Other Courses

ADVS 5000 - One Health: People, Animals, and the Environment 3 credits

This course is designed to introduce the student to the core concepts and historical background underlying the emerging discipline of One Health. It will provide a broad overview of the key issues in this field using relevant examples to illustrate the major problems and challenges. In particular, it will explore the interdisciplinary nature of One Health and the role of the key actors within this framework. The course will contribute to a better understanding of emerging disease dynamics and the role of One Health in addressing emerging disease threats. The list of topics will include a discussion of bidirectional impact of animal health on human health, the impact of earth’s changing ecology on health, issues of food and water security and the benefits of comparative medicine.

Prerequisite/Restriction: BIOL 1610, CHEM 2310 or CHEM 3700, BIOL 3300 recommended, or instructor permission

Effective Term
Spring 2017

CEAS 1000 - Continuing Education Unit: Special Topics in Applied Sciences, Technology and Education .5 - 20 CEU

Topics of special interest in Applied Sciences, Technology and Education. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring

MGT 3590 - Small Business Consulting 1 credit

This course is for interns of the Clark Center for Entrepreneurship, and students enrolled in the SEED Social Venturing program offered by the Center. The course covers the entire cycle of new venture creation from concept to cash flow, including idea generation, business model development, entity formation, funding, team building, marketing, planning and business plan execution. The emphasis of the course is on teaching these skills to student entrepreneurs and aspiring entrepreneurs in developing countries. After completing the course, students will understand the challenges of starting a business, the keys to success, and how to consult with clients who are launching and growing new ventures.

Prerequisite/Restriction: Instructor permission

Effective Term
Sprint 2017

Accounting

ACCT 2010 - Financial Accounting Principles 3 credits

Survey of uses of accounting information by investors and creditors for decision making. Emphasis on basic accounting principles used to prepare, analyze, and interpret financial statements.

Prerequisite/Restriction: STAT 1040, STAT 1045, MATH 1030 or MATH 1050 (MATH 1050 or equivalent is required for Huntsman School of Business majors); and GPA of 2.5 or higher

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $15.00

ACCT 2020 - Managerial Accounting Principles 3 credits

Survey of uses of accounting information by managers for decision making, including planning, budgeting, and controlling operations. Emphasizes accumulation, analysis, and control of product and service costs.

Prerequisite/Restriction: ACCT 2010

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $15.00

ACCT 3110 - Intermediate Financial Accounting and Reporting I 3 credits

Study of accounting principles, theory, and practice relating to financial reporting of assets.

Prerequisite/Restriction: Cumulative GPA of 3.0 or
higher; grade of B or better in ACCT 2010; ACCT 2020; MIS 2100; successful completion of the accounting entrance exam (www.huntsman.usu.edu/acct/); admittance to a USU major; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

ACCT 3120 - Intermediate Financial Accounting and Reporting II
3 credits

Study of accounting principles, theory, and practice relating to liabilities, equities, and other contemporary issues.

Prerequisite/Restriction: ACCT 3110; admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

ACCT 3310 - Strategic Cost Management
3 credits

Contemporary theory and applications in the accumulation, analysis, and interpretation of accounting information for internal decision-making and control.

Prerequisite/Restriction: Cumulative GPA of 3.0 or higher; grade of B or better in ACCT 2010; ACCT 2020; MIS 2100; successful completion of the accounting entrance exam (www.huntsman.usu.edu/acct/); admittance to a USU major; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

ACCT 3410 - Income Taxation I
3 credits

Emphasis on Federal income taxation of individuals. Introduction to tax research methods and taxation of corporations and partnerships.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $5.00
ACCT 4900 - Independent Research and Readings  
1-3 credits

Selected reading and research individually assigned, handled, and directed. Problems of mutual interest to students and the instructor are investigated and reported.

Prerequisite/Restriction: Permission of department; admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ACCT 4950 - Senior Honors Thesis/Project  
3 credits

Creative project that will then be written up and presented as a Senior Thesis as required for an Honors Plan.

Semester(s) Traditionally Offered: Spring

ACCT 6010 - Financial and Managerial Accounting  
3 credits

Introduction to financial and managerial accounting at the graduate level.

Prerequisite/Restriction: Admission to a Huntsman School of Business graduate program

Semester(s) Traditionally Offered: Summer

ACCT 6100 - Financial Reporting and the SEC  
3 credits

This course provides an overview of the SEC and its registration and periodic reporting requirements. It also provides a high-level overview of financial statements and financial statement analysis. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6101 - Advanced Strategic Cost Management  
3 credits

This course involves an in-depth study of the concepts and techniques used in managerial decision making. Topics such as strategic analysis, capital budgeting, manufacturing accounting, management control systems, performance measurement, and quantitative techniques for planning and control will be discussed. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6102 - Research and Valuation  
3 credits

This class reviews the professional accounting research process. The course also covers the basics of valuation. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6103 - Accounting Information and the Capital Markets  
3 credits

This course discusses the intersection between accounting and the capital markets. Students learn about how markets incorporate accounting and other information. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6104 - Big Data and Systems Analytics for Financial Executives  
3 credits
Students learn to apply advanced algorithms and data visualization techniques to uncover insights from a variety of high-volume data sources. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6105 - Taxes: Planning and Strategy
3 credits

Study of income taxation with a focus on issues that impact business decisions with tax planning opportunities and tax traps to avoid. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6106 - International Business, Finance, and Accounting
3 credits

The course provides an overview of prevailing theories and practices relating to international business, finance, and accounting. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6107 - Corporate Governance
3 credits

This course focuses on the role of corporate governance in helping ensure a successful execution of business objectives and strategy. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

ACCT 6108 - Leadership for Financial Executives
3 credits

This course introduces the principles of transformational and transactional leadership. It presents a framework for leading efforts toward achieving organizational objectives. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6109 - Financial Strategy
3 credits

This is an integrative capstone course for the EMAcc program and is designed to allow you to use the tools and techniques you have developed in your graduate program and in your professional experience. Admission to the Executive Master of Accounting (EMAcc) program is required.

Prerequisite/Restriction: Admittance to Executive Master of Accounting (EMAcc) program

Effective Term
Summer 2016

ACCT 6200 - Accounting for Complex and Multinational Businesses
3 credits

Study of accounting principles related to consolidations and multinational accounting.

Prerequisite/Restriction: ACCT 3120

Semester(s) Traditionally Offered: Fall, Spring

ACCT 6250 - Accounting Concepts, Research, and Cases
3 credits

Financial reporting concepts are examined and used to develop a general frame of reference to explain and predict appropriate accounting methodologies.
Integration of practical research methodology with the resolution of financial reporting problems cases.

Prerequisite/Restriction: ACCT 3120

Semester(s) Traditionally Offered: Spring, Summer

ACCT 6300 - Advanced Accounting Internship
3 credits

Provides accounting internship experience in a career-related position approved by the School of Accountancy.

Prerequisite/Restriction: Instructor approval required

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

ACCT 6310 - Cost Management Systems to Support World-Class Operations
3 credits

Examination of appropriate cost management systems and performance measures to support decision making in world-class business operations. Cases, projects, simulations, and field studies to reinforce concepts.

Prerequisite/Restriction: ACCT 3310

Semester(s) Traditionally Offered: Fall, Summer

ACCT 6350 - Accounting for Management Decision Making
3 credits

Action-oriented case studies to demonstrate management accounting techniques to achieve profit goals and business strategies in a variety of organizations. International accounting and ethical issues are addressed.

Prerequisite/Restriction: ACCT 2010 and ACCT 2020, or ACCT 6010

Semester(s) Traditionally Offered: Fall, Spring, Summer

ACCT 6400 - Income Taxation II
3 credits

Federal income taxation of partnerships, corporations, S-corporations, estates and trusts, and gifts.

Prerequisite/Restriction: ACCT 3410

Semester(s) Traditionally Offered: Fall, Summer

Course Fee: $5.00

ACCT 6410 - Tax Research and Procedures
3 credits

Tax research methodology, tax policy, and tax practice. Topic areas include tax research techniques, tax planning and communication, regulation and professional responsibilities with an introduction to multi-jurisdictional and international taxation.

Prerequisite/Restriction: ACCT 3410 and concurrent or prior enrollment in ACCT 6400

Semester(s) Traditionally Offered: Spring, Summer

ACCT 6420 - Taxation of Corporations and Shareholders
3 credits

Concepts and principles governing the taxation of corporations and shareholders including corporate formation, capital structure, distributions, liquidations, reorganizations, consolidated tax returns and taxation of international transactions.

Prerequisite/Restriction: ACCT 3410 and ACCT 6400

Semester(s) Traditionally Offered: Summer

ACCT 6440 - Taxation of Flow-Through Entities
3 credits

Advanced concepts and principles governing the taxation of partnerships and partners, S-corporations and shareholders with basic concepts in estates, trusts, and beneficiary taxation.

Prerequisite/Restriction: ACCT 3410 and ACCT 6400

Semester(s) Traditionally Offered: Fall

ACCT 6460 - Advanced Tax Topics
3 credits

Concepts and principles of transfer taxes, not-for-profit organizations, multinational taxation of individuals, and other tax topics.
Prerequisite/Restriction: ACCT 3410 and ACCT 6400

Semester(s) Traditionally Offered: Summer

ACCT 6500 - Advanced Accounting Information Systems
3 credits

Study of contemporary issues in accounting information systems, including emerging information technologies for supporting enterprise decision making.

Prerequisite/Restriction: ACCT 4500

Semester(s) Traditionally Offered: Spring

ACCT 6510 - Financial Auditing
3 credits

Application of generally accepted auditing standards to accounting systems. Some study of auditing theory and current issues, and an introduction to statistical auditing.

Prerequisite/Restriction: ACCT 4510

Semester(s) Traditionally Offered: Fall, Spring

ACCT 6540 - Fraud Examination and Forensic Accounting
3 credits

Study of forensic accounting. Topics covered include types of fraud, recognition of red flags, and fraud investigation techniques. Also includes practice with computer-aided fraud detection, interrogation techniques, and case studies.

Semester(s) Traditionally Offered: Fall

ACCT 6560 - Business Law and Professional Responsibilities
3 credits

Examines the ethical and legal responsibilities of business professionals. Includes the application of law to business organizations, contracts, government regulation of business, and the uniform commercial code.

Semester(s) Traditionally Offered: Fall, Spring

ACCT 6600 - Information Systems Auditing and Control
3 credits

Study of information systems auditing methodologies, including risk assessment, systems controls, and the use of computer-assisted audit techniques.

Semester(s) Traditionally Offered: Fall

ACCT 6620 - Financial Statement Analysis and Valuation
3 credits

Students learn to analyze financial data, translate that information into forecasts of financial statements, and use valuation models to arrive at a fundamental values for a business. Includes discussions of trading strategies, market efficiency, and other issues in capital markets.

Prerequisite/Restriction: ACCT 3120

Semester(s) Traditionally Offered: Fall

ACCT 6700 - Advanced Accounting Topics
3 credits

Special topics include governmental accounting, international accounting, professional responsibilities, ethics, etiquette, and selected emerging and important financial reporting topics.

Prerequisite/Restriction: ACCT 3120

Semester(s) Traditionally Offered: Fall, Summer

ACCT 6800 - Accounting Communications and Professional Conduct
3 credits

Study of written and oral communication skills appropriate for the accounting profession. Covers interpersonal skills and professional conduct, including ethical conduct, in various business settings.

Semester(s) Traditionally Offered: Spring

ACCT 6900 - Independent Reading and Research
1-3 credits

Independent work in accounting areas: theory, auditing, taxation, and other related areas.

Prerequisite/Restriction: Permission of department

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
ACCT 6960 - Professional Paper
1-3 credits

A paper of professional quality prepared by the student. Designed to demonstrate the ability to complete a major business-related project and to effectively present the results.

Prerequisite/Restriction: Permission of department

Semester(s) Traditionally Offered: Fall, Spring, Summer

ACCT 6990 - Continuing Graduate Advisement
1-3 credits

Continuing enrollment at the University required after completing coursework.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Accounting (USU Eastern)

ACTG 0010 - Introduction to QuickBooks
30 contact hours

This course will provide a basic understanding of this electronic accounting and bookkeeping program for business owners. Owners who take time to set up their business’s books correctly from the start have a better chance of being successful.

Campus: USU Eastern only

ACTG 0100 - QuickBooks Applications
60 contact hours

Learn abilities of industry utilized accounting software. Students will perform accounting functions including setting up a company, accounting for daily transactions, managing inventory, processing payroll, working with bank accounts, and preparing financial statements.

Campus: USU Eastern only

ACTG 0200 - Core Concepts of Accounting
60 contact hours

This course will introduce you to some basic accounting principles, accounting concepts, and accounting terminology.

Campus: USU Eastern only

ACTG 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

ACTG 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

Aerospace Studies

AS 1010 - Introduction to the Air Force Today
1 credit

Introduces the United States Air Force and Air Force Reserve Officer Training Corps. Air Force mission and organization, officership and professionalism, military customs and courtesies, officer opportunities, group leadership problems, and communication skills. Leadership Laboratory is mandatory for cadets.

AS 1020 - Introduction to the Air Force Today
1 credit

Introduces the United States Air Force and Air Force Reserve Officer Training Corps. Air Force mission and organization, officership and professionalism, military customs and courtesies, officer opportunities, group leadership problems, and communication skills. Leadership Laboratory is mandatory for cadets.

Semester(s) Traditionally Offered: Fall, Spring

AS 1110 - Leadership Laboratory I
1 credit

Air Force customs and courtesies, drill and ceremonies, military commands, environment of the Air Force officer, and officer opportunities.

Corequisite: AS 1010.
AS 1120 - Leadership Laboratory I
1 credit

Air Force customs and courtesies, drill and ceremonies, military commands, environment of the Air Force officer, and officer opportunities.

Corequisite: AS 1020.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

AS 2010 - The Evolution of US Aerospace Power
1 credit

Examines general aspects of air and space power through a historical perspective. Illustrates Air Force Core Values with historical examples and continues development of communications skills. Leadership Laboratory is mandatory for cadets.

AS 2020 - The Evolution of US Aerospace Power
1 credit

Examines general aspects of air and space power through a historical perspective. Illustrates Air Force Core Values with historical examples and continues development of communications skills. Leadership Laboratory is mandatory for cadets.

Semester(s) Traditionally Offered: Fall, Spring

AS 2110 - Leadership Laboratory II
1 credit

Air Force customs and courtesies, drill and ceremonies, military commands, environment of the Air Force officer, and officer opportunities.


Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

AS 2120 - Leadership Laboratory II
1 credit

Air Force customs and courtesies, drill and ceremonies, military commands, environment of the Air Force officer, and officer opportunities.


Pass/Fail only.

AS 3010 - Air Force Leadership and Management
3 credits

Presents advanced leadership and management skills. Cadets given opportunity to practice these leadership skills and management techniques in a supervised environment. Leadership Laboratory is mandatory for cadets.

AS 3020 - Air Force Leadership and Management
3 credits

Presents advanced leadership and management skills. Cadets given opportunity to practice these leadership skills and management techniques in a supervised environment. Leadership Laboratory is mandatory for cadets.

Semester(s) Traditionally Offered: Fall, Spring

AS 3060 - Physical Fitness Training
1-2 credits

Early morning workout to build stamina. Organized to keep cadets in shape to pass the Physical Fitness Test (PFT). Team instructed.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

AS 3110 - Leadership Laboratory III
1 credit

Advanced leadership experiences to include the planning and controlling of cadet corps activities, and the preparation and presentation of briefings and other oral and written communications.

Corequisite: AS 3010.

Pass/Fail only.

AS 3120 - Leadership Laboratory III
1 credit

Advanced leadership experiences to include the planning
and controlling of cadet corps activities, and the preparation and presentation of briefings and other oral and written communications.

Corequisite: AS 3020.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

AS 3400 - Field Training (4 weeks)
1-4 credits

Students in the four-year program participate in four weeks of Field Training. Major areas of study include junior officer training, career orientation, survival training, base functions, Air Force environment, and physical training.

Pass/Fail only.
Semester(s) Traditionally Offered: Summer

AS 3500 - Field Training (5 Weeks)
1-5 credits

Students in the two-year program participate in five weeks of Field Training. Major areas of study include junior officer training, career orientation, survival training, base functions, Air Force environment, and physical training.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

AS 4110 - Leadership Laboratory IV
1 credit

Advanced leadership experiences to include the planning and controlling of cadet corps activities, and the preparation and presentation of briefings and other oral and written communications.

Corequisite: AS 4010.

Pass/Fail only.

AS 4120 - Leadership Laboratory IV
1 credit

Advanced leadership experiences to include the planning and controlling of cadet corps activities, and the preparation and presentation of briefings and other oral and written communications.

Corequisite: AS 4020.

Agricultural Systems Technology and Education

ASTE 1010 - Introduction to Agricultural Systems Technology
3 credits

Introduction to problem solving related to the areas of agricultural power and machinery, soil and water conservation, structures and animal environments, electrical circuits, and emerging technologies.

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

ASTE 1120 - Forage and Harvest Equipment
3 credits

Fundamentals and principles in operations, adjustments, and maintenance of technologies utilized in agricultural forage and combine harvesting.

Semester(s) Traditionally Offered: Fall

ASTE 1130 - Planting and Tillage Equipment
3 credits
Fundamentals and principles in operation, maintenance, and repair of planting and tillage equipment. Exploration of different systems and their applications.

Semester(s) Traditionally Offered: Spring
ASTE 1610 - Agricultural Machinery Engines
3 credits

Fundamental principles and components utilized in the power production for agricultural machinery. Diesel engines, as power plants, will be overhauled using a systems approach.

Semester(s) Traditionally Offered: Fall
ASTE 1615 - Agricultural Machinery Engine Laboratory
3 credits

Gives students practical hands-on experience in engine diagnostics and repairs.

Prerequisite/Restriction: ASTE 1610 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall
ASTE 1620 - Agricultural Machinery Power Trains
3 credits

Fundamental principles and components utilized in agricultural machinery transmittal of power through drive trains. A systems approach to overhauling these components will be developed.

Semester(s) Traditionally Offered: Spring
ASTE 1625 - Agricultural Machinery Power Trains Laboratory
3 credits

Gives students practical hands-on experience in power trains diagnostics and repairs.

Prerequisite/Restriction: ASTE 1620 (may be taken concurrently)

Semester(s) Traditionally Offered: Spring
ASTE 1710 - Introduction to Agricultural Communication
3 credits

Overview of the history, importance to society, and role of mass communication in agriculture. Introduces students to the use of mass media in the agricultural industry.

Semester(s) Traditionally Offered: Fall
ASTE 2200 - Electricity in Agricultural Systems
3 credits

Fundamentals of electricity (AC) as used on farms and ranches. Residential and commercial agricultural applications of the National Electric code. Electrical supply and service, distribution, proper grounding, and installation of components.

Semester(s) Traditionally Offered: Spring
ASTE 2250 - Occupational Experience in Agriculture
1-6 credits

Supervised occupational experiences for technical vocational preparation.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
ASTE 2710 - Orientation to Agriculture Education
2 credits

Students examine the framework of agricultural education, with a special emphasis on the nature of the programs, career opportunities, and the qualifications and preparation requirements of future agricultural educators.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall
ASTE 2830 - Agribusiness Sales and Marketing
3 credits

Basic principles of agribusiness sales and marketing. After completing a series of self-assessments relating to sales, learning, and personality preferences, students learn to complete each major step of the sales process.

Semester(s) Traditionally Offered: Fall
Course Fee: $5.00
ASTE 2900 - Food Matters: Ethics, Economics, and the Environment (BSS)
BSS Breadth Social Sciences
3 credits

This course provides a broad overview of food systems as they relate to ethical, economic, and environmental issues. The complex challenges involved with feeding the world's population are discussed using popular “foodie” media and science-based research.

Semester(s) Traditionally Offered: Spring, Summer

ASTE 2930 - Individualized Projects in Agriculture Mechanics
1-3 credits

Basic skill preparation for employment in agricultural industry.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

ASTE 3030 - Metal Welding Processes and Technology in Agriculture
3 credits

Selection of ferrous and nonferrous welding techniques in agricultural applications. Welding, cold- and hot-working metal in agricultural construction and maintenance.

Semester(s) Traditionally Offered: Fall
Course Fee: $80.00

ASTE 3040 - Fabrication Practices in Agricultural Buildings (QI)
QI Quantitative Intensive
2 credits

Selection and use of agricultural building materials, including concrete and masonry, lumber, plywood, finishes, and fasteners. Application of hand and power tools and procedures in agricultural construction.

Semester(s) Traditionally Offered: Spring

ASTE 3050 - Technical and Professional Communication Principles (CI)
CI Communications Intensive
3 credits

Technical communication principles and practices used in the workplace. Emphasizes technical writing of reports and correspondence using electronic information retrieval and presentation.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement
Cross-listed as: JCOM 3050

Semester(s) Traditionally Offered: Fall, Spring, Summer

ASTE 3080 - Compact Power Units for Agricultural and Turfgrass Applications
3 credits

Operation and application of agricultural and turfgrass equipment powered by internal combustion engines having less than 40 horsepower.

Semester(s) Traditionally Offered: Spring
Course Fee: $55.00

ASTE 3090 - Graphic Communication in Agriculture
3 credits

Prepares students to be proficient in elements of design, graphic art production, photo editing, and image composition techniques used in agricultural communications and journalism fields.

Cross-listed as: JCOM 3090

Semester(s) Traditionally Offered: Spring

ASTE 3100 - Personal and Team Leadership
3 credits

The study of leadership principles and theories, including, but not limited to: personal leadership development, individual strengths, characteristics of effective leaders, leadership styles, team leadership, servant leadership and leadership ethics. Team capstone project includes service in community.

Semester(s) Traditionally Offered: Spring
Course Fee: $7.00
Effective Term
Spring 2017

ASTE 3240 - Teaching in Laboratory Settings (CI)
CI Communications Intensive

Basic principles of teaching students in laboratory settings. Overview of major concepts, considerations, and practices used for developing and evaluating agriscience curricula.

Prerequisite/Restriction: ASTE 2710 Students should be admitted into the Secondary Teacher Education Program (STEP) prior to enrollment in this course.

Repeatable for credit. Semester(s) Traditionally Offered: Spring
Course Fee: $40.00

ASTE 3300 - Clinical Experience I in Agricultural Education
1 credit

In-school clinical observation experience. Students involved in observing management and assisting in teaching. Designed to provide familiarity with agricultural education classroom.

Prerequisite/Restriction: Admission into Teacher Education

Pass/Fail only. Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ASTE 3440 - Science, Technology, and Modern Society (DSC)
DSC Depth Life and Physical Sciences
3 credits

Designed to challenge students from all academic majors to develop an understanding of the dynamic interaction between science, technology, and society. Explores responsibility of humans for directing the utilization of technology as a creative enterprise.

Cross-listed as: TEE 3440.

Semester(s) Traditionally Offered: Fall, Spring

ASTE 3500 - Teaching Apprenticeship in Agricultural Education
2 credits

Each student serves as an apprentice to professional agricultural educator. Students complete competencies leading to early preparation for student teaching.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ASTE 3600 - Management of Agriculture Machinery Systems (QI)
QI Quantitative Intensive
3 credits

Management principles for evaluation and selection of agricultural implements for performance, optimization, economics, environmental impact, and long-term sustainable agricultural practices.

Prerequisite/Restriction: MATH 1050 or higher mathematics course; AP Calculus AB exam score of 3 or higher; or STAT 1040, STAT 1045 or higher statistics course

Semester(s) Traditionally Offered: Spring

ASTE 3620 - Managing the FFA and SAE Programs
2 credits

Introduction to basic concerns, understandings, and practices needed to effectively advise an FFA chapter. Students learn appropriate philosophies and skills for operation of a comprehensive supervised agricultural experience program.

Prerequisite/Restriction: Admission to Secondary Teacher Education Program

Semester(s) Traditionally Offered: Spring

ASTE 3670 - Agricultural Equipment Business Management, Marketing, and Communications
3 credits

Introduction to principles and operation of computer software systems related to marketing and management within the agricultural machinery business industry. Emphasis on business communication principles for effective transfer of information and problem resolution.

Prerequisite/Restriction: MATH 1050 or higher mathematics course; AP Calculus AB exam score of 3 or higher; fulfillment of Communications Literacy CL1 requirement or instructor permission

Semester(s) Traditionally Offered: Spring
ASTE 3710 - Agricultural Machinery Hydraulic Systems and Diagnosis
3 credits

Fundamental principles and components overhaul of hydraulic systems as applied in agricultural machinery. Exploration of techniques for diagnosing malfunctions and related failures with a systems approach.

Semester(s) Traditionally Offered: Fall

ASTE 3720 - Agricultural DC Electrical Systems and Diagnosis
3 credits

Fundamental principles and components overhaul of DC electrical systems as applied in agricultural machinery. Exploration of techniques for diagnosing malfunctions and related failures with a systems approach.

Prerequisite/Restriction: ASTE 1620 or instructor permission

Semester(s) Traditionally Offered: Fall

ASTE 3730 - Agricultural Machinery Auxiliary Systems and Diagnosis
3 credits

Application of theory, testing, diagnosis, and repairs of auxiliary systems, including air conditioning, fuel injection, analog, electronic monitoring, and GPS as utilized in agricultural equipment.

Prerequisite/Restriction: ASTE 3720 or instructor permission

ASTE 3900 - Special Problems in Agricultural Systems Technology and Education
1-6 credits

Students conduct short-term investigation and/or literature analysis with critical review of contemporary issues in Agricultural Systems Technology. Formal contract with approved faculty. Activities culminate with a written report.

Repeatable for credit.

ASTE 4100 - Agricultural Structures and Environment (QI)
QI Quantitative Intensive
3 credits

Overview of agricultural structures and environmental considerations related to livestock, livestock waste management, and commodity storage. This USU class is a quantitative intensive (QI) course and as such will emphasize mathematical calculations related to wood and metal products, wood and metal construction, and various calculations related to constructing and maintaining agricultural structures.

Prerequisite/Restriction: MATH 1050 or higher mathematics course, or AP Calculus AB exam score of 3 or higher

Semester(s) Traditionally Offered: Spring

Course Fee: $35.00

Effective Term
Spring 2017

ASTE 4150 - Methods of Teaching Agriculture (CI)
CI Communications Intensive
3 credits

Introduction to basic practices of classroom teaching and program planning. Through participation in discussions, activities, and assignments, students refine their abilities to develop programs, diagnose the learner, prepare the instruction, and guide student learning.

Prerequisite/Restriction: ASTE 2710, ASTE 3240

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

Course Fee: $25.00

ASTE 4210 - Cognition and Evaluation of Student Learning in Career and Technical Education
3 credits

Overview of the various methods used to measure and evaluate student achievement, within the cognitive, affective, and psychomotor domains with emphasis on performance based and authentic assessment specific to the Career and Technical Education classroom.
Prerequisite/Restriction: Admission to Secondary Teacher Education Program

Effective Term
Fall 2016

ASTE 4250 - Occupational Experiences in Agriculture
1-6 credits

Supervised occupational experience for technical and professional preparation in teacher education and/or agricultural business.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ASTE 4300 - Clinical Experience II in Agricultural Education
1 credit

Continued in-school observation of agricultural education teaching. Requires student participation in teaching, management, and program development in agricultural education.

Prerequisite/Restriction: Admission into Teacher Education

Pass/Fail only.
Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

ASTE 4400 - Advising Applied Technology Education Student Organizations
1 credit

Principles and practices for advising applied technology student organizations in secondary education.
Examination of leadership organizations supporting applied technology education. Emphasis on program planning, leadership development, and evaluation.

ASTE 4900 - Senior Project Research and Creative Opportunity
1-6 credits

Returning student teachers work to strengthen their weaknesses in areas such as scaled drawing, cost estimating, machine shop practices, construction, and small engines.

Semester(s) Traditionally Offered: Spring

ASTE 5200 - Assessment in Applied Technology Education
3 credits

Principles and practices in assessing performance and development of applied technology students. Emphasizes testing and evaluation techniques used in applied technology education.

Semester(s) Traditionally Offered: Spring, Summer

ASTE 5260 - Environmental Impacts of Agricultural Systems (CI)
CI Communications Intensive
3 credits

Investigation of relationship between agricultural practices and environmental quality, including control of agricultural nonpoint-source pollution.

Cross-listed as: ASTE 6260.

Semester(s) Traditionally Offered: Fall

ASTE 5400 - Food, Land, and People
1-3 credits

Designed for pre-service (undergraduate, elementary education) or practicing, in-service (graduate) teachers. Offers development for infusing agriculture and the concepts of food, land, and people into existing curriculum standards and objectives. Presentation of agricultural-related instructional units, as well as research-based teaching strategies will be demonstrated.

Cross-listed as: ASTE 6400.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ASTE 5500 - Agricultural Education Secondary Curriculum Seminar
2 credits

Cooperative examination of considerations and processes for teaching secondary students. Reflection on the practice of teaching. Preparation for entry into the teaching profession.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring

ASTE 5550 - Continuing Education in Agricultural Education
0.5-3 credits
Concentrated offerings to increase knowledge and skills in current agricultural education topics or curriculum areas.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ASTE 5630 - Agricultural Education Student Teaching in Secondary Schools
10 credits
Students teach agriscience and technology courses in secondary and middle school settings under the guidance of clinical and Utah State University supervisors.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $300.00

ASTE 6090 - Program Design
3 credits
Study of contemporary program design and development in technology and engineering education and career and technical education. Reviews complete curriculum developmental process.
Cross-listed as: TEE 6090
Pass/Fail only
Semester(s) Traditionally Offered: Spring, Odd Years

ASTE 6100 - Research Methods in Agricultural Systems
3 credits
Introduces techniques used in applied agricultural research, as well as in career and technical education research. Includes research design, data gathering, and statistical analysis and interpretation.
Prerequisite/Restriction: PSY 3010; SOC 3120; STAT 2000 or STAT 2300; STAT 3000 or instructor permission
Semester(s) Traditionally Offered: Summer, Taught Alternate Even Years

ASTE 6120 - Analysis of Social Research Data
3 credits
Explores the use of descriptive statistics, contingency tables, differential statistics, and correlational statistics. Discussion of syntax, procedure options, and interpretation of output.
Semester(s) Traditionally Offered: Fall

ASTE 6140 - Reading and Applying Research
3 credits
Investigation and analysis of relevant educational research that informs applications in career and technical educations and extension education environments.
Semester(s) Traditionally Offered: Spring, Even Years

ASTE 6150 - Evaluation and Assessment
3 credits
This course will provide an overview of the various methods used to measure and evaluate student achievement, within the cognitive, affective, and psychomotor domains. This course will review the principles of teaching and learning.
Cross-listed as: TEE 6150
Semester(s) Traditionally Offered: Fall, Odd Years

ASTE 6160 - Foundations of Adult Education
3 credits
Addresses the context and providers of adult education. In addition, adult learning theories and participation models are examined.
Semester(s) Traditionally Offered: Spring

ASTE 6170 - Program Planning & Evaluation
3 credits
Application of theory to program planning and evaluation in nonformal and formal environments.
Semester(s) Traditionally Offered: Summer, odd years
Effective Term
Summer 2016
ASTE 6180 - Administration and Leadership
3 credits
Application of administration and leadership theory in nonformal and formal environments for successful programming and organizations.
Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2017
ASTE 6200 - Principles and Practices of Extension Education
3 credits
History, philosophy, and organizational structure of U.S. and international extension organizations, including programming models, teaching strategies, and accountability.
Semester(s) Traditionally Offered: Spring
ASTE 6220 - Volunteer Programs and Partnerships
3 credits
Explores the use and management of volunteers and partnerships in the development and implementation of extension, nonformal, and outreach education programs.
Semester(s) Traditionally Offered: Summer
ASTE 6260 - Environmental Impacts of Agricultural Systems
3 credits
Investigation of relationship between agricultural practices and environmental quality, including control of agricultural nonpoint-source pollution.
Cross-listed as: ASTE 5260.
Semester(s) Traditionally Offered: Fall
ASTE 6300 - Advanced Teaching Strategies
3 credits
Explores advanced application of teaching strategies and theory, as well as the creation of innovative classroom materials.
Semester(s) Traditionally Offered: Summer, Even Years
ASTE 6310 - Advanced Agriculture Teaching Methods
3 credits
This course focuses on advanced methods of classroom teaching. This course is designed for those who have had basic teaching experience or have taken methods classes previously. It is designed to enhance and build upon practicing teachers’ experiences and knowledge in order to become a more expert practitioner.
Semester(s) Traditionally Offered: Summer
Effective Term
Spring 2017
ASTE 6315 - Advanced FFA & SAE Development in Agricultural Education
3 credits
Examines planning and supervising career exploration, experiential learning, and leadership development activities of secondary agriculture students and professional development of the secondary agriculture teacher.
Semester(s) Traditionally Offered: Summer
Effective Term
Summer
ASTE 6320 - Classroom Management, Student Motivation and Guidance
3 credits
Multiple-strategy approach for increasing teachers’ effectiveness and satisfaction in classroom management and discipline.
Semester(s) Traditionally Offered: Fall, Even Years
ASTE 6350 - Safety and Risk Management for CTE Experiential Learning Opportunities
3 credits
Major concepts associated with the development, enactment, and execution of policy of experiential learning programs. Focus will be on the examination and development of policy. This course provides students with an understanding of safety concepts, principles, and practices as they relate to risk management for extension.
ASTE 6360 - History, Philosophy and Policy Development in Career and Technical Education
3 credits
Explores the historical and philosophical foundations of extension and career and technical education required to understand current policy development.

ASTE 6380 - Mentoring and Supervision
3 credits
Explores the role of supervision and mentoring in the success of teaching professionals. Reviews four components of professional practice. Examines techniques for observation and conferencing. Students reflect upon their own teaching/mentoring experiences and the impact upon professional practice.

ASTE 6400 - Food, Land, and People
1-3 credits
Designed for pre-service (undergraduate, elementary education) or practicing, in-service (graduate) teachers. Offers development for infusing agriculture and the concepts of food, land, and people into existing curriculum standards and objectives. Presentation of agricultural-related instructional units, as well as research-based teaching strategies will be demonstrated.

Cross-listed as: ASTE 5400.

ASTE 6440 - Technology and Society: Linking CTE with STEM
3 credits
Challenges students to develop an understanding of the dynamic interaction of science and technology along with its application to career and technical education.

Cross-listed as: TEE 6440 and TEE 4440

ASTE 6450 - Graduate Topics in Agricultural Education
3 credits
Program planning for locally applied curriculum design to meet student interests and community needs for career and technical educators. Repeatable for credit.

ASTE 6460 - Integrating Career and Technical Education Curriculum with Science, Technology, Engineering, and Mathematics
3 credits
This course engages students with essential understandings and application practices for integrating Career and Technical Education (CTE) curricula with science, technology, engineering and mathematics (STEM) concepts.

ASTE 6900 - Graduate Independent Study in Career and Technical Education
3 credits
Independent study in an area of family and consumer sciences education. For approval of project and allowable credits, students should check with committee. Repeatable for credit.

ASTE 6910 - Experimental Laboratory
3 credits
Introduction to elements of a research report through selection and development of experimental study utilizing tools, equipment, materials, and processes for improving programs and teaching techniques.

Cross-listed as: TEE 6910

ASTE 6950 - Graduate Internship
1-6 credits
Designed for graduate students who wish to acquire or upgrade their experience in an occupational field related to their area of study. One credit earned for each 60
hours of experience. Repeatable for up to 6 credits.

Repeatable
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring 2017

ASTE 6960 - Graduate Seminar
1 credit

Identification of research problems and critical issues, consideration of critical issues and research methods, and application of data analysis procedures under faculty direction.

Repeatable for credit.
Semester(s) Traditionally Offered: Summer

ASTE 6970 - Research and Thesis
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ASTE 6990 - Continuing Graduate Advisement
1-3 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ASTE 7000 - Principles and Practices of Community College Education
3 credits

Examines the American two-year college, including historical and philosophical development, curricula, students and the learning process, faculty and instruction, administration and governance, support, and control. Focuses upon principles, practices, and problems of community colleges in America.

Semester(s) Traditionally Offered: Summer

ASTE 7400 - Community and Interagency Partnerships
3 credits

Explores relationship between education and the community, with special emphasis on community needs and interagency relationships needed for the development of a total community education program.

Furthers understanding of leadership and agency, through exploring and examining contemporary and perennial issues from multiple perspectives in a diverse higher-educational context.

ASTE 7500 - Diffusion of Innovations
3 credits

Explores processes by which professional change agents influence the introduction, adoption, and diffusion of technological change. Course content is applicable to persons who work closely with people in formal and informal educational settings.

Semester(s) Traditionally Offered: Summer

AG 4250 - Advanced Internship and Cooperative Experience
1-6 credits

Advanced or middle-level internship or cooperative experience to be approved by the Dean’s Office. Intended for nonformal students interested in a broad agricultural experience.

Semester(s) Traditionally Offered: Fall, Spring, Summer

AG 4900 - Special Problems - Ag Ambassadors
1 credit

A semester long leadership course for Ag Ambassadors.

Prerequisite/Restriction: Approval from the Dean’s Office

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

ADVS 1100 - Small Scale Animal Production
3 credits

Fundamentals of raising domestic farm animals in a semi-rural, noncommercial setting. Considerations of feeding, breeding, housing, marketing, sanitation, general health care, and community zoning factors.

Prerequisite/Restriction: For nonmajors
ADVS 1110 - Introduction to Animal Science
4 credits
Influence and contributions of animal production and its commodities to society. Introductory scientific principles of animal science, livestock production systems, and contemporary issues. Introduction to professions and careers in animal agriculture and veterinary sciences.

ADVS 1200 - Basic Horsemanship Skills
3 credits
This course focuses on the necessary elements of horsemanship for the beginning equine student.

ADVS 1600 - Riding Fundamentals I
3 credits
Lectures explore the theory necessary to be a successful rider. Includes information on use of natural and artificial aids with hunt seat and western-style riding. In riding labs, students develop their riding skills and understanding of riding theory.

Prerequisite/Restriction: Enrollment limited to students in Equine Science and Management emphasis of Animal, Dairy and Veterinary Sciences major or by instructor permission.

ADVS 2080 - Beef and Dairy Herd Health and Production Practices
3 credits
Explores progressive concepts of disease prevention and health management for beef and dairy cattle. Explains how these concepts lead to optimum herd health, cow comfort, and productivity. Helps students gain advanced critical thinking and problem-solving skills relating to beef and dairy herd health and production management.

Prerequisite/Restriction: ADVS 1110 (may be taken concurrently) or instructor permission

ADVS 2100 - Weanling Behavior and Handling
3 credits
ADVS 2100 gives students hands on experience with weanling behavior. Students will learn skills to create desired behavior in young horses with an emphasis in comprehending and applying classical behaviorism. Students will be the first handlers of the weanlings and will work to prepare them for future courses and the equine industry.

Prerequisite/Restriction: Safety Skill Test

Semester(s) Traditionally Offered: Spring
Course Fee: $30.00

ADVS 2090 - Sheep Production Practices
2 credits
Production practices in the handling, selection, and care of sheep. Demonstrations of equipment, facilities, and skills relevant to sheep and wool production.

Prerequisite/Restriction: ADVS 1110 (may be taken concurrently) or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ADVS 2120 - Swine Production Practices
2 credits
Production practices in the selection, handling, and care of swine. Demonstrations of equipment, facilities, and skills relevant to swine industry.

Prerequisite/Restriction: ADVS 1110 (may be taken concurrently) or instructor permission

Semester(s) Traditionally Offered: Fall, Odd Years
Course Fee: $30.00

ADVS 2150 - Yearling Fitting and Sales Preparation
3 credits
The comprehension of yearling health and sales preparation is essential to be successful in the equine industry. This course will give students an understanding of the specificities of preparing a yearling for proper health and condition. Students will have hands on experience with the exercise, nutrition, and handling of yearling colts. Students will understand and prepare their colts for requirements prior to marketing colts to be sold, including training for photo and video sessions.

Prerequisite/Restriction: Safety and Skills Test

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

ADVS 2190 - Horse Production Practices
3 credits

This course focuses on horse production, beginning with aspects of management including anatomy, nutrition, disease and safety in handling. It also includes introductions to the digestive tract and feeding, reproduction, behavior and alternative medicines. Labs will involve demonstrations and hands-on activities on the topics covered in lecture.

Prerequisite/Restriction: Enrollment limited to students in the Equine Science and Management emphasis of the Animal, Dairy and Veterinary Sciences major or by instructor permission

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $100.00

ADVS 2200 - Anatomy and Physiology of Animals
4 credits

Normal structure and function studied systematically. Comparative livestock, poultry, pleasure and companion animals, laboratory animals, and humans.

Prerequisite/Restriction: BIOL 1620

Semester(s) Traditionally Offered: Spring
Course Fee: $20.00

ADVS 2250 - Cooperative Work Experience
1-12 credits

For students who require animal industry experience to prepare them for advanced curriculum in Animal, Dairy, or Bioveterinary Science.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 2300 - Horse Health Care
2 credits

Covers fundamental principles of stable management and horse health care, including facility up keep, ground manners, detecting and treating injuries and illness, management practices specific for individual facilities, horse herd health and upkeep, daily maintenance and duties required of a safe and healthy equine facility, show preparation, use of farm equipment and client relationships. Students are expected to be out at the Equine Education Center 6 hours per week.

Prerequisite/Restriction: ADVS 2190 and ADVS 2200 or instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $60.00
Effective Term
Fall 2017

ADVS 2400 - Riding Fundamentals II - Intermediate
3 credits

Students will develop skills of an intermediate rider. Lecture will include principles and theories to understand biomechanics and the rider’s influence on maneuvering the horse’s body. Riding lab will be used to demonstrate student’s understanding through intermediate patterns and movements.

Prerequisite/Restriction: ADVS 1600

Semester(s) Traditionally Offered: Fall and Spring
Effective Term
Fall

ADVS 2500 - Feeds and Feeding
3 credits

This course will provide a general introduction to physiological processes associated with nutrition, chemical composition of feedstuffs, nutritive requirements of domestic/production animals, and an introduction to formulating and balancing rations.
ADVS 2600 - Riding Fundamentals II - Western
2 credits

Lecture includes detailed discussion of upper-level riding skills necessary for western-style riding. Riding labs provide students with opportunity to develop more advanced riding skills.

Prerequisite/Restriction: Grade of C- or better in ADVS 1600, or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $220.00

ADVS 2650 - Riding Fundamentals II - Hunter
2 credits

Lecture includes detailed discussion of upper-level riding skills necessary for hunter-style riding. Riding labs provide students with opportunity to develop more advanced riding skills.

Prerequisite/Restriction: Grade of C- or better in ADVS 1600, or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $220.00

ADVS 3000 - Animal Health and Hygiene
3 credits

Introduction to basic principles of disease. Agents, mechanisms, and preventive measures for common diseases of farm animals will be emphasized.

Prerequisite/Restriction: ADVS 2200

Semester(s) Traditionally Offered: Spring
Course Fee: $30.00

ADVS 3100 - Equine Evaluation and Judging
3 credits

This course focuses on the principles of equine confirmation and performance. Students will learn to evaluate and select a horse for a suitable purpose. Students will learn to make choices, form opinions and defend their ideas. Evaluation of young horse potential, pre-purchase, common unsoundness issues will also be discussed.

Semester(s) Traditionally Offered: Fall
ADVS 3150 - Principles of Equine Assisted Activities and Therapies
3 credits

This course will provide an overview of the growing field of Equine Assisted Activities and Therapies (EAAT). It will explore the various disciplines within the EAAT; the standards and best practices for providing EAAT services; and how horses and humans interact within the EAAT setting.

Semester(s) Traditionally Offered: Spring
ADVS 3200 - Ethical Issues in Genetic Engineering and Biotechnology (DSC)
DSC Depth Life and Physical Sciences
3 credits

Critical evaluation of ethical issues of genetic engineering in biotechnology, including biological engineering and cloning of plants, animals, and humans. Presents basic science of genetic engineering and biotechnology.

Semester(s) Traditionally Offered: Spring
ADVS 3300 - Farrier Science, Basic Hoof Trimming and Shoeing
3 credits

Provides students with in-depth understanding of lower leg and hoof anatomy, as well as hands-on experience in both proper hoof trimming and shoeing.

Prerequisite/Restriction: ADVS 1600 and ADVS 2190 and ADVS 2200 and ADVS 3100

Semester(s) Traditionally Offered: Spring
Course Fee: $125.00

ADVS 3500 - Principles of Animal Nutrition
3 credits

ADVS 3500 is a principal animal nutrition course covering metabolic roles and characteristics of carbohydrates, proteins, lipids, minerals, vitamins, and water. Metabolic process of each nutrient will also be taught. Digestion, absorption, and use of nutrients and
their metabolites will be discussed as well.

**Prerequisite/Restriction:** ADVS 2200 and CHEM 1220

**Semester(s) Traditionally Offered:** Fall

**Course Fee:** $30.00

**Effective Term**

Fall 2016

**ADVS 3520 - Equine Nutrition and Exercise Physiology**

3 credits

This course will cover the nutritional needs of the horse and explore muscle function, demand and exercise physiology of the equine athlete. It will present topics in the lecture format with experiential experiences throughout the semester to highlight topics covered in lecture. Where appropriate, subject experts will be invited to cover certain topics.

**Semester(s) Traditionally Offered:** Fall

**Effective Term**

Fall 2016

**ADVS 3600 - Equine Behavior and Training**

3 credits

Focuses on developing the trust and confidence of both horse and handler when introducing and progressing through ground and under-saddle work.

**Prerequisite/Restriction:** ADVS 2600 or ADVS 2650, or instructor permission

**Semester(s) Traditionally Offered:** Fall, Spring

**Course Fee:** $220.00

**ADVS 3650 - Live Animal and Carcass Evaluation**

3 credits

Judging, grading, and pricing of market animals and carcasses, with emphasis on comparative evaluation of live animals and carcasses.

**Semester(s) Traditionally Offered:** Fall

**Course Fee:** $50.00

**ADVS 3710 - Advanced Livestock Judging**

2 credits


**Prerequisite/Restriction:** ADVS 3650 or instructor permission

**Repeatable for credit.**

**Semester(s) Traditionally Offered:** Spring

**Course Fee:** $150.00

**ADVS 3750 - Equine Behavior and Training II**

3 credits

This course is designed to advance students’ skills in colt training, conditioning, and two year old nutrition. Each horse will require diverse approaches to progress, which will allow students to learn to adapt to different cases they may encounter in their equine futures. Students will train colts to be suitable to be marketed for sale, therefore meeting an industry standard level of training for a two year old colt.

**Prerequisite/Restriction:** ADVS 3600 and/or Safety and Skills Test

**Semester(s) Traditionally Offered:** Spring

**Effective Term**

Spring 2016

**ADVS 3900 - Special Problems and Readings**

1-3 credits

Students conduct short-term studies and/or literature review with critical analysis of individualized subject matter. Formal written reports required.

**Prerequisite/Restriction:** Instructor permission

**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**ADVS 3910 - Special Topics**

1-5 credits

Topics of special interest to those who have needs not satisfied by courses currently offered.

**Repeatable for credit.**

**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**ADVS 4200 - Physiology of Reproduction and Lactation (CI)**

CI Communications Intensive

4 credits
Introduction to principles of physiology as they relate to the reproductive and lactation processes in domestic mammals. Factors affecting reproductive and lactation performance and their applications in animal management.

Prerequisite/Restriction: ADVS 2200; CHEM 1120, CHEM 1220, or CHEM 2310

Semester(s) Traditionally Offered: Fall
Course Fee: $45.00

ADVS 4210 - Applied Reproduction and Artificial Insemination
2 credits

Applied reproduction, artificial insemination and semen handling. Gross anatomy and physiology of common reproductive tracts and reproductive management of farm animals.

Prerequisite/Restriction: ADVS 4200

Semester(s) Traditionally Offered: Spring
Course Fee: $100.00

ADVS 4220 - Applied Equine Reproduction I
3 credits

This course focuses on reproductive management of the mare. Students will focus on breeding soundness exam for open mares, foaling, estrus cycle manipulation, diagnostic ultrasound for ovulation prediction, breeding with cooled shipped or frozen semen and finally pregnancy detection and maintenance. Students are required to participate in an early morning lecture and lab using mares maintained for the Equine Science breeding program.

Prerequisite/Restriction: ADVS 4200

Semester(s) Traditionally Offered: Spring
Course Fee: $100.00

ADVS 4250 - Internship in Animal Industry
1-12 credits

Directed and evaluated educational work experience with an animal production unit, related business, or government facility in cooperation with the Livestock Education Foundation.

Prerequisite/Restriction: ADVS 4200

Semester(s) Traditionally Offered: Fall
Course Fee: $45.00

ADVS 4260 - Internship in Animal Biotechnology Industry
2-12 credits

Directed and evaluated educational work experience with an animal biotechnology unit, or with a related business or government facility.

Prerequisite/Restriction: ADVS 5160 or ADVS 5260 and instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 4270 - Internship in Equine Industry
1-12 credits

Directed and evaluated work experience with an equine facility. Prerequisite: Permission of instructor.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 4560 - Principles of Animal Genetics and Breeding (QI)
QI Quantitative Intensive
3 credits

Genetic influences affecting animal performance and the application of selection principles, breeding systems, and methods of improvement to farm animals, including beef and dairy cattle, sheep, swine, and horses.

Prerequisite/Restriction: BIOL 1010 or BIOL 1620

Semester(s) Traditionally Offered: Fall

ADVS 4800 - Undergraduate Research of Creative Opportunity
1-6 credits

Research or creative activity pertaining to animals. May include management, production, medical, or basic science, with consideration of biological, chemical, or physical aspects, or instrument design.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 4810 - Thesis/Project Seminar
1 credit

Oral presentation and discussion of Honors senior thesis/projects. Guest presentations focus on essential contrasts and similarities in “ways of knowing” among various academic specialties.

Semester(s) Traditionally Offered: Fall, Spring

ADVS 4900 - Senior Thesis/Project
1-3 credits

All Honors students are required to submit a senior thesis/project for graduation with an Honors degree. Thesis/project may be in any area of student's choice, prepared in cooperation with an advisor drawn from the faculty at large.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 4920 - Undergraduate Seminar (CI)
CI Communications Intensive
2 credits

Current developments in agricultural field selected by student. Each student is responsible for the research and oral presentation of a topic in the animal industries. Group investigations, preparations, and deliberations on issues in animal agriculture.

Prerequisite/Restriction: Senior standing

Semester(s) Traditionally Offered: Fall

ADVS 5030 - Sustainable Agricultural Production Systems with Animals
3 credits

Study of various domestic animal production systems in relation to sustainable agriculture and integrated ranch and farm management strategies. Consideration of environmental factors and overall profitability.

Prerequisite/Restriction: ADVS 1110

Semester(s) Traditionally Offered: Fall

ADVS 5080 - Beef Cattle Management
3 credits

Managing the beef enterprise to yield optimum returns through integrating resource use and applying breeding, nutrition, reproduction, and animal health practices.

Prerequisite/Restriction: ADVS 2080; ADVS 4200, ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 6080.

Semester(s) Traditionally Offered: Spring

ADVS 5090 - Sheep Management and Wool Technology
4 credits

Detailed study of the managerial considerations for range and farm flock operations. Examinations of wool, and review of wool clip handling and merchandising.

Prerequisite/Restriction: ADVS 2090; ADVS 4200, ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 6090.

Semester(s) Traditionally Offered: Spring

ADVS 5120 - Swine Management
3 credits

Management decisions based on nutrition, breeding programs, herd health practices, herd records, and marketing opportunities.

Prerequisite/Restriction: ADVS 2120; ADVS 4200, ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 6120.

Semester(s) Traditionally Offered: Fall, Even Years

Course Fee: $65.00

ADVS 5130 - Dairy Cattle Management
3 credits

Capstone course drawing together concepts and applying them to a total dairy farm management program.

Prerequisite/Restriction: ADVS 4200 or ADVS 4560 (may be taken concurrently)
ADVS 5160 - Methods in Biotechnology: Cell Culture
3 credits
Techniques and fundamental knowledge for culturing mammalian and insect cells. Students will learn maintenance, growing, genetic engineering of cells, cytotoxicity, hybridoma creation, cloning, etc. Extensive laboratory experience is provided.

Cross-listed as: BIOL 5160 and NDFS 5160 and PSC 5160.

ADVS 5190 - Equine Business Management
3 credits
Deciding to turn your passion for horses into a profitable business requires planning. This course teaches principles of business plans, risk management, facility design, marketing and communication plans, event planning and journalism tools both general and unique to small equine businesses.

Prerequisite/Restriction: ADVS 2190; ADVS 4200, ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 6190.

ADVS 5220 - Endocrine Aspects of Nutrition
3 credits
Provides physiological background into hormones involved in nutrient regulation, as well as mechanisms of hormone action at the cellular and molecular levels. Includes action of steroids in the nucleus and membrane-based signal transduction pathways. Course includes lectures and literature reviews/presentations.

Prerequisite/Restriction: CHEM 3700 or instructor permission

Cross-listed as: ADVS 6220 and BIOL 5220/BIOL 6220

ADVS 5260 - Methods in Biotechnology: Molecular Cloning
3 credits
Laboratory-oriented course designed to teach molecular biology techniques such as DNA cloning, genetic probes, polymerase chain reaction, and DNA sequencing.

Prerequisite/Restriction: CHEM 3700 or CHEM 5710; or BIOL 3060; or instructor permission

Cross-listed as: BIOL 5260 and NDFS 5260, and PSC 5260.

ADVS 5280 - Animal Molecular Biology
3 credits
Laboratory-based course designed to present the theory and provide an in-depth laboratory experience in RNA detection, differential gene expression analysis, real-time RT-PCR, protein detection and purification, 2-D gel electrophoresis, and microarrays.

Prerequisite/Restriction: ADVS 5260 or instructor permission

Cross-listed as: ADVS 6280 and BIOL 5280/BIOL 6280

ADVS 5300 - Equine Assisted Activities and Therapies
2-3 credits
This course is designed to instruct and mentor students so they will be able to sit for certifying examinations by the Professional Association of Therapeutic Horsemanship International (PATH Intl.). This course will be offered as either 2 credits (4 weeks) or 3 credits (6 weeks) depending on the students beginning horsemanship skills. Registered instructor is the entry level certification required by PATH Intl. centers. Students will be prepared to take this certification examination.

Cross-listed as: ADVS 6300 and BIOL 5300/Biol 6300
Animal, Dairy and Veterinary Sciences

ADVS 5350 - Introductory Pharmacology and Pharmacokinetics
3 credits

Basic principles of pharmacology and pharmacokinetics providing basis for extrapolation of biological kinetics of foreign compounds to a wide variety of xenobiotics encountered in toxicology, biology, and research.

Prerequisite/Restriction: BIOL 5600, CHEM 3700

Cross-listed as: ADVS 6350.

Semester(s) Traditionally Offered: Spring, taught odd years

ADVS 5400 - Environmental Toxicology
3 credits

Presents in-depth survey of toxic chemicals present in the environment, environmental factors impacting fate of chemicals, potential biological effects associated with chemical exposures, and methods of reducing associated risks.

Prerequisite/Restriction: CHEM 1220 and BIOL 1620

Cross-listed as: ADVS 6400 and BIOL 5400/BIOL 6400 and PUBH 5400/PUBH 6400.

Semester(s) Traditionally Offered: Spring

ADVS 5500 - Applied Animal Nutrition
2 credits

This course will teach students how to use the information they have learned in introductory animal nutrition courses in applicable, real-life agricultural scenarios that can be applied in an industry setting.

Prerequisite/Restriction: ADVS 3500

Cross-listed as: ADVS 6500

Semester(s) Traditionally Offered: Spring (odd years only)

Effective Term
Spring 2017

ADVS 5520 - Grazing Livestock Nutrition and Management
2 credits

Principles of livestock nutrition and production applied to the grazing environment and the relationships of livestock and range management for optimizing values from both.

Prerequisite/Restriction: WILD 4000 (Recommended)

Cross-listed as: ADVS 6520.

Semester(s) Traditionally Offered: Spring, Even Years

ADVS 5630 - Endocrinology
3 credits

Molecular, cellular and physiological aspects of the endocrine system in vertebrates, presented with a species comparative approach. Clinical aspects and diseases associated with dysfunction of the endocrine system.

Prerequisite/Restriction: BIOL 1620

Cross-listed as: ADVS 6630, BIOL 5630, BIOL 6630

Semester(s) Traditionally Offered: Fall, Alternate Odd Years

ADVS 5650 - Science Communication
3 credits

Principles of effective science communication intended for scientific peers and general lay audiences. Instruction will center on effective written and/or oral communication for journal articles, proposals, conference presentation, public lectures and new media. This course is not discipline-specific.

Cross-listed as: ADVS 6650

Semester(s) Traditionally Offered: Fall even years
ADVS 5820 - Animal Cytogenetics and Gene Mapping
3 credits

Structure and properties of chromosomes, chromosome behavior during cell division, chromosomal influence on phenotype, and factors causing changes in chromosome structure and number. Gene markers and gene mapping, with emphasis on applications for livestock.

Prerequisite/Restriction: ADVS 4560 or BIOL 3060

Cross-listed as: ADVS 6820.

Semester(s) Traditionally Offered: Fall

ADVS 5860 - Poisonous Range Plants Affecting Livestock
3 credits

Poisonous plants of rangelands and their effects on grazing animals, especially livestock. Management practices to reduce or prevent poisoning.

Cross-listed as: WILD 5860

Semester(s) Traditionally Offered: Spring, Even Years

ADVS 6080 - Beef Cattle Management
3 credits

Managing the beef enterprise to yield optimum returns through integrating resource use and applying breeding, nutrition, reproduction, and animal health practices.

Prerequisite/Restriction: ADVS 2080; ADVS 4200, ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 5080.

Semester(s) Traditionally Offered: Spring

ADVS 6090 - Sheep Management and Wool Technology
4 credits

Detailed study of the managerial considerations for range and farm flock operations. Examinations of wool, and review of wool clip handling and merchandising.

Prerequisite/Restriction: ADVS 2090; ADVS 4200, ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 5090.

Semester(s) Traditionally Offered: Fall, Alternate Odd Years

Course Fee: $40.00

ADVS 6120 - Swine Management
3 credits

Management decisions based on nutrition, breeding programs, herd health practices, herd records, and marketing opportunities.

Prerequisite/Restriction: ADVS 2120; ADVS 4200, ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 5120.

Semester(s) Traditionally Offered: Fall, Even Years

Course Fee: $65.00

ADVS 6130 - Dairy Cattle Management
3 credits

Capstone course drawing together concepts and applying them to a total dairy farm management program.

Prerequisite/Restriction: ADVS 4200 or ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 5130

Semester(s) Traditionally Offered: Fall, Alternate Odd Years

Course Fee: $40.00

ADVS 6190 - Equine Business Management
3 credits

Deciding to turn your passion for horses into a profitable business requires planning. This course teaches principles of business plans, risk management, facility design, marketing and communication plans, event planning and journalism tools both general and unique to small equine businesses.

Prerequisite/Restriction: ADVS 2190; ADVS 4200, ADVS 4560 (may be taken concurrently)

Cross-listed as: ADVS 5190.

Semester(s) Traditionally Offered: Fall

ADVS 6200 - Physiology of Reproduction
3 credits
Study of processes of reproduction in mammals, including fertilization, embryonic development, reproductive endocrinology, and mechanisms of control.

Prerequisite/Restriction: ADVS 4200, CHEM 3700

Semester(s) Traditionally Offered: Fall

ADVS 6210 - Molecular Reproduction and Development
3 credits

Lecture-based course focusing on current knowledge of genes associated with gametogenesis, fertilization, nuclear reprogramming, and embryonic and fetal development.

Prerequisite/Restriction: ADVS 6200 or instructor permission

Cross-listed as: ADVS 7210.

Semester(s) Traditionally Offered: Spring, Odd Years

ADVS 6220 - Endocrine Aspects of Nutrition
3 credits

Provides physiological background into hormones involved in nutrient regulation, as well as mechanisms of hormone action at the cellular and molecular levels. Includes action of steroids in the nucleus and membrane-based signal transduction pathways. Course includes lectures and literature reviews/presentations.

Prerequisite/Restriction: CHEM 3700 or instructor permission

Cross-listed as: ADVS 5220 and BIOL 6220/BIOL 5220 and NDFS 6220/NDFS 5220.

Semester(s) Traditionally Offered: Fall

ADVS 6280 - Animal Molecular Biology
3 credits

Laboratory-based course designed to present the theory and provide an in-depth laboratory experience in RNA detection, differential gene expression analysis, real-time RT-PCR, protein detection and purification, 2-D gel electrophoresis, and microarrays.

Prerequisite/Restriction: ADVS 5260 or instructor permission

Cross-listed as: ADVS 5280 and BIOL 6280/BIOL 5280.

Semester(s) Traditionally Offered: Spring

Course Fee: $125.00

ADVS 6300 - Equine Assisted Activities and Therapies
2-3 credits

This course is designed to instruct and mentor students so they will be able to sit for certifying examinations by the Professional Association of Therapeutic Horsemanship International (PATH Intl.). This course will be offered as either 2 credits (4 weeks) or 3 credits (6 weeks) depending on the students beginning horsemanship skills. Registered instructor is the entry level certification required by PATH Intl. centers. Students will be prepared to take this certification examination.

Cross-listed as: ADVS 5300

Semester(s) Traditionally Offered: Summer

ADVS 6350 - Introductory Pharmacology and Pharmacokinetics
3 credits

Basic principles of pharmacology and pharmacokinetics providing basis for extrapolation of biological kinetics of foreign compounds to a wide variety of xenobiotics encountered in toxicology, biology, and research.

Prerequisite/Restriction: BIOL 5600, CHEM 3700

Cross-listed as: ADVS 5350

Semester(s) Traditionally Offered: Spring, taught odd years

ADVS 6400 - Environmental Toxicology
3 credits

Presents in-depth survey of toxic chemicals present in the environment, environmental factors impacting fate of chemicals, potential biological effects associated with chemical exposures, and methods of reducing associated risks.

Cross-listed as: ADVS 5400 and BIOL 6400/BIOL 5400 and PUBH 6400/PUBH 5400.
ADVS 6500 - Applied Animal Nutrition  
2 credits

This course will teach students how to use the information they have learned in introductory animal nutrition courses in applicable, real-life agricultural scenarios that can be applied in an industry setting. In addition, graduate students enrolled in the course will learn how techniques in applied animal nutrition can be modified and applied to research settings.

Prerequisite/Restriction: ADVS 3500

Cross-listed as: ADVS 5500

Semester(s) Traditionally Offered: Spring (odd years only)
Effective Term: Spring 2017

ADVS 6510 - Digestion and Metabolism in Ruminants  
3 credits

Explores key aspects of physiology and metabolism of the ruminant digestive tract, with emphasis on the rumen. Topics include: anatomy and function; motility; metabolism of protein, carbohydrates, and lipids; rumen microbiology; fermentation biochemistry; digestive disorders; and postruminal physiology.

Prerequisite/Restriction: ADVS 3500

Cross-listed as: ADVS 7510.

Semester(s) Traditionally Offered: Spring, Even Years

ADVS 6540 - Energy and Protein Metabolism  
3 credits

Examines principles of energetics; flow of energy; carbohydrate and lipid metabolism; efficiency of energy utilization in metabolism; energetic costs of nutrient inter-conversion and turnover; metabolism and utilization of protein; and relationship between energy and protein metabolism.

Prerequisite/Restriction: ADVS 3500, CHEM 5700

Cross-listed as: ADVS 7540.

Semester(s) Traditionally Offered: Spring, Even Years

ADVS 6600 - Advanced and Molecular Toxicology  
3 credits

The aim of this advanced toxicology course is to provide an in-depth knowledge of the mechanisms of interactions between foreign compounds and biological systems. Molecular mechanisms of action of environmental toxicants are emphasized. An understanding of the fundamentals of toxicology, biochemistry, and physiology is needed for this course.

Cross-listed as: ADVS 7600

Semester(s) Traditionally Offered: Fall

ADVS 6630 - Endocrinology  
3 credits

Molecular, cellular and physiological aspects of the endocrine system in vertebrates, presented with a species comparative approach. Clinical aspects and diseases associated with dysfunction of the endocrine system.

Prerequisite/Restriction: BIOL 1620

Cross-listed as: ADVS 5630, BIOL 5630, BIOL 6630

Semester(s) Traditionally Offered: Fall, Alternate Odd Years

ADVS 6650 - Science Communication  
3 credits
Principles of effective science communication intended for scientific peers and general lay audiences. Instruction will center on effective written and/or oral communication for journal articles, proposals, conference presentation, public lectures and new media. This course is not discipline-specific.

Cross-listed as: ADVS 5650

Semester(s) Traditionally Offered: Fall even years
ADVS 6680 - Seminar in Veterinary Pathology and Histopathology
3 credits

The goal of this course is to develop advanced histopathology skills as well as critical thinking skills. It consists of biweekly, 1 hour long microscopic slides and medical literature reviews covering a wide variety of diseases in domestic and non-domestic animals. This course is intended for advanced graduate students and veterinary pathology residents.

Cross-listed as: ADVS 7680

Pass/Fail
Semester(s) Traditionally Offered: Spring
ADVS 6700 - Epigenetics
3 credit

Epigenetics is the study of heritable changes in gene expression that do not involve changes to the underlying DNA sequence. This course is an in-depth discussion- and literature-based treatment of the molecular mechanisms and manifestations of epigenetics in eukaryotic systems.

Prerequisite/Restriction: CHEM 5700, reasonable equivalent, or instructor’s permission

Semester(s) Traditionally Offered: FALL, ODD YEARS
Effective Term
Fall
ADVS 6800 - Graduate Student Seminar
1 credit

Seminars on topics of interest in Animal, Dairy and Veterinary Sciences.

Semester(s) Traditionally Offered: Fall, Spring
ADVS 6810 - Seminar in Toxicology
1 credit

Graduate seminar in toxicology and related topics.
Repeatable for credit
Semester(s) Traditionally Offered: Spring
ADVS 6820 - Animal Cytogenetics and Gene Mapping
3 credits

Structure and properties of chromosomes, chromosome behavior during cell division, chromosomal influence on phenotype, and factors causing changes in chromosome structure and number. Gene markers and gene mapping, with emphasis on applications for livestock.

Prerequisite/Restriction: ADVS 4560 or BIOL 3060
Cross-listed as: ADVS 5820.

Semester(s) Traditionally Offered: Fall
ADVS 6820 - Animal Cytogenetics and Gene Mapping
3 credits

ADVS 6850 - Seminar in Veterinary Pathology and Histopathology
3 credits

The goal of this course is to develop general veterinary pathology knowledge, basic knowledge of veterinary clinical pathology, and to advance gross pathology and histopathology interpretive skills. It consists of biweekly, 1 hour long microscopic slides and medical literature reviews covering a wide variety of diseases in domestic and non-domestic animals. This course is intended for advanced graduate students and veterinary pathology residents.

Pass/Fail
Semester(s) Traditionally Offered: Fall
ADVS 6900 - Special Problems
1-3 credits

Readings, discussions, lectures, literature reviews, and research problems in animal, dairy, and bioveterinary sciences. Prerequisite: Consent of instructor and department.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 6910 - Readings and Conference in Pharmacology and Toxicology
1-3 credits

Independent readings and conferences in the area of pharmacology and toxicology with particular emphasis on current literature.

Prerequisite/Restriction: ADVS 6350/ADVS 5350

Repeatable for credit.
Semester(s) Traditionally Offered: Fall

ADVS 6970 - Research and Thesis
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 6990 - Continuing Graduate Advisement
1-3 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 7210 - Molecular Reproduction and Development
3 credits

Lecture-based course focusing on current knowledge of genes associated with gametogenesis, fertilization, nuclear reprogramming, and embryonic and fetal development.

Prerequisite/Restriction: ADVS 6200 or instructor permission

Cross-listed as: ADVS 6210.

Semester(s) Traditionally Offered: Spring, Odd Years

ADVS 7510 - Digestion and Metabolism in Ruminants
3 credits

Explores key aspects of physiology and metabolism of the ruminant digestive tract, with emphasis on the rumen. Topics include: anatomy and function; motility; metabolism of protein, carbohydrates, and lipids; rumen microbiology; fermentation biochemistry; digestive disorders; and postruminal physiology.

Prerequisite/Restriction: ADVS 3500

Cross-listed as: ADVS 6510.

Semester(s) Traditionally Offered: Spring

ADVS 7515 - Veterinary Microscopic Anatomy
4 credits

Students will learn the basics of microscopic anatomy and physiology of cells, tissues, and organs from normal domestic animals. The goal of this course is for students to acquire an understanding of microscopic anatomy to prepare them for instruction in disease mechanisms.

Cross-listed as: VM 7510

Semester(s) Traditionally Offered: Fall

ADVS 7519 - Veterinary Physiology I
4 credits

Students will learn the cellular physiology of tissues, organs, and systems from normal domestic animals. The goal of this course is for students to acquire an understanding of cellular physiology to prepare them for instruction in the mechanisms of disease.

Cross-listed as: VM 7519

Semester(s) Traditionally Offered: Fall

ADVS 7520 - Veterinary Physiology II
5 credits

Students will learn the physiology of organ systems from normal domestic animals. This course is the continuation of ADVS 7519 with emphasis on the physiology of organ systems and will help students acquire an understanding of the physiological basis for disease.

Cross-listed as: VM 7520

Semester(s) Traditionally Offered: Spring

ADVS 7534 - Veterinary Immunology
3 credits

Students will learn the basic mechanisms of immunology
with an emphasis on protective immunity against infectious diseases and the role of aberrant immune responses in disease. The goal of the course is for students to acquire a functional basis for medical immunology.

Cross-listed as: VM 7534

Semester(s) Traditionally Offered: Spring

ADVS 7535 - Veterinary Virology
3 credits

Students will learn the basics of general virology as it applies to normal domestic animals. The goal of this course is for students to acquire an understanding of the basic principles for the prevention and control of viral diseases.

Cross-listed as: VM 7535

Semester(s) Traditionally Offered: Fall

ADVS 7536 - Veterinary Bacteriology
4 credits

Students will learn the basics of general bacteriology and mycology as it applies to normal domestic animals. The goal of this course is for students to acquire an understanding of the basic principles for the prevention and control of bacterial and fungal diseases.

Cross-listed as: VM 7536

Semester(s) Traditionally Offered: Fall

ADVS 7540 - Energy and Protein Metabolism
3 credits

Examines principles of energetics; flow of energy; carbohydrate and lipid metabolism; efficiency of energy utilization in metabolism; energetic costs of nutrient inter-conversion and turnover; metabolism and utilization of protein; and relationship between energy and protein metabolism.

Prerequisite/Restriction: ADVS 3500, CHEM 5700

Cross-listed as: ADVS 6540.

Semester(s) Traditionally Offered: Spring, Even Years

ADVS 7545 - General Pathology
2 credits

Students will learn the basics of general pathology as it relates to cellular injury, inflammation, immunopathology and neoplasia. The goal of this course is for students to acquire an understanding of the basic principles of general pathology to enable them to apply those principles to understanding disease mechanisms.

Cross-listed as: VM 7545

Semester(s) Traditionally Offered: Spring

ADVS 7600 - Advanced and Molecular Toxicology
3 credits

The aim of this advanced toxicology course is to provide an in-depth knowledge of the mechanisms of interactions between foreign compounds and biological systems. Molecular mechanisms of action of environmental toxicants are emphasized. An understanding of the fundamentals of toxicology, biochemistry, and physiology is needed for this course.

Cross-listed as: ADVS 6600

Semester(s) Traditionally Offered: Fall, Taught Alternate Odd Years

ADVS 7680 - Seminar in Veterinary Pathology and Histopathology
3 credits

The goal of this course is to develop advanced histopathology skills as well as critical thinking skills. It consists of biweekly, 1 hour long microscopic slides and medical literature reviews covering a wide variety of diseases in domestic and non-domestic animals. This course is intended for advanced graduate students and veterinary pathology residents.

Cross-listed as: ADVS 6680

Pass/Fail

Semester(s) Traditionally Offered: Spring

ADVS 7970 - Dissertation Research
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ADVS 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Anthropology

ANTH 1010 - Cultural Anthropology (BSS)
BSS Breadth Social Sciences
3 credits

Role of cultural concepts within discipline of anthropology. Relationship of cultural concepts to survival and adaptation, society and social life, ideology and symbolism, and cultural change and diversity. Applications to contemporary world problems.

Semester(s) Traditionally Offered: Fall, Spring (Fall, Spring, Summer online)

ANTH 1020 - Biological Anthropology (BLS)
BLS Breadth Life Sciences
3 credits

Survey of multidisciplinary field of biological anthropology. Includes study of fossil and living primates, fossil evidence for human evolution, bioarchaeology, contemporary human variation and adaptation, principles of evolutionary theory, and introductory population genetics.

Semester(s) Traditionally Offered: Fall

ANTH 1030 - World Archaeology (BSS)
BSS Breadth Social Sciences
3 credits

Surveys archaeology and the means by which inferences about the past are made. Examines major processes shaping humans, including world colonization, our foraging legacy, origins of agriculture and civilization, and implications of our past for the present and future.

Semester(s) Traditionally Offered: Fall (Spring online)

ANTH 1099 - Resources in Anthropology at USU
1 credit

Familiarizes incoming freshmen, new majors, and transfer students with the academic resources available to Anthropology students at USU. Covers program, department, library, college, campus, intercampus, and internet resources.

Semester(s) Traditionally Offered: Fall

ANTH 2010 - Peoples of the Contemporary World (BSS)
BSS Breadth Social Sciences
3 credits

Introduces different ways of life, rural and urban, from the world’s major culture areas. Focuses on how contemporary societies have evolved in ecological, historical, and political context. Introduces problems arising from third world social change.

Semester(s) Traditionally Offered: Spring

ANTH 2011 - Introduction to Peoples of the Southwest (BHU)
BHU Breadth Humanities
3 credits

Course will appeal to those interested in the prehistoric and living peoples of the American Southwest. A variety of classroom and field trip experiences will be used to apply the principles of archaeology and anthropology to the native peoples of the region.

Prerequisite/Restriction: Previous anthropology experience or coursework suggested

Campus: USU Eastern only

ANTH 2018 - Native American History and Culture (BSS)
BSS Breadth Social Sciences
3 credits

Provides a broad overview of Native American history from pre-history to the present. First half of the course emphasizes an anthropological approach to the study of the origins and reality of historical and contemporary Native American peoples. Topics include early colonization of North America, diversity of aboriginal cultures, the great ancestral civilizations of Mesoamerica and South America, and Native America in the 20th and 21st centuries. Second half of the course examines the process and results of conquest and colonization, the United States government Indian policy, and the persistence of Native American culture and tribal identity
throughout the modern era. Course employs discussion, lecture, independent reading and writing projects, participation in Native American cultural activities and Native American history in film.

Prerequisite/Restriction: Previous anthropology experience or coursework is suggested

Cross-listed as: HIST 2018

Campus: USU Eastern only

ANTH 2210 - Introduction to Folklore (BHU)
BHU Breadth Humanities
3 credits

Introduction to major genres of folklore (folk narrative, custom, folk music and song, vernacular architecture and arts), folk groups (regional, ethnic, occupational, familial), and basic folklore research method (collecting and archiving).

Cross-listed as: ENGL 2210 and HIST 2210.

Semester(s) Traditionally Offered: Fall, Spring

ANTH 2330 - Principles of Archaeology (BSS)
BSS Breadth Social Sciences
3 credits

Addresses different ways of interpreting the past by exploring archaeology’s historical, theoretical, and methodological development. Provides students with the basic tools for conducting archaeological research and with an understanding of the background of the discipline.

Semester(s) Traditionally Offered: Spring

ANTH 2520 - Introductory Archaeology Field School
3-5 credits

Internship on archaeological field project, including survey, excavation, recording, mapping, and scientific conduct or archaeological problem solving. Application process may begin as early as December. Additional field support fee required.

Prerequisite/Restriction: ANTH 1030 and instructor permission

Campus: USU Eastern only Semester(s) Traditionally Offered: Summer

ANTH 2525 - Introductory Archaeology Lab
1-3 credits

Laboratory experience enabling participation in analysis/reporting stages of archaeology projects. Includes methods component.

Prerequisite/Restriction: Instructor permission

Campus: USU Eastern only

ANTH 2720 - Survey of American Folklore
3 credits

Principal ethnic, regional, and occupational folk groups in America. Relations between folklore and American history, literature, and society. Key genres in American folklore (narrative, art, song, etc.) and their role in American culture.

Cross-listed as: ENGL 2720 and HIST 2720

Semester(s) Traditionally Offered: Spring

ANTH 2977 - Cooperative Education
1-3 credits

Provides on-the-job experience for students in most aspects of archaeological work.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

ANTH 2988 - Independent Studies
1-3 credits

Customized study or readings on topics not covered in regular courses.

Prerequisite/Restriction: Approval of proposal written by students in consultation with instructor

Repeatable for credit
Campus: USU Eastern only

ANTH 2999 - Workshop
1-3 credits
Designed to meet the changing needs of the student in Anthropology.

Repeatable for credit
Campus: USU Eastern only

ANTH 3090 - Introduction to Shamanism: Shamanic Healing for Personal and Planetary Transformation
3 credits

Course provides introduction to methods utilized by shamanic healers as well as background information on indigenous views of relationships between matter, mind and spirit to help students understand how shamanic healing is used in multiple settings.

Cross-listed as: RELS 3090

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $25.00

ANTH 3110 - North American Indian Cultures (DSS)
DSS Depth Social Sciences
3 credits

Introduces ethnography of native cultures found within the USA and Canada, documenting their pre-contact adaptations and their interactions with changing national policies leading to today's resurgence of native peoples.

Semester(s) Traditionally Offered: Fall

ANTH 3120 - African Healing Systems
3 credits

Provides an overview of health and illness, and health care systems in cultural contexts among African societies. Offers opportunities to engage problems arising at the intersections of indigenous ethnomedical systems, religious healing traditions, and biomedicine in Africa.

Semester(s) Traditionally Offered: Fall, Odd Years

ANTH 3130 - Peoples of Latin America (CI)
CI Communications Intensive
3 credits

Survey of Latin American cultures, past and present. Emphasis on culture as a dynamic, adaptive system and on contemporary issues in rural and urban Andean South America, Amazonia, and Mesoamerica. Appropriate for both majors and nonmajors.

Semester(s) Traditionally Offered: Fall

ANTH 3140 - Sex and Gender (DSS)
DSS Depth Social Sciences
3 credits

Increases awareness of sexuality and gender and of feminist perspectives about social problems related to sex and gender that cross-cut cultural boundaries and paradigms.

Semester(s) Traditionally Offered: Spring, Odd Years

ANTH 3150 - Applied Anthropology Survey: History, Uses, Methods, and Careers
3 credits

Surveys the field of applied anthropology, including discussions of emergence, application, and usefulness. Introduces students to methods and skills used by practitioners, as well as to those used to prepare for careers in applied anthropology.

Semester(s) Traditionally Offered: Spring
Course Fee: $60.00

ANTH 3160 - Anthropology of Religion (DSS)
DSS Depth Social Sciences
3 credits


Cross-listed as: RELS 3160

Semester(s) Traditionally Offered: Fall

ANTH 3200 - Perspectives on Race (DSS/CI)
DSS/CI Depth Social Sciences/Communications Intensive
3 credits

Study of the processes of racial differentiation, the basis of biological differences found among existing human groups, the influence of biology and culture on human variation, and the influence of social context on perceptions of race.

Semester(s) Traditionally Offered: Spring
ANTH 3250 - Osteology
3 credits
Detailed hands-on study of human skeleton, including component of comparative vertebrate skeletal anatomy. Applications to fields of archaeology, forensic science, paleopathology, and zoology. Includes methods component.

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

ANTH 3300 - Archaeology in North America (DSS)
DSS Depth Social Sciences
3 credits
Prehistoric and historic archaeology of the North American continent. Explores initial colonization and Native American origins; variability among foraging adaptations; spread of farming; cultural complexity in Midwest, Southwest, and West Coast; Indian-environment relationships; European contact; depopulation; and historic archaeology of Euro-Americans.

Semester(s) Traditionally Offered: Spring

ANTH 3310 - Introduction to Museum Studies (CI)
CI Communications Intensive
3 credits
Explores all aspects of museum work, from the acquisition and storage of collections to fundraising and educational programs. As part of course requirements, students tour area museums and get first-hand perspectives on the challenges and rewards of museum work from professionals in the field. Course fee for field trip(s) required.

Cross-listed as: MUSM 3310
Semester(s) Traditionally Offered: Spring
Course Fee: $20.00

ANTH 3330 - Geophysical Survey Systems for Archaeology
3 credits
This course introduces undergraduates to the application of geophysical inquiry in archaeological research. No prerequisites or previous experience is required.

ANTH 3340 - Geographic Information Science for Anthropology
3 credits
This course introduces undergraduate students to the application of Geographic Information Systems in anthropological research. No prior GIS experience is required for enrollment.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

ANTH 3350 - Archaeology of Ancient Civilizations (DSS)
DSS Depth Social Sciences
3 credits
Mesoamerica. In-depth study of the process of their formation and theories of their origins. Emphasis is anthropological and scientific to complement the classical and humanistic.

Semester(s) Traditionally Offered: Spring

ANTH 3360 - Utah Archaeology (DSS)
DSS Depth Social Sciences
3 credits
Popular introduction to the archaeology and prehistory of Utah and surrounding regions. Employs approachable texts with some supplementary readings. Features liberal use of photographs and maps to illustrate lectures. Class website provides context, discussion forums, and study aids.

Semester(s) Traditionally Offered: Fall

ANTH 3370 - Archaeology of Prehistoric Europe (DSS)
DSS Depth Social Sciences
3 credits
Explores major issues in European prehistory, from the arrival of the first hominids through the establishment of settled farming and pastoral communities just before the rise of the state societies.

Semester(s) Traditionally Offered: Fall
ANTH 3380 - Archaeology Field Trip  
1-3 credits

Field trip to archaeological points of interest. Trips vary in destination (local to surrounding states) and duration (1-7 days). Credits vary from 1-3 and are determined by the instructor based on the duration of the trip and the accompanying reading, writing, and any other assignments on a particular trip. Consult with instructor for details.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $300.00

ANTH 3550 - Culture of East Asia (DHA)  
DHA Depth Humanities and Creative Arts
3 credits

Helps students explore and appreciate the culture of three East Asian countries: China, Japan and Korea. Students gain sincere view and understanding of these East Asian cultures through readings, hands-on cultural activities, viewing video materials, writing, and discussions. Topics include: major historical and social events, customs and traditions, thoughts and beliefs, people, food, contemporary issues, art, literature, and film.

Cross-listed as: HIST 3550 and LANG 3550.

ANTH 4100 - The Study of Language  
3 credits

Investigates ways in which human languages are structured, how they change, how they reflect the cultures in which they are used, and how they are learned.

Cross-listed as: LING 4100.

Semester(s) Traditionally Offered: Fall, Spring

ANTH 4110 - Southwest Indian Cultures, Past and Present (DSS)  
DSS Depth Social Sciences
3 credits

Reviews past and present Indian cultures of greater southwest region. Examines the prehistoric Anasazi, the Pueblos, the canyon and desert peoples, the Utes, and the Navajos. Interprets these cultures in ecological, historic, and political contexts.

Cross-listed as: ANTH 6110.

Semester(s) Traditionally Offered: Spring

ANTH 4120 - Anthropology of Childhood (DSS/CI)  
DSS/CI Depth Social Sciences/Communications Intensive
3 credits

Focuses on the anthropological study of childhood. Students design and carry out an ethnology (using library and archival sources) on an issue in the study of children. Readings of ethnographic studies of childhood from the U.S. and abroad. Includes methods component.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirements (ENGL 2010)

Semester(s) Traditionally Offered: Spring

ANTH 4130 - Introduction to Medical Anthropology (DSS)  
DSS Depth Social Sciences
3 credits

Introduction to the discipline of Medical Anthropology. Examines the bio-ecological (matter) and socio-cultural aspects of disease/illness in human populations and examines “spiritual” dimensions of health in cross-cultural context. Includes methods component for anthropology majors and serves as a Liberal Arts cluster capstone course.

Semester(s) Traditionally Offered: Spring

ANTH 4140 - Anthropology of Global Health (CI)  
CI Communications Intensive
3 credits

This course provides an overview of anthropology of global health and anthropology in global health. The course offers students the opportunity to understand health problems in global perspective, public health initiatives in “development” contexts, and local responses to international health issues.

Cross-listed as: ANTH 6140

Semester(s) Traditionally Offered: Spring, Odd Years
ANTH 4170 - Ethnographic Methods in Anthropology
3 credits

Course familiarizes students with methods of anthropological field research including data collection, recording, analysis and write-up giving students the opportunity for conducting field research in a controlled, supervised setting. Fulfills methods requirement for anthropology.

Cross-listed as: ANTH 6170

Semester(s) Traditionally Offered: Fall, alternate years
Course Fee: $47.00

ANTH 4800 - Topics in Anthropology
1-3 credits

Focuses on special topics in anthropology. Topics and course format vary.

Repeatable for credit.

ANTH 4980 - History and Theories of Anthropology
3 credits

Explores the epistemological foundations of anthropology. Traces the history of anthropology, including the main currents of theoretical thought, the paradigm shifts that revitalize the discipline, and the major scholars that illustrate each period. This is an advanced course that benefits from some anthropology and familiarity with the intellectual traditions of the Western World.

Prerequisite/Restriction: ANTH 1010 and at least one other upper-division course in cultural anthropology

Semester(s) Traditionally Offered: Fall or Spring

ANTH 4990 - Contemporary Issues in Anthropology (CI)
CI Communications Intensive
3 credits

Capstone course in anthropological theory and method, required for all majors.

Prerequisite/Restriction: ANTH 1010; ANTH 4980 (recommended)

Semester(s) Traditionally Offered: Spring

ANTH 5115 - Applied Anthropology/Ethnographic Research Lab
1-3 credits

This lab course provides an opportunity for students to gain experience analyzing qualitative data and generating reports that are associated with ethnographic/applied anthropology field research as well as related tasks associated with ethnographic/applied anthropology research.

Cross-listed as: ANTH 6115

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

ANTH 5130 - Ethnographic Field School
3-6 credits

Provides practical training in use of ethnographic field methods, qualitative data analysis, and ethnographic report-writing. Combines classroom instruction with supervised off-campus field research, while living in a cross-cultural setting. Fulfills program methods requirement. Application and additional fee required.

Cross-listed as: ANTH 6130 and SOC 5130/SOC 6130.

Semester(s) Traditionally Offered: Summer
Course Fee: $42.00

ANTH 5190 - Applied Anthropology Practicum
1-5 credits

Seminar with supervised projects in applied anthropology for advanced students. Integrates academic knowledge and field technique. Includes methods component.

Prerequisite/Restriction: Instructor permission

Cross-listed as: ANTH 6190.

Repeatable for credit.

ANTH 5210 - Physical Anthropology Lab
1-3 credits

Laboratory experience enabling participation in analysis/reporting stages of physical anthropology projects. Includes methods component.
Prerequisite/Restriction: Instructor permission

ANTH 5250 - Problems in Bioarchaeology (QI)
QI Quantitative Intensive
3 credits

Examines various approaches to the study of human biocultural adaptation through the analysis of human remains from archaeological sites. Includes methods component. Graduate students complete a more substantial research project than undergraduates, which must include a quantitative component.

Prerequisite/Restriction: STAT 1040 or STAT 1045 or higher statistics class or ANTH 3250 or instructor permission

Cross-listed as: ANTH 6250

Repeatable for credit
Semester(s) Traditionally Offered: Spring
Course Fee: $25.00

ANTH 5300 - Archaeology Field School
6 credits

Internship on archaeological field project, including survey, excavation, recording, mapping, and scientific conduct of archaeological problem solving. Application process may begin as early as December. Additional field support fee required.

Prerequisite/Restriction: ANTH 1030 and instructor’s permission

Cross-listed as: ANTH 6300

Repeatable
Semester(s) Traditionally Offered: Summer
Course Fee: $1,000.00
Effective Term
Summer 16

ANTH 5310 - Archaeology Laboratory
1-3 credits

Laboratory experience enabling participation in analysis/reporting stages of archaeology projects. Includes methods component.

Prerequisite/Restriction: Graduate standing or instructor permission

Cross-listed as: ANTH 6310.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

ANTH 5320 - Zooarchaeology
3 credits

Advanced undergraduate and graduate course on laboratory methods in zooarchaeology. Structured to address anthropologically significant questions that can be investigated through zooarchaeological analysis, and to provide students with the basic analytical skills to address these questions. Graduate students will be required to conduct a more extensive research project and write-up.

Cross-listed as: ANTH 6320.

Campus: Brigham City.
Semester(s) Traditionally Offered: Spring
Course Fee: $25.00

ANTH 5330 - Geoarchaeology
3 credits

Explores the ways that the earth sciences are employed in archaeological analysis. Topics include: sedimentology, pedology, geomorphology, paleoclimatology, geophysical methods of dating archaeological materials, artifact and materials sourcing, and modeling environment-human interaction.

Prerequisite/Restriction: Graduate standing; or ANTH 1020 and ANTH 1030; or GEO 1110 and GEO 3200 and upper-division standing

Cross-listed as: ANTH 6330.

Semester(s) Traditionally Offered: Fall

ANTH 5340 - Archaeology of the Desert West
3 credits
Prehistory of Utah and surrounding regions in context of human behavioral ecology. Approachable texts and primary literature. Photographs and maps illustrate lectures. Web site provides content, discussion forums and study aids. Graduate students present research and have weekly seminar.

Prerequisite/Restriction: ANTH 1030 and ANTH 2330

Cross-listed as: ANTH 6340

Semester(s) Traditionally Offered: Fall

ANTH 5380 - Peopling of the New World
3 credits

Explores how, when, and why humans first populated the Americas. Through emphasis on critical thinking and hypothesis testing, students scientifically evaluate evidence for initial colonization drawn from the fields of archaeology, biological anthropology, genetics, and linguistics. This course is the archaeology track capstone for anthropology majors pursuing an archaeology track.

Prerequisite/Restriction: ANTH 1030 or ANTH 2330, plus one upper-division archaeology course

Cross-listed as: ANTH 6380

Semester(s) Traditionally Offered: Spring

ANTH 5420 - Lithic Analysis
1-3 credits

Laboratory course emphasizing techniques used to study stone tools and other lithic technologies. Focuses on morphological analysis and how to generate data from laboratory measurements. Includes applications of lithic analyses to empirical and theoretical research questions.

Prerequisite/Restriction: ANTH 1030 and at least two courses from the “archaeology track” suite on the anthropology major green sheet

Cross-listed as: ANTH 6420

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Even years
Course Fee: $25.00

ANTH 5650 - Developing Societies (DSS)
DSS Depth Social Sciences
ANTH 5980 - Senior Project
1 credit

Develops advanced research and writing skills in a specialty area, and results in a research project/report. Completed in consultation with faculty instructor and subject to approval.

ANTH 6110 - Southwest Indian Cultures, Past and Present
3 credits

Reviews past and present Indian cultures of greater southwest region. Examines the prehistoric Anasazi, the Pueblos, the canyon and desert peoples, the Utes, and the Navajos. Interprets these cultures in ecological, historic, and political contexts.

Cross-listed as: ANTH 4110.

ANTH 6140 - Anthropology of Global Health
3 credits

This course provides an overview of anthropology of global health and anthropology in global health. The course offers students the opportunity to understand health problems in global perspective, public health initiatives in “development” contexts, and local responses to international health issues.

Cross-listed as: ANTH 4140

ANTH 6170 - Ethnographic Methods in Anthropology
3 credits

Course familiarizes students with methods of anthropological field research including data collection, recording, analysis and write-up giving students the opportunity for conducting field research in a controlled, supervised setting. Fulfills methods requirement for anthropology.

Cross-listed as: ANTH 4170

ANTH 6190 - Applied Anthropology Practicum
1-5 credits

Seminar with supervised projects in applied anthropology for advanced students. Integrates academic knowledge and field technique. Includes methods component.

Prerequisite/Restriction: Instructor permission

Cross-listed as: ANTH 5190.

ANTH 6250 - Problems in Bioarchaeology
3 credits

Examines various approaches to the study of human biocultural adaptation through the analysis of human
remains from archaeological sites. Includes methods component. Graduate students complete a more substantial research project than undergraduates, which must include a quantitative component.

Prerequisite/Restriction: STAT 1040 or STAT 1045 or higher statistics class or ANTH 3250 or instructor permission

Cross-listed as: ANTH 5250.

Repeatable for credit.
Semester(s) Traditionally Offered: Spring
Course Fee: $25.00

ANTH 6300 - Archaeology Field School
6 credits

Internship on archaeological field project, including survey, excavation, recording, mapping, and scientific conduct of archaeological problem solving. Application process may begin as early as December. Additional field support fee required.

Cross-listed as: ANTH 5300

Repeatable
Semester(s) Traditionally Offered: Summer
Course Fee: $1,000.00
Effective Term
Summer

ANTH 6310 - Archaeology Lab
1-3 credits

Laboratory experience enabling participation in analysis/reporting stages of archaeology projects. Includes methods component.

Prerequisite/Restriction: Graduate standing or instructor permission

Cross-listed as: ANTH 5310.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ANTH 6320 - Zooarchaeology
3 credits

Advanced undergraduate and graduate course on laboratory methods in zooarchaeology. Structured to address anthropologically significant questions that can be investigated through zooarchaeological analysis, and to provide students with the basic analytical skills to address these questions. Graduate students will be required to conduct a more extensive research project and write-up.

Cross-listed as: ANTH 5320.

Campus: Brigham City.
Semester(s) Traditionally Offered: Spring
Course Fee: $25.00

ANTH 6330 - Geoarchaeology
3 credits

Explores the ways that the earth sciences are employed in archaeological analysis. Topics include: sedimentology, pedology, geomorphology, paleoclimatology, geophysical methods of dating archaeological materials, artifact and materials sourcing, and modeling environment-human interaction.

Prerequisite/Restriction: Graduate standing; or ANTH 1020 and ANTH 1030; or GEO 1110 and GEO 3200 and upper-division standing

Cross-listed as: ANTH 5330.

Semester(s) Traditionally Offered: Fall

ANTH 6340 - Archaeology of the Desert West
3 credits

Prehistory of Utah and surrounding regions in context of human behavioral ecology. Approachable texts and primary literature. Photographs and maps illustrate lectures. Web site provides content, discussion forums and study aids. Graduate students present research and have weekly seminar.

Prerequisite/Restriction: Graduate standing

Cross-listed as: ANTH 5340

Semester(s) Traditionally Offered: Fall

ANTH 6350 - Archaeological Theory
3 credits

Survey and critique of archaeological theory from the 19th century to current issues in the 21st century.
Emphasizes shifting paradigms and research strategies. As a seminar course, includes reading, discussion, and critical writing.

Semester(s) Traditionally Offered: Fall

ANTH 6360 - Research Design and Quantitative Methods in Archaeology
3 credits

Develops skills required for conducting original research at the professional level. Focuses on linking research with relevant theoretical, empirical, and methodological questions; developing statistically sound sampling strategies; using statistics to interpret data; and deriving conclusions from data.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

ANTH 6370 - GIS in Archaeology
3 credits

Presents background and develops skills necessary to use geographic information systems (GIS) for recording and maintaining archaeological data. Provides overview on how to use GIS to analyze and interpret these types of data.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ANTH 6380 - Peopling of the New World
3 credits

Explores how, when, and why humans first populated the Americas. Through emphasis on critical thinking and hypothesis testing, students scientifically evaluate evidence for initial colonization drawn from the fields of archaeology, biological anthropology, genetics, and linguistics.

Prerequisite/Restriction: ANTH 1030 or ANTH 2330, plus one upper-division archaeology course
Cross-listed as: ANTH 5380

Semester(s) Traditionally Offered: Spring

ANTH 6390 - Cultural Resources Management Policy
3 credits

Reviews the history of Cultural Resource Management (CRM) legislation, addressing how laws are interpreted and implemented by contract archaeologists working mainly in the United States. Focuses on how to run modern CRM projects within this legislative framework.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Spring

ANTH 6400 - Collections Management
1-3 credits

Teaches techniques for accessioning, curating, storing, and managing anthropological collections. Emphasizes computer software commonly used to track ethnographic and archaeological assemblages of objects.

Semester(s) Traditionally Offered: Spring, Taught Alternate Years

ANTH 6410 - Writing for Archaeologists
3 credits

Teaches future archaeologists to communicate effectively in the various genres of the discipline demanding writing proficiency. Emphasizes professional writing, including research papers, grant proposals, bids for archaeological work, curriculum vitae, and cover letters.

Semester(s) Traditionally Offered: Fall

ANTH 6420 - Lithic Analysis
1-3 credits

Laboratory course emphasizing techniques used to study stone tools and other lithic technologies. Focuses on morphological analysis and how to generate data from laboratory measurements. Includes applications of lithic analyses to empirical and theoretical research questions.

Prerequisite/Restriction: Graduate standing
Cross-listed as: ANTH 5420
Repeatable for credit

Semester(s) Traditionally Offered: Fall, Even Years
Course Fee: $25.00
ANTH 6430 - Archaeometry
3 credits

This course is a graduate seminar that focuses on advanced instrumental analysis of archaeological materials. The semester course is divided into two sections that include techniques in archaeological chronology and archaeological chemistry. Instruction includes lecture, laboratory exercises, and critical review of appropriate literature in technique development and applications to the regional archaeological record.

Semester(s) Traditionally Offered: Spring, Odd Years

ANTH 6650 - Developing Societies
3 credits

Reviews how sociology, cultural geography, and economic anthropology analyze processes of globalization in postcolonial societies. Examines changing livelihoods, patterns of spatial incorporation and societal evolution, and emergent policy problems associated with rapid socioeconomic change.

Cross-listed as: ANTH 5650 and GEOG 6650/GEOG 5650 and SOC 6650/SOC 5650.

Semester(s) Traditionally Offered: Spring

ANTH 6700 - Archaeology Internship
2 credits

Internship in governmental agency, tribal office, museum, or private archaeology firm. Coordinated by the Anthropology graduate director, in conjunction with the committee chair and professional supervisor.

Prerequisite/Restriction: Proposal and Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

ANTH 6800 - Museum Development
1-3 credits

Apprenticeship in the USU Museum of Anthropology to learn the operation of a small museum. Entails collaborating closely with the museum director and staff. Projects vary and can include curation, exhibit development, public outreach, and others.

Prerequisite/Restriction: Approval of proposal written by student in consultation with instructor

Repeatable for credit.

ANTH 6900 - Independent Studies
1-3 credits

Customized study or readings for graduate students on topics not covered in regular courses.

Semester(s) Traditionally Offered: Fall, Spring

ANTH 6950 - Archaeology Special Topics/Seminar
1-3 credits

Special topics course or seminar for graduate students in the Master of Science program in archaeology and cultural resource management.

Semester(s) Traditionally Offered: Fall, Spring

ANTH 6970 - Thesis Research
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Applied Economics

APEC 1600 - Natural Resources and American Economic Institutions (BAI)
BAI Breadth American Institutions
3 credits

This course explores how the American economy and quality of life is linked to the development of the nation's resources. Focus is on the interaction of individual citizens, business, and government institutions from the Colonial Era to present. Topics explore the role of democracy, property rights, free markets, government, agencies, and financial institutions in the development of the United States.

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring 2017

APEC 2010 - Introduction to Microeconomics (BSS)
BSS Breadth Social Sciences
3 credits

Designed to build an understanding of the economics of the marketplace from the perspectives of individual consumer and producer or business. Development and application of microeconomic principles to demonstrate the role and limitations of competitive markets in motivating socially efficient consumer, business, and public sector choices.

Prerequisite/Restriction: ECN 1500

Cross-listed as: ECN 2010.

Semester(s) Traditionally Offered: Fall, Spring, Summer

APEC 3010 - Introduction to Agricultural Economics and Agribusiness (DSS)
DSS Depth Social Sciences
3 credits

Introduction to economic principles as they apply to the food and agricultural industry. Emphasizes production and consumption of food and fiber products, the structure of the agricultural/agribusiness industry, major farm problems, and public policy issues impacting agribusiness firms.

Semester(s) Traditionally Offered: Spring

APEC 3012 - Introduction to Natural Resource and Regional Economics (DSS)
DSS Depth Social Sciences
3 credits

Introduction to economic principles as they apply to the use of natural resources and as they affect environmental quality. Analysis of changes in natural resource use and environmental quality, in order to determine the economic impact upon rural communities and regions.

Semester(s) Traditionally Offered: Fall

APEC 3020 - Firm Finance and Records Analysis (DSS)
DSS Depth Social Sciences
3 credits

Construction, analysis, and comparison of key financial statements using cash and accrual systems of accounting. Introduction to computerized financial and management record-keeping systems to meet tax and management purposes.

Prerequisite/Restriction: ACCT 2010 and APEC 3010 (APEC 3010 may be taken concurrently)

Semester(s) Traditionally Offered: Spring

APEC 3310 - Analytical Methods in Applied Economics (QI)
QI Quantitative Intensive
3 credits

Explores application of mathematics to agricultural, resource, environmental, and regional economics. Reviews algebraic, single-variable calculus (differentiation and integration); multivariate calculus optimization; and linear algebra and applications to economics.

Corequisite: MATH 1100 and (APEC 2010 or ECN 2010) or instructor’s permission

Semester(s) Traditionally Offered: Fall

APEC 3500 - Commodity Futures and Options Trading and Analysis
2 credits

This course is an introduction into commodity futures and options trading. Students will learn about fundamental and technical analysis of markets and how to hedge to offset commodity price risk. Speculative trading strategies will also be introduced.

Semester(s) Traditionally Offered: Fall

Effective Term
Fall 2016

APEC 4010 - Intermediate Microeconomics
3 credits

Analysis of behavior of consumers and business firms. Application of theory to the solution of real world problems. Credit will not be given for both ECN 3010 and APEC/ECN 4010.

Prerequisite/Restriction: APEC 2010/ECN 2010, MATH 1100 or MATH 1210, and STAT 2300 or STAT 2000
Cross-listed as: ECN 4010.

Semester(s) Traditionally Offered: Fall, Spring

APEC 4250 - Applied Economics Internship
1-3 credits

A professional internship which is a directed and evaluated educational work experience in agribusiness, international agribusiness, or environmental and natural resource economics. Internships can be with private firms; local, state or federal agencies; or non-profit organizations.

Prerequisite/Restriction: Approval of Instructor

Repeatable

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring 2016

APEC 4900 - Directed Readings, Research, or Seminar Series
1-3 credits

This course is for students who are undertaking a directed readings, participating in a research project or attending a seminar series. To receive credit in the Applied Economics department, prior approval of a faculty member is required.

Repeatable

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring 2017

APEC 5000 - International Trade and Finance
3 credits

Explores various issues in international trade and international finance with emphasis on agricultural goods and products. Topics include comparative advantage, gains from trade, trade policy, balance of payments, foreign exchange rates and policies, and international investment.

Prerequisite/Restriction: ECN 1500

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

APEC 5010 - Firm Marketing and Price Analysis (QI)
QI Quantitative Intensive
3 credits

This course focuses on the analysis of prices in food and agricultural markets. Emphasis is placed on empirical analysis. Includes institutional aspects of pricing, temporal and spatial price relationships, factors affecting the supply and demand of commodities, price forecasting, and the economic consequences of pricing decisions. Upon successful completion of this course, students should be able to acquire tools, and become familiar with techniques and methods used by professional price analysts.

Prerequisite/Restriction: APEC 3010 and APEC 3310

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00
Effective Term
Fall 2016

APEC 5015 - Firm Management, Planning, and Optimization (QI)
QI Quantitative Intensive
3 credits

Application of principles and practices used by managers of agribusiness firms. Evaluation of alternative actions using budgeting (enterprise, cash flow, partial, whole firm, and capital) and optimization programs.

Prerequisite/Restriction: APEC 4010 or ECN 3010 or ECN 4010

Semester(s) Traditionally Offered: Fall

APEC 5020 - Strategic Firm Management (CI)
CI Communications Intensive
3 credits

Explores principles and concepts needed to evaluate the impact of industry structure, policies, and international forces on the management of agribusiness firms. Emphasizes the evaluation of producing and marketing new or differentiated products or services.

Prerequisite/Restriction: APEC 4010 or ECN 3010 or ECN 4010

Semester(s) Traditionally Offered: Spring
APEC 5040 - Agriculture and Food Based Tourism (CI)
CI Communications Intensive
3 credits

This course explores rural economic development strategies in the context of agricultural and food-based tourism. Emphasis is placed on the evaluation of visitor preferences and needs, cross-industry and public-private partnership models, as well as destination image and marketing methods.

Prerequisite/Restriction: APEC 4010 or ECN 3010 or ECN 4010

Effective Term
Spring 2017

APEC 5330 - Applied Econometrics (QI)
QI Quantitative Intensive
3 credits

Introduction to basic statistics, simple linear regression, multiple regression, and simultaneous equation models for economics.

Prerequisite/Restriction: STAT 2000 or STAT 2300 or STAT 3000

Cross-listed as: ECN 5330.

Semester(s) Traditionally Offered: Spring

APEC 5560 - Natural Resource and Environmental Economics
3 credits

Economics of developing, managing, and conserving natural resources and the environment. Topics include resource use and conservation, environmental quality, public and private resource management, and valuation of nonmarket goods.

Prerequisite/Restriction: APEC 2010/ECN 2010 or APEC 3012

Semester(s) Traditionally Offered: Spring

APEC 5700 - Regional and Community Economic Development
3 credits

Building on microeconomic theory, models for regional and urban structure and change are explored. Policy decision models based on advances in economic growth and development, economic structure, land-use, public finance, housing, social welfare, and transportation are developed.

Prerequisite/Restriction: APEC 4010/ECN 4010

Cross-listed as: APEC 6700

Semester(s) Traditionally Offered: Spring

APEC 5710 - International Experiential Education in Applied Economics
1-6 credits

This course provides academically sound international educational experiences for students. Course content and location of study abroad program will vary year to year. Students must apply for the Study Abroad program through the USU Office of Global Engagement.

Prerequisite/Restriction: APEC major with 24 credits or consent of instructor

Repeatable
Effective Term
Summer 2016

APEC 5950 - Applied Economics Policy Analysis
3 credits

This course focuses on the identification and analysis of current agricultural, natural resource and environmental economic policy issues. Throughout this process, other applied economics course concepts and methods are brought together to understand and analyze the policy issues.

Semester(s) Traditionally Offered: Fall

APEC 6030 - Agricultural Marketing
3 credits

Covers a variety of topics relating to price analysis for agricultural commodities. Explores econometric and time series modeling and forecasting of agricultural prices. Includes a section on futures and options on futures contracts, focusing on fundamental and technical analysis.
Prerequisite/Restriction: APEC 6330/ECN 6330

Semester(s) Traditionally Offered: Fall

APEC 6040 - Agribusiness Production and Supply Chain Management
3 credits

Uses economics to explain resource allocations within agribusiness production units and supply chains. This includes, but is not limited to, development of understanding of supply chains and how to use supply chains to effectively address markets for food and fiber.

Prerequisite/Restriction: APEC 6030

Semester(s) Traditionally Offered: Fall

APEC 6100 - Microeconomic Theory I
3 credits

Provides a rigorous introduction to graduate-level microeconomic theory. While the specific focus is on the theoretical construct of graduate-level microeconomic models, the broad objective of the class is to lay the foundation for empirical applications in microeconomics. To meet this broad objective, the course covers theory of the firm, consumer theory, market structure, theory of public goods and externalities, and welfare economics.

Semester(s) Traditionally Offered: Fall

APEC 6250 - Graduate Internship
1-3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

APEC 6300 - Quantitative Analysis for Business and Policy Decisions
3 credits

Provides an introduction to applied mathematical programming, operations research, simulation, risk analysis, adaptive management, and other decision theoretic tools used by government policy makers and managers of firms.

Semester(s) Traditionally Offered: Spring

APEC 6330 - Applied Econometrics
3 credits

Provides graduate-level introduction to applied regression tools, including: simple and multivariate regression analysis; linear, nonlinear, and qualitative dependent variable models; distributed lags; seemingly unrelated regression; and model specification and validation tests. Prerequisite: Background in statistics and calculus.

Cross-listed as: ECN 6330.

Semester(s) Traditionally Offered: Fall

APEC 6500 - Introduction to Natural Resource Economics
3 credits

Introduction to the legal and regulatory foundations of natural resource policy, with specific attention to water, minerals, rangelands, forests, fish, and off-site impacts of agricultural and industrial production. Topics include externalities, property rights, public goods, public choice, and public trust.

Prerequisite/Restriction: ECN 3010 or APEC 4010/ECN 4010 or APEC 5560

Semester(s) Traditionally Offered: Spring

APEC 6510 - Introduction to Environmental Economics
3 credits

Introduction to the foundations of environmental economics. Adaptation of market mechanisms to ameliorate pollution problems and provide amenity services. Methods for determining the value of nonmarketed goods and services. Topics include economic principles regarding social choice and market exchange, as well as current and historical issues involving pollution, environmental regulation, and the effects of environmental regulation on the profitability of private and public entities.

Prerequisite/Restriction: ECN 3010 or APEC 4010/ECN 4010 or APEC 5560 or APEC 6500

Semester(s) Traditionally Offered: Fall

APEC 6700 - Regional and Community Economic Development
3 credits

Building on microeconomic theory, models for regional
and urban structure and change are explored. Policy decision models based on advances in economic growth and development, economic structure, land-use, public finance, housing, social welfare, and transportation are developed.

Prerequisite/Restriction: APEC 4010/ECN 4010

Cross-listed as: APEC 5700

Semester(s) Traditionally Offered: Spring

APEC 6710 - Community Planning and Impact Analysis
3 credits

Focuses on tools used by local and regional economic development specialists as they relate to planning and impact assessment. Specific topics will include I/O models, IMPLAN models, and computable CGE modeling approaches as they are used in a planning environment.

Prerequisite/Restriction: APEC 6700

Semester(s) Traditionally Offered: Fall

APEC 6710 - Independent Research
1-3 credits

Directed readings. Credits from this course toward any applied economics graduate degree require approval of the student's advisory committee, and the department head.

Prerequisite/Restriction: Pursuing a Master's degree in the Applied Economics Department

Repeatable

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Spring 2017

APEC 6970 - Thesis Research
1-9 credits

Master's level research.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

APEC 6990 - Continuing Graduate Advisement
1-9 credits

Master's level advisement.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

APEC 7130 - Microeconomic Theory I
3 credits

Provides a rigorous introduction to graduate-level microeconomic theory. While the specific focus is on the theoretical construct of graduate-level microeconomic models, the broad objective of the class is to lay the foundation for empirical applications in microeconomics. To meet this broad objective, the course covers theory of the firm, consumer theory, market structure, theory of public goods and externalities, and welfare economics.

Cross-listed as: ECN 7130.

Semester(s) Traditionally Offered: Fall

APEC 7140 - Microeconomic Theory II
3 credits

Extends the theoretical foundations of microeconomics with an emphasis on model building in economics. Topics include static games of complete and incomplete information, dynamic games of complete and incomplete information, imperfectly competitive markets, risk and uncertainty, public goods, general equilibrium, and information economics.

Prerequisite/Restriction: APEC 7130/ECN 7130 and APEC 7360/ECN 7360

Semester(s) Traditionally Offered: Spring

APEC 7150 - Microeconomic Theory III
3 credits

Explores the uses of microeconomic theory in fields such as Game Theory, Industrial Organization, and Labor Economics. Study of topics such as multi-stage and repeated games, bargaining, principal-agent models of economic behavior, auctions and bidding, labor market discrimination, price discrimination and two-part tariffs, and the labor-leisure choice. Course is based on both classic and contemporary papers in each of these fields.

Prerequisite/Restriction: APEC 7140
APEC 7240 - Macroeconomic Theory II
3 credits
Extends the foundations of ECN 5020/ECN 7230 with a more in-depth look at the theory and computational aspects of various models of economic growth and business cycles.
Prerequisite/Restriction: ECN 7230/ECN 5020 and APEC 7360/ECN 7360
Cross-listed as: ECN 7240

APEC 7310 - Econometrics I
3 credits
Begins with a review of probability and statistics. Remainder of course is spent discussing the Classical linear regression model, least squares and maximum likelihood estimation, finite and asymptotic sample properties, inference, prediction, and nonlinear optimization.
Cross-listed as: ECN 7310

APEC 7320 - Econometrics II
3 credits
Extension of APEC 7310, covering topics such as nonspherical disturbances, panel data, simultaneous equations, time series and distributed lag models, and limited and qualitative dependent variable models.
Prerequisite/Restriction: APEC 7310/ECN 7310
Cross-listed as: ECN 7320.

APEC 7330 - Econometrics III
3 credits
Provides in-depth coverage of current topics/techniques in applied econometric time series analysis, with an emphasis on econometric model development, estimation, and interpretation. Topics include difference equations, lag operators, stationary ARMA processes, modeling economic time series including trends and volatility, testing for trends and unit roots, vector autoregressions, the Kalman filter including the state space representation of a dynamic system, cointegration, and error-correction models.
Prerequisite/Restriction: APEC 7320/ECN 7320

APEC 7350 - Mathematical Economics I
3 credits
Includes linear equations, matrix algebra, multivariate calculus, static optimization, comparative static analysis, constrained optimization, and Kuhn-Tucker conditions.
Cross-listed as: ECN 7350.

APEC 7360 - Mathematical Economics II
3 credits
Extends the presentation of APEC 7350 by covering applications of constrained optimization, the envelope theorem and applications, differential equations, dynamic economics, and optimal control.
Prerequisite/Restriction: APEC 7350/ECN 7350

APEC 7400 - International Trade and the Environment
3 credits
Focuses on recent developments in the theory of trade and trade policy, including: (1) imperfect competition, (2) factor movements, (3) trade flows, and (4) the effect of trade policies on environmental quality.
Prerequisite/Restriction: APEC 7140 and APEC 7240/ECN 7240

APEC 7500 - Resource Economics
3 credits
Focuses on formal economic models associated with...
optimal exploitation of renewable and nonrenewable resources. Applications to minerals, groundwater, energy resources, soil, forests, fisheries, rangelands, watersheds, wildlife, etc.

Prerequisite/Restriction: APEC 7140 and APEC 7240/ECN 7240

Semester(s) Traditionally Offered: Fall

APEC 7510 - Environmental Economics
3 credits

Covers the theory of environmental policy. Topics include, but are not limited to, externalities, uncertainty and the choice of policy instruments, market imperfections and the number of participants, nonconvexities in the production set, the charges and standards approach, marketable emission permits, the environment and development, international environmental issues, and ecological economics.

Prerequisite/Restriction: APEC 7500

Semester(s) Traditionally Offered: Spring

APEC 7950 - Department of Economics Graduate Seminar
1 credit

Exposes students to new developments in research and management in the field of economics. Features participation by students, faculty, and guest lecturers.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

APEC 7970 - Dissertation Research
1-9 credits

PhD dissertation research.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall

APEC 7990 - Continuing Graduate Advisement
1-9 credits

PhD-level advisement.

Repeatable for credit.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall

Apprentice (USU Eastern)

APPR 2301 - Electrical Apprentice 1-A
5 credits

Designed for students enrolled in electrical apprenticeship. Teaches the theory of electricity and includes an introduction to electricity, basic CD theory, voltage, current, resistance, batteries, and magnetism. Covers principles, formulas and math for simple electrical circuits, series, parallel, combination circuits, and power problems. Includes theory and lab experiences.

Prerequisite/Restriction: Willingness to obtain apprentice license

Campus: USU Eastern only

APPR 2302 - Electrical Apprentice 1-B
5 credits

Designed for students enrolled in electrical apprenticeship. Introduces measuring instruments, magnetism, circuits, devices, National Electrical Code, blueprint reading, DC motors, low voltage circuits, DC motor control, DC generators, 3 and 4 way switches, and conduit bending.

Prerequisite/Restriction: APPR 2301 and apprentice license

Campus: USU Eastern only

APPR 2303 - Electrical Apprentice 2-A
5 credits

Designed for students enrolled in electrical apprenticeship. Covers the application of AC theory as it applies to industrial applications in the electrical field. Covers the basic construction and theory of inductance, capacitance, and resistors dealing with L.C.R. circuits as they are used in the electrical field. Emphasizes hands-on lab experience in correcting power factor in motors, comparing true power and reactive power in inductor, capacitors and resistors.

Prerequisite/Restriction: APPR 2302 and apprentice license
Campus: USU Eastern only

APPR 2304 - Electrical Apprentice 2-B
5 credits

Designed for students enrolled in electrical apprenticeship. Covers the installation, troubleshooting, preventive maintenance and repair of AC motors, motor control, and transformers. Students will learn the proper use of tools and test equipment needed in maintaining AC motors, motor control, and transformers. Includes theory and lab experiences.

Prerequisite/Restriction: APPR 2303 and apprentice license

Campus: USU Eastern only

APPR 2310 - Electrical Apprentice 3-A
5 credits

Designed for students enrolled in electrical apprenticeship. Includes installation, troubleshooting, preventive maintenance, and repair of AC motor controls. Covers the proper use of hand tools and test equipment, used in the maintenance of AC motor controllers. Completers should be able to work at entry level jobs maintaining AC motor control equipment in an industrial environment.

Prerequisite/Restriction: APPR 2304 and apprentice license

Campus: USU Eastern only

APPR 2320 - Electrical Apprentice 3-B
5 credits

Designed for students enrolled in electrical apprenticeship. Covers the theory of the operation of electronic devices used in industrial control systems. Students study test equipment and procedures used in the installation, maintenance, troubleshooting, and repair of electronic control circuits. The basic theory and operation of instrumentation and process control equipment is introduced. Completers should be able to work in industry in related entry level positions.

Prerequisite/Restriction: APPR 2310 and apprentice license

Campus: USU Eastern only

APPR 2320 - Electrical Apprentice 3-B
5 credits

Designed for students enrolled in electrical apprenticeship. Studies: Industrial motor control with particular attention to the National Electrical Code and Programmable Logic Controllers (PLC). Explores the fundamental parts of a PLC system, identifying their use and how they work together to make a control system. Completers should be qualified to work in industry in related work at entry level positions.

Prerequisite/Restriction: APPR 2320 and apprentice license

Campus: USU Eastern only

APPR 2410 - Electrical Apprentice 4-A
5 credits

Final course designed for students enrolled in electrical apprenticeship. Reviews DC and AC theory, electrical circuits and circuit calculations, transformers, motors and motor control circuits. Studies the calculation of single and three phase loads, service entrance size, feeder and branch circuit capacity, wire and conduit size, and voltage drops. Includes a comprehensive study of all chapters of the National Electrical Code with an emphasis placed on the preparation for taking the Utah State Journeyman Exam. Completers should be prepared to take the Utah State Journeyman Exam, provided they have completed all Utah State requirements.

Prerequisite/Restriction: APPR 2410 and apprentice license

Campus: USU Eastern only

APPR 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit

Campus: USU Eastern only

APPR 2420 - Electrical Apprentice 4-B
5 credits

Campus: USU Eastern only

APPR 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit

Campus: USU Eastern only

Arabic
ARBC 1010 - Arabic First Year I
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

ARBC 1020 - Arabic First Year II
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: ARBC 1010 or equivalent

ARBC 1800 - Study-Abroad Arabic Language and Society I
1-8 credits

This is a 4-week program of Arabic language and culture for students having no previous exposure to Arabic. The program aims to develop the students’ communicative competencies and expose them to the society, culture, and customs of the Arab people.

Semester(s) Traditionally Offered: Summer, Even Years

Page: 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 .. Forward 10 -> 64

ARBC 2010 - Intermediate Standard Arabic Second Year I
4 credits

This course focuses on developing proficiency in the formal oral and written Arabic language, with emphasis on advanced grammar topics, oral fluency skills, non-technical prose reading and writing, and cultural awareness activities.

Prerequisite/Restriction: ARBC 1020

Semester(s) Traditionally Offered: Fall

ARBC 2020 - Intermediate Standard Arabic Second Year II
4 credits

Continuation of ARBC 2010

Prerequisite/Restriction: ARBC 2010

Semester(s) Traditionally Offered: Spring

ARBC 2800 - Study-Abroad Arabic Language and Society II
1-8 credits

ARBC 3010 - Advanced Arabic I
3 credits

Advanced course on Arabic grammar, morphology, and vocabulary in Modern Standard Arabic. The course is designed for the non-native speaker and will further develop student’s ability to communicate in Arabic orally and in reading and writing.

Prerequisite/Restriction: ARBC 2020 or permission of the instructor

Semester(s) Traditionally Offered: Fall, Alternate Years

ARBC 3020 - Advanced Arabic II
3 credits

This course is designed to develop increased communication competence in Arabic. The course will focus on grammar, morphology, and vocabulary in Modern Standard Arabic.

Prerequisite/Restriction: ARBC 3010 or permission of instructor

Semester(s) Traditionally Offered: Spring

ARBC 3030 - Introduction to Islam (DHA)
DHA Depth Humanities and Creative Arts
This course will focus on understanding Islam through the examination of what Muslim jurists, theologians, exegetes and traditionalists think of their own traditions. This course will focus on the core beliefs, practices, scriptures and sentiments that have defined historically Muslim communities. In addition, the course aims to examine the spiritual dimensions, the theological discourses and the legal maxims of the Muslim traditions.

Cross-listed as: HIST 3030 and RELS 3030

ARBC 4040 - Language and Culture of the Arab World
3 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs. This course is only for students with no previous background in the Arabic language.

Semester(s) Traditionally Offered: Fall

Art

ART 1010 - Exploring Art (BCA)
BCA Breadth Creative Arts
3 credits

Introduction to the visual arts, including the language, elements, and history of art.

Semester(s) Traditionally Offered: Fall

ART 1020 - Drawing I (BCA)
BCA Breadth Creative Arts
3 credits

Introduction to the visual language of drawing, the graphic elements, various drawing media, and the creative problems involved.

Prerequisite/Restriction: Art & Design Department students only

Semester(s) Traditionally Offered: Fall, Spring

ART 1050 - Introduction to Photography
3 credits

An overview of photography. Operation of basic camera (and related) equipment, employment of the photographic medium for creative purposes with a strong emphasis on composition, photographic aesthetics and vernacular photography.

Semester(s) Traditionally Offered: Fall, Spring

ART 1120 - Two-Dimensional Design
3 credits

Study and problem solving of form, space, texture, value, and color theory.

Prerequisite/Restriction: Art & Design Department students only

Semester(s) Traditionally Offered: Fall, Spring

ART 1130 - Three-Dimensional Design
3 credits

Fosters development of basic understanding of three-dimensional form and space relationships. Includes three-dimensional problem solving, as well as use of a range of materials.

Prerequisite/Restriction: Art & Design Department students only

Semester(s) Traditionally Offered: Fall, Spring

ART 1140 - 4D Design: Time Research
3 credits

This 3-credits course is an introduction to the relationship of time with that of Art & Design, which includes discussing duration tempo, intensity, scope, setting, and chronology as the six major elements of time design.

Prerequisite/Restriction: Art & Design Department students only

Semester(s) Traditionally Offered: Fall, Spring

ART 1430 - Basic Illustration
3 credits

Will emphasize basic drawing and painting skills in illustration problems in a variety of media and techniques. Emphasis will be placed on materials. Students will draw and paint from the model in some
ART 2110 - Drawing II
3 credits
A continuation of ART 1020, with an emphasis on more complex problems and techniques.
Prerequisite/Restriction: ART 1020 Art & Design Department students only
Semester(s) Traditionally Offered: Fall, Spring

ART 2200 - Painting I
3 credits
Introduction to visual language of painting. Focuses on organization of visual ideas and basic oil painting techniques. Provides experience in both direct and indirect painting methods, as well as introducing applied color concepts.
Prerequisite/Restriction: ART 1020 and ART 1120 Art & Design Department students only
Semester(s) Traditionally Offered: Fall

ART 2220 - Watercolor Painting
3 credits
Exploration of formal, technical, and conceptual problems in water media, for students with basic painting experience. Emphasis on gaining proficiency in both transparent and opaque watercolor techniques.
Prerequisite/Restriction: ART 2200
Semester(s) Traditionally Offered: Fall, Spring

ART 2230 - Basic Printmaking
3 credits
Introductory course to acquaint students with the broader aspects of relief, intaglio, and planographic processes.
Prerequisite/Restriction: ART 1020 and ART 1120 Art & Design Department students only

ART 2260 - Intermediate Portfolio Preparation
2 credits
Designed for sophomore students who will transfer to a four-year program or begin professional careers as artists. Course addresses photographing and assembling a digital portfolio and writing artist statements, cover letters, and resumes. Critical analysis skills will be built through a series of formal critiques. Required of all art majors.

ART 2400 - Introduction to Graphic Design
3 credits
This course offers fundamental skills relevant to the discipline of graphic design. Through studio projects, students learn the vocabulary of visual communication design and become familiar with graphic design digital and analog production processes.
Prerequisite/Restriction: ART 1020, ART 1120, ART 1130
Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

ART 2500 - Advanced Photography
3 credits
A continuation of ART 2810, the advanced course will further the skills and experiences of the photographer in technical controls, lighting and exposure. A greater emphasis will be placed on aesthetics and photographic style. The instructor will use lectures, demonstrations and reviews to help the student better understand the medium. An introduction to experimental photography and image enhancement processes will be explored. The student, in conjunction with the instructor, will develop a project that will be presented in portfolio form at the end of the semester. Emphasis will be placed on the aesthetic and presentation skills acquired during the class.
Prerequisite/Restriction: ART 2810
Campus: USU Eastern only
ART 2600 - Basic Sculpture
3 credits
Introduction to additive and subtractive processes in the realization of sculptural ideas. Student involvement in carving, clay modeling, and construction projects.
Prerequisite/Restriction: ART 1130 Art & Design Department students only
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ART 2650 - Introduction to Ceramics
3 credits
Introduction to basic processes of ceramics and the operation of the USU ceramics lab. Includes handbuilding, throwing, and firing.
Prerequisite/Restriction: Art & Design Department students only
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $100.00

ART 2660 - Intermediate Ceramics
3 credits
Includes all the descriptions in ART 2650 course with an emphasis on throwing larger forms, extruded sculptural forms and Raku firing of wheel thrown forms.
Campus: USU Eastern only

ART 2810 - Photography I
3 credits
Essential digital photography skills, camera operation through the employment of aperture, shutter speed, etc. Compositional and editorial skills within the photographic medium are fostered as well as the application of digital imaging software. Coursework concludes with a printed and digital portfolio.
Prerequisite/Restriction: Art & Design Department students only
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $90.00

ART 2830 - Photographic Technologies
3 credits
This course introduces students to the advanced practices of photographic technology. By exploring the creative potentials and properties of available photographic methods, students develop a comprehensive understanding of various techniques applicable to the medium. As a result, students will engage in a combination of lab management and technical support to the working environment of photographic facilities. Repeatable for up to 12 credits.
Prerequisite/Restriction: Admitted to ART BS, or ART BA, or ART BFA only; ART 2810
Repeatable for credit
Effective Term
Fall 2016

ART 2900 - Introductory Internship/CO-OP
3 credits
Introductory level educational work experience in an internship/cooperative education position approved by the Department of Art and Design.
Prerequisite/Restriction: ART BS or ART BA or ART BFA only instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

ART 2920 - Sophomore Independent Projects
1-3 credits
Sophomore-intermediate level problems in emphasis, medium, and idiom of student’s choice. Student-planned projects, executed through individual initiative and scheduled consultation with instructor.
Prerequisite/Restriction: ART 1020, ART 1120; and ART 1130
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 3000 - Secondary Art Methods I
3 credits
Focuses on developing art curricula by formulating objectives for teaching art history, art appreciation, and the making of art in the secondary schools. Required for art education majors.

Prerequisite/Restriction: BFA Art Education only

Semester(s) Traditionally Offered: Fall, Spring

ART 3050 - Japanese Calligraphy
1 credit

Study of Japanese writing system through practicing the art of calligraphy.

Cross-listed as: JAPN 3050.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

ART 3200 - Painting II
3 credits

Continuation of concepts and techniques covered in ART 2200, emphasizing more complex formal and conceptual problems.

Prerequisite/Restriction: ART 2200 ART BS or ART BA or ART BFA only

Semester(s) Traditionally Offered: Spring

ART 3200 - Screen Printing
3 credits

Investigation of the basic processes employed in screen printing. Includes surface preparation, image preparation, drawing techniques, registration, and printing of the screen.

Prerequisite/Restriction: ART 2230 BFA Printmaking only

Semester(s) Traditionally Offered: Fall, Spring

ART 3220 - Lithography
3 credits

Investigation of the basic processes employed in lithography, including surface preparation, basic drawing techniques, registration, processing, and printing of the stone or plate, as well as photo, transfer, and color methods.

Prerequisite/Restriction: ART 2230 BFA Printmaking only

Semester(s) Traditionally Offered: Fall, Spring

ART 3240 - Intaglio
3 credits

Introduction to relief printing, including woodcut, linoleum cut, and wood engraving.

Prerequisite/Restriction: ART 2230 BFA Printmaking only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ART 3250 - Relief Prints
3 credits

Investigation into the basic processes and techniques employed in creating hand bound books. Includes exploring traditional and contemporary book forms and binding techniques, relating concept, form and context, incorporating image and text.

Prerequisite/Restriction: ART 1020 or 1110, ART 1120 or 1150, ART 1130 or 1160, and ART 2230 ART BS, ART BA, or ART BFA only

Semester(s) Traditionally Offered: Spring

ART 3240 - Intaglio
3 credits

Investigation of the basic processes employed in intaglio, including acid (line etch, aquatint, lift grounds, soft ground) and nonacid (dry point, mezzotint, engraving) techniques, as well as transfer and color methods.

Prerequisite/Restriction: ART 2230 BFA Printmaking only

Semester(s) Traditionally Offered: Fall, Spring

ART 3250 - Relief Prints
3 credits

Introduction to relief printing, including woodcut, linoleum cut, and wood engraving.

Prerequisite/Restriction: ART 2230 BFA Printmaking only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ART 3260 - Introduction to Book Arts
3 credits

Effective Term

Spring 2016
ART 3270 - Color: Theory and Practice
3 credits
Explores both the theory and application of color in the visual arts. Special emphasis placed on the development of applied color skills.

Prerequisite/Restriction: ART BS or ART BA or ART BFA only

Semester(s) Traditionally Offered: Taught Alternate Years

ART 3300 - Clinical Experience I
1 credit
First clinical practicum (30 hours minimum) in middle and secondary schools, arranged by special methods instructors in department. Required at level I.

Prerequisite/Restriction: Admission into Teacher Education BFA Art Education only

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ART 3370 - Illustration Concepts
3 credits
Students learn to develop visual ideas for illustrations and carry an idea through the stage of roughs to a comprehensive and finished image, using both digital and traditional media.

Prerequisite/Restriction: BFA Graphic Design only

Semester(s) Traditionally Offered: Fall

ART 3400 - Typography
3 credits
Introductory graphic design course, dealing with concepts and principles related to the exploration of typography as an art and design element. Series of exercises designed to give students professional and philosophical look at aesthetic and functional use of type and related visual elements.

Prerequisite/Restriction: BFA only

ART 3410 - History of Graphic Design Studio
3 credits
This hybrid history/studio course will study the history of the discipline of graphic design from its origins to the present day.

Prerequisite/Restriction: ART 2400 and BFA in Graphic Design status

Semester(s) Traditionally Offered: Spring

ART 3420 - Hashimoto Communication Arts Seminar
1 credit
Lecture seminars by professional guest artists in illustration and graphic design.

Repeatable
Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

ART 3610 - Intermediate Sculpture
3 credits
Further development in the materials, techniques, and traditions of sculpture. Expands on specific explorations, such as modeling, construction, and carving. Emphasizes strong relationship between concept and the technical execution of a sculptural form.

Prerequisite/Restriction: ART 2600 ART BS, ART BA, or ART BFA only

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ART 3650 - Intermediate Ceramics: Handbuilding
3 credits
Application of traditional ceramic construction techniques to vessel and sculptural subjects.

Prerequisite/Restriction: ART 2650 ART BS, ART BA, or ART BFA only

Repeatable for credit.
ART 3660 - Intermediate Ceramics: Throwing on the Potter's Wheel
3 credits
Focuses on throwing and trimming techniques using the potter's wheel. Emphasizes production of multiples.
Prerequisite/Restriction: ART 2650 ART BS, ART BA, or ART BFA only
Repeatable for credit.

ART 3700 - Elementary Art Methods
3 credits
Focuses on developing art curricula by formulating objectives for teaching art processes, art history, and art appreciation in the elementary schools. Required preparation for a grade school teacher.
Semester(s) Traditionally Offered: Fall, Spring

ART 3710 - Fine Art Seminar
.5 credit
Seminar composed of lectures delivered by artists, designers, and scholars who visit USU as part of the Department of Art & Design visiting artist/designer series.
Prerequisite/Restriction: Art & Design Department students only
Repeatable
Pass/Fail only

ART 3810 - Photography II
3 credits
Black and white photography—camera operation, exposure and development, enlarging and printing of black and white film negatives with a concern for advancing technical controls, aesthetics, and darkroom experimentation. Introduction to electronic imaging.
Prerequisite/Restriction: ART 2810 ART BS, ART BA, or ART BFA only
Repeatable for credit.

ART 4000 - Secondary Art Methods II
3 credits
Focuses on developing methodologies for presenting art concepts and techniques in the secondary schools.
Prerequisite/Restriction: ART 3000 BFA Art Education only

ART 4200 - Advanced Drawing and Painting Studio
3-6 credits
Advanced individual painting and drawing projects. Students may use a variety of painting and drawing methods to execute a series of closely related paintings and drawings that are intended to develop a focused and personal portfolio.
Prerequisite/Restriction: ART 3200 ART BS or ART BA or ART BFA only
Repeatable

ART 4210 - Figure Painting
3 credits
Painting from the model, with emphasis on solving problems of the planar structure of the human form.
Prerequisite/Restriction: ART 4260 ART BS, ART BA, or ART BFA only
Repeatable for credit.

ART 4250 - Advanced Printmaking Studio
1-6 credits
In-depth investigation of one printmaking process with emphasis placed on both technical and aesthetic...
considerations.

Prerequisite/Restriction: ART 3220, ART 3230, ART 3240, or ART 3250 BFA Printmaking only

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ART 4260 - Life Drawing
3 credits

Drawing from live models with emphasis on exploring interpretation, techniques, and compositional approach.

Prerequisite/Restriction: ART 2110 ART BS, ART BA, or ART BFA only

Repeatable for credit.
Semester(s) Traditionally Offered: Fall

ART 4270 - Special Topics: Drawing and Painting
3 credits

Focuses on various issues in the field of drawing and painting. Allows students to pursue production of their own creative endeavors related to the topic of the course. Course content varies from semester to semester.

Prerequisite/Restriction: ART BS or ART BA or ART BFA only

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 4300 - Clinical Experience II
1 credit

Second clinical practicum (30 hours minimum) in middle and secondary schools, arranged by special methods instructors in department. Required at level II.

Prerequisite/Restriction: ART 3300 BFA Art Education only

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

ART 4410 - Graphic Interface Design I
3 credits

Concentrates on development of graphic design techniques and theories necessary to create successful graphical user interfaces. Students explore aesthetic and functional uses of motion, sound, interactivity, information architecture, branding, and typography as they relate to graphic interface design.

Prerequisite/Restriction: ART 3400 BFA only

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

ART 4420 - Brand Identity Design
3 credits

Advanced studio course focusing on the visual expression of a brand. Students study the design and application of trademarks/logos, related brand strategies, positioning, and processes of research and analysis. Students complete a series of symbol design and application projects.

Prerequisite/Restriction: ART 3400 BFA Graphic Design only

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

ART 4425 - Package Design
3 credits

Explores the application of a visual brand to a three-dimensional package. Topics addressed include: brand architecture, brand reinvention, personality packaging, sustainable packaging, systems packaging, asset development, market positioning, container function/aesthetics, innovation process, sketching for visualization/presentation and comprehensive production.

Prerequisite/Restriction: BFA Graphic Design only ART 4420

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

Course Fee: $50.00

ART 4430 - Graphic Interface Design II
3 credits

Advanced graphic design course exploring dynamic
interactivity. Students take a professional and philosophical look at the use of multimedia as it relates to business and society. Emphasizes research and the exploration of innovative ideas using interactive interface as a vehicle for communicating information.

Prerequisite/Restriction: ART 4410 BFA Graphic Design only

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ART 4440 - Type, Image, and Visual Continuity
3 credits

Examines the application of design theory and process to complex information organization systems. Focuses on relationships between typography, imagery, and visual continuity. Students design varied text-intensive publications and image-intensive poster projects.

Prerequisite/Restriction: ART 3400 BFA Graphic Design only

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ART 4445 - Book Cover Design
3 credits

This course explores the application of visual communication design theory and principles to book cover design. Specific focuses: designing for content, author and publisher; design that arrests the browsing consumer; pushing boundaries of tradition.

Prerequisite/Restriction: BFA Graphic Design only ART 4440

Effective Term
Fall

ART 4450 - Senior Capstone
3 credits

This capstone course builds students’ job-seeking portfolios through lectures, critiques and studio work. The course culminates in the annual Senior BFA Exhibition.

Prerequisite/Restriction: ART 4410, ART 4420, ART 4440, BFA Graphic Design only

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ART 4460 - Motion Design
3 credits

An exploration of motion and time as it applies to visual communication in linear narratives. Examines the basic principles of digital video capture, editing for broadcast and film; covers the integration of motion graphics and sound within these formats. May be repeated for up to 6 credits.

Prerequisite/Restriction: ART 4440 BFA Graphic Design only

Repeatable

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00
Effective Term
Spring

ART 4470 - Special Topics in Graphic Design I
1-9 credits

Focuses on various issues in the field of visual communications design. Allows students to pursue production of digital and traditional projects related to the topic of the course. Content of this studio course varies from semester to semester.

Prerequisite/Restriction: Instructor permission BFA Graphic Design only Repeatable for additional credit (eg, seminars, practicums, etc)

Repeatable

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Fall 2016

ART 4475 - Special Topics in Graphic Design II
1-9 credits

Focuses on various issues in the field of visual communications design. Allows students to pursue production of digital and traditional projects related to the topic of the course. Content of this studio course varies from semester to semester.

Prerequisite/Restriction: Instructor permission BFA Graphic Design only
Repeatable
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Fall 2016

ART 4480 - Special Topics in Art and Design
3 credits

Focuses on various issues in Art and Design. Allows advanced undergraduate students to pursue production of their own creative work related to the topic of the course. Content of this studio course varies from semester to semester.

Prerequisite/Restriction: Instructor permission ART BS or ART BA or ART BFA only Repeatable for additional credit (eg, seminars, practicums, etc)

Cross-listed as: ART 6480

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

ART 4610 - Sculpture Projects
3 credits

Develops skills in a particular sculptural methodology. Investigates genres of public sculpture, installation, and advanced modeling, from traditional to contemporary. Stresses ideas based in a broader context of social and cultural issues.

Prerequisite/Restriction: ART 3610 ART BS or ART BA or ART BFA only

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

ART 4620 - Sculpture Seminar
3 credits

Designed to focus on and challenge current assumptions in regard to contemporary issues in sculpture.

Prerequisite/Restriction: ART 4660 ART BS or ART BA or ART BFA only

Semester(s) Traditionally Offered: Fall

ART 4630 - Figure Study for Sculpture
3 credits

This course focuses on creating sculpture from observations of the human figure, sculpting from live models. Students will also become familiar with some important figurative sculptors and consider issues facing the creation of figurative sculpture in a contemporary art context.

Prerequisite/Restriction: ART 2600 ART BS or ART BA or ART BFA only Repeatable for additional credit (eg, seminars, practicums, etc)

Cross-listed as: ART 6630

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

ART 4640 - Technology of Ceramic Art
3 credits

Selected topics in aesthetics and technology of ceramic art, including ceramic history, glaze chemistry and calculation, firing techniques, kiln design and construction, etc. Students enrolling for more than 3 credits arrange credit for directed studies in specific topics.

Prerequisite/Restriction: ART 3650, ART 3660 ART BS or ART BA or ART BFA only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $100.00

ART 4650 - Advanced Ceramic Studio
3-6 credits

Provides time, equipment, and facilities for advanced students to pursue directed studies leading to personal expression through ceramic media. To be repeated during at least four semesters by art majors with ceramics emphasis.

Prerequisite/Restriction: ART 3650, ART 3660 ART BS or ART BA or ART BFA only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $100.00
ART 4660 - Advanced Sculpture Studio
1-9 credits
Advanced directed study in specific technical, aesthetic, and/or conceptual issues in sculpture.
Prerequisite/Restriction: ART 4610 ART BS or ART BA or ART BFA only
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ART 4810 - Digital Imaging
3 credits
Continued exploration of digital photography with an emphasis on digital imaging. Constructed and altered realities and complex alterations of photographs. Digital image processing employing the software and the hardware. Study of ethical, artistic, and personal issues will be investigated.
Prerequisite/Restriction: ART 3810. ART BS or ART BA or ART BFA only.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall
Course Fee: $90.00

ART 4825 - Color Photography
3 credits
Introduction to technical, conceptual, aesthetic, and digital explorations available with exposure and development of color positive and negative films. Investigation of color theory accompanied by production of correctly balanced color prints.
Prerequisite/Restriction: ART 3810. BFA Photography only.
Semester(s) Traditionally Offered: Fall, Even Years
Course Fee: $90.00

ART 4855 - View Camera and Large Format
3 credits
Exploration of traditional view camera applications combined with large format photography employing black and white and color film with emphasis on advanced technical controls to enhance creative expression.
Prerequisite/Restriction: ART 3810. BFA Photography only.
Semester(s) Traditionally Offered: Spring
Course Fee: $90.00

ART 4835 - Theory of Photography
3 credits
Study of comprehensive and critical readings, screenings and exhibition visits surrounding the medium of photography. Emphasis on photography’s relationship to contemporary art, science, commerce, legal or historical evidence and social record.
Prerequisite/Restriction: ART 3810 ART BS or ART BA or ART BFA only
Semester(s) Traditionally Offered: Spring, Odd Years

ART 4845 - The Moving Image and Video Art
3 credits
Experimental investigation into the realm of moving images as a complementary practice to traditional applications of the photographic medium. Exploration of technical abilities using contemporary methods and support equipment. Theoretical and historical review of photography's relationship to the moving image and video art.
Prerequisite/Restriction: ART 3810. ART BS or ART BA or ART BFA only.
Semester(s) Traditionally Offered: Spring, Even Years

ART 4865 - Nineteenth Century Photographic Processes
3 credits
Intensive study and practice of traditional and alternative photographic processes highlighting technological developments relevant to the history of photography. Production of a variety of different printing techniques. Emphasis on technical control, research, and portfolio building.
Prerequisite/Restriction: ART 3810. BFA Photography only.
Semester(s) Traditionally Offered: Fall, odd years
Course Fee: $90.00
ART 4875 - Photographic Studio
3 credits
Exploration of the photographic studio, 4x5 view camera, the principles of applied lighting, and the communication of an idea through photography. Commercial, editorial, portrait, and digital photography directed toward professional portfolio preparation. All students required to have 4x5 camera.

Prerequisite/Restriction: ART 3810. BFA Photography only. Permission of Academic Advisor.

Semester(s) Traditionally Offered: Fall
Course Fee: $90.00

ART 4885 - Photographic Portfolio
3 credits
Advanced photography class in preparation for life after graduation. Strong emphasis on work toward a personal professional portfolio (fine art and commercial) and written support documentation (resumes, cover letters, artist statement, etc.).

Prerequisite/Restriction: ART 4875. Add permission of Academic Advisor

Semester(s) Traditionally Offered: Spring
Course Fee: $90.00

ART 4900 - Advanced Internship/Coop
1-9 credits
Internship/cooperative education work experience in art. For those students needing complexity and a more professional level of experience in the workplace.

Prerequisite/Restriction: ART BS or ART BA or ART BFA only instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 4910 - Senior BFA Professional Practice
1 credit
Students learn fundamentals of professional practice in preparation for graduation. This course is required for all art education, ceramics, drawing and painting, photography, printmaking, and sculpture BFA candidates.

Prerequisite/Restriction: Approval of advisor Enrollment limited to senior standing and BFA candidates only

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

ART 4915 - Senior BFA Exhibition
1 credit
Students learn about proper exhibition procedures and organize an exhibit of their own artwork. This course is required for all art education, ceramics, drawing & painting, photography, printmaking, and sculpture BFA candidates.

Prerequisite/Restriction: Approval of advisor Enrollment limited to senior standing and BFA candidates only

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

ART 4920 - Independent Projects
1-9 credits
Student-planned projects, executed through individual initiative and scheduled consultation with instructor.

Prerequisite/Restriction: ART BS or ART BA or ART BFA only instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 4930 - Student Teaching at University Level
3 credits
Teaching methods and procedures for university-level classes, working directly with faculty in lower-division classes.

Prerequisite/Restriction: Approval of instructor ART BS or ART BA or ART BFA only

Semester(s) Traditionally Offered: Fall, Spring, Summer
ART 5500 - Student Teaching Seminar
2 credits

Capstone seminar focused upon student teaching issues, professional development, and principles of effective instruction, emphasizing a reflective methodology.

Prerequisite/Restriction: Level 1 and Level 2 completion, and student teaching placement

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

ART 5630 - Student Teaching in Secondary Schools
10 credits

Thirteen-week culminating practicum in which students assume full-time teaching responsibilities under direction of cooperating teachers in major and minor fields.

Prerequisite/Restriction: Level 1 and Level 2 completion, and student teaching placement

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $300.00

ART 6200 - Graduate Drawing and Painting Studio
1-9 credits

Emphasizes individual attainment of personal conviction or direction in painting.

Prerequisite/Restriction: Graduate status
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 6260 - Graduate Book Arts Studio
3 credits

Investigation into advanced processes and techniques employed in creating hand bound books. Includes exploring traditional and contemporary book forms and binding techniques, relating concept, form, and context, incorporating image and text. Graduates investigate the book form as installation or interactive sculpture, and how it relates to emphasis media.

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

ART 6250 - Graduate Printmaking Studio
1-9 credits

Intensive individual production in advanced printmaking techniques.

Prerequisite/Restriction: Graduate status instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ART 6400 - Graduate Graphic Design Studio
3-9 credits

Graphic design problems leading to understanding of major concepts in this area.

Prerequisite/Restriction: Graduate status
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 6480 - Special Topics in Art and Design
3 credits

Focuses on various issues in Art and Design. Allows advanced undergraduate students to pursue production of their own creative work related to the topic of the course. Content of this studio course varies from semester to semester.

Prerequisite/Restriction: Instructor permission
Cross-listed as: ART 4480

ART 6630 - Figure Study for Sculpture
3 credits

This course focuses on creating sculpture from observations of the human figure, sculpting from live models. Students will also become familiar with some important figurative sculptors and consider issues facing the creating of figurative sculpture in a contemporary art context.

Prerequisite/Restriction: ART 2600 Repeatable for additional credit (eg, seminars, practicums, etc)

Semester(s) Traditionally Offered: Spring
Cross-listed as: ART 4630

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

ART 6640 - Technology of Ceramic Art
3 credits

Selected topics in aesthetics and technology of ceramic art, including ceramic history, glaze chemistry and calculation, firing techniques, kiln design and construction, etc.

Prerequisite/Restriction: Graduate status

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $100.00

ART 6650 - Graduate Ceramic Studio
3-9 credits

Arranged to provide time, equipment, and facilities for graduate students to pursue directed studies. Tutorial format with group critiques.

Prerequisite/Restriction: Graduate status

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $100.00

ART 6660 - Graduate Sculpture Studio
3-9 credits

Advanced individual problems in various media and technique.

Prerequisite/Restriction: Graduate status

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

ART 6800 - Graduate Photography Studio
3-9 credits

Designed to cover several phases of photography, with emphasis on composing what we see in an artistic manner. Allows graduate students to further emphasize their thesis project area of study.

Prerequisite/Restriction: Instructor permission and graduate status

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 6940 - Graduate Internship/Coop
1-9 credits

ART 6900 - Professional Practices
3 credits

Designed to familiarize graduate students with practical experiences shared by all studio disciplines, including researching opportunities, financing, and practicing a post-graduate career in the studio. Explores preparation of a portfolio, writing materials, and documentation of studio works for individualized application strategies. Details extensive research into employment possibilities, such as teaching, gallery and museum positions, and artist residencies.

Prerequisite/Restriction: Graduate status

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $90.00

ART 6910 - Graduate Interdisciplinary Critique
3 credits

Focuses on current work of critique participants. Brings disciplinary analysis to specific problem.

Prerequisite/Restriction: Graduate status

Repeatable for credit.
Semester(s) Traditionally Offered: Fall

ART 6920 - Graduate Independent Projects in Art
1-9 credits

Advanced problems in emphasis, medium, and idiom of student’s choice. Student plans project and executes it through individual initiative and scheduled consultation with the instructor.

Prerequisite/Restriction: Instructor permission and graduate status

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 6940 - Graduate Internship/Coop
1-9 credits
Internship/cooperative education work experience in art. Designed to allow graduate students to receive more complex and professional workplace experience.

Prerequisite/Restriction: Graduate status
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 6970 - Research and Thesis
3 credits
Prerequisite/Restriction: Candidacy status
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ART 6990 - Continuing Graduate Advisement
1-3 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Art History

ARTH 1270 - Native American Arts and Crafts
3 credits
Introduces prehistoric, historic, and contemporary Native American art forms and the underlying philosophical belief systems that gave rise to them. Goal is to provide basic principles for understanding and evaluating the artistic expression of Native Americans. Organized around geographical regions and cultural types.

Campus: USU Eastern only

ARTH 2710 - Survey of Western Art: Prehistoric to Medieval (BHU)
BHU Breadth Humanities
3 credits
Prehistoric art through the end of the Gothic era.

Prerequisite/Restriction: Art & Design Department only or instructor permission
Semester(s) Traditionally Offered: Fall

ARTH 2720 - Survey of Western Art: Renaissance to Post-Modern (BHU)
BHU Breadth Humanities
3 credits
Renaissance through modern.

Prerequisite/Restriction: Art & Design Department only or instructor permission
Semester(s) Traditionally Offered: Spring

ARTH 2730 - Art of the African Diaspora (BHU)
BHU Breadth Humanities
3 credits
Examination of the visual arts rooted in the broad experience of the of the global African diaspora from the 18th century onwards.

Semester(s) Traditionally Offered: Spring, odd years

ARTH 3110 - Ancient Near East (CI/DHA)
CI/DHA Communications Intensive/Depth Humanities and Creative Arts
3 credits
Survey of history and civilization of ancient Mesopotamia, Egypt, and Israel, from prehistory to 500 B.C. Writing intensive.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement
Cross-listed as: HIST 3110.

Semester(s) Traditionally Offered: Spring

ARTH 3200 - Experiential Learning in Art History-Study Abroad
1-3 credits
Learning from travel-based experience in museums, galleries, and historic cities/sites worldwide is an invaluable part of the education of artists, designers, and art historians. This course is designed to allow student to earn credit in structured, professor-led study aboard
programs.

Repeatable for credit
Semester(s) Traditionally Offered: Summer

ARTH 3210 - Classical Mythology
3 credits

Introduces major myths of the Classical world. Explores how these myths serve as keys to understanding the documents and arts of Classical civilization.

Cross-listed as: CLAS 3210, HIST 3210 and RELS 3210

Semester(s) Traditionally Offered: Fall, Spring

ARTH 3270 - Native North American Art
3 credits

Through geographically and thematically oriented slide lectures, class discussions, video, independent research, local event attendance and displays at the University Museum Study Gallery, the students will become familiar with the people, the lifestyles and the objects of material culture of several different geographical areas of Native North America. We will look at ancient traditions, how the arts changed after European contact and briefly, more contemporary art forms as well.

Prerequisite/Restriction: ARTH 2710 and ARTH 2720; Art majors, Art History majors, Art History minors or instructor permission

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

ARTH 3310 - History of Asian Art: Ancient to Modern
3 credits

This course introduces students to the arts of Asia from antiquity to the modern period.

Prerequisite/Restriction: ARTH 2710 and ARTH 2720

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

ARTH 3320 - Pre-Columbian Art (CI)
CI Communications Intensive
3 credits

Explores the emergence and development of Islamic visual cultures in Asia and around the Mediterranean

Through geographically and thematically oriented PowerPoint-based lectures, online video presentations, class discussions, independent research and an opportunity for a field trip to the NEHMA, the USU Museum of Anthropology and local cultural events. Students will become familiar with several different art forms from Native Meso-America, Central, and South America. While we will be looking primarily at the art and architecture popularly termed “Pre-Columbian,” I will also include more contemporary forms of Latin American art as well.

Prerequisite/Restriction: ARTH 2710 and ARTH 2720; ART majors, ARTH majors, and ARTH minors or instructor permission

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

ARTH 3340 - African Art (CI)
CI Communications Intensive
3 credits

Through geographically and thematically oriented PowerPoint-based lectures, online video presentations, class discussions, independent research and an opportunity to attend a field trip to the NEHMA, the USU Museum of Anthropology and local cultural events, the students will become familiar with a broad range of arts, primarily of West and Central Africa, as well as North, East and Southern Africa. While we will look at a few instances of contemporary art, the course will concentrate primarily on how the arts were and are used in the daily life of the traditional small scale societies of these particular areas of Africa. The last set of lectures will be devoted to contemporary African and African-American Art.

Prerequisite/Restriction: ARTH 2710 and ARTH 2720; Art majors, Art History majors, Art History minors or instructor permission

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

ARTH 3510 - Islamic Visual Cultures (CI/DHA)
CI/DHA Communications Intensive/Depth Humanities
3 credits

Explores the emergence and development of Islamic visual cultures in Asia and around the Mediterranean

Through geographically and thematically oriented PowerPoint-based lectures, online video presentations, class discussions, independent research and an opportunity for a field trip to the NEHMA, the USU Museum of Anthropology and local cultural events. Students will become familiar with several different art forms from Native Meso-America, Central, and South America. While we will be looking primarily at the art and architecture popularly termed “Pre-Columbian,” I will also include more contemporary forms of Latin American art as well.

Prerequisite/Restriction: ARTH 2710 and ARTH 2720; ART majors, ARTH majors, and ARTH minors or instructor permission

Semester(s) Traditionally Offered: Summer
between 622 and 1250.

Prerequisite/Restriction: ARTH 2710 or instructor permission

Cross-listed as: RELS 3510

Semester(s) Traditionally Offered: Spring, Alternate Years
Effective Term
Spring 2016

ARTH 3610 - Classical Art History: Greece and Rome (CI)
CI Communications Intensive
3 credits

This course focuses on the art of the ancient Mediterranean world with an emphasis on the Greek and Roman traditions. It is writing and reading intensive.

Prerequisite/Restriction: ARTH 2710, ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Fall, Alternate Years

ARTH 3620 - Early Christian and Byzantine Art (DHA)
DHA Depth Humanities and Creative Arts
3 credits

This course focuses on the art of the period between about 300-1000 CE in the Mediterranean and western Europe. Some prior knowledge of art history is advantageous.

Prerequisite/Restriction: ARTH 2710 or instructor permission

Semester(s) Traditionally Offered: Spring, Alternate Years

ARTH 3630 - Medieval Art (CI/DHA)
CI/DHA Communications Intensive/Depth Humanities and Creative Arts
3 credits

Covers art and architecture in Europe between 450 and 1450, with an emphasis on cultural diversity and artistic variety. Study of the visual arts is complemented by readings in history and literature.

Prerequisite/Restriction: ARTH 2710, ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Fall, Alternate Years

ARTH 3710 - Art, Culture and Crisis in Postwar Britain (CI)
CI Communications Intensive
3 credits

Examination of visual culture in Britain during the years 1945-1960.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Effective Term
Fall 2016

ARTH 3720 - Renaissance Art (CI)
CI Communications Intensive
3 credits

This writing and reading intensive course takes a comparative approach to Northern and Italian art in the period 1300-1550.

Prerequisite/Restriction: ARTH 2720, ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Spring, Alternate Years

ARTH 3730 - The Documentary (CI)
CI Communications Intensive
3 credits

Examination of history of documentary filmmaking, along with multiple forms of the genre (ie. newsreel, romantic, verite, propaganda etc.).

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Effective Term
Fall 2016

ARTH 3740 - Art of the Avant-Gardes: 1872-1945 (CI)
CI Communications Intensive
3 credits

This course examines the role of the avant-garde in developing new forms of visual art and artistic engagement from 1872 to 1945.
ARTh 3750 - High-Modernism to Post-Modernism: 1945-1989 (CI)
CI Communications Intensive
3 credits

This course examines the aesthetic and theoretical shifts in global artistic productions, visual culture, and art criticism from 1945 to 1989.

Prerequisite/Restriction: ARTH 2720, ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Spring, Taught
Alternate Years
Effective Term
Fall 2016

ARTh 3760 - American Art and Visual Culture (CI)
CI Communications Intensive
3 credits

This course examines the development of art and visual culture from the Colonial Period to WWII.

Prerequisite/Restriction: ARTH 2720, ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

ARTh 3770 - American Apocalypse: Disaster and Dystopia in Hollywood Film
3 credits

Examination of Hollywood films dealing with apocalypse scenarios through war, famine, disease, alien invasion, religious rapture, etc.

Prerequisite/Restriction: Instructor permission

Effective Term
Fall 2016

ARTh 3780 - 19th Century European Art
3 credits

This course will explore nineteenth-century European art through a thematic approach, addressing the movements of Neo-Classicism, Romanticism, Academicism, Realism, Impressionism, Post-Impressionism, Neo-Impressionism, and Symbolism. We will address the artistic production of “the long nineteenth century,” roughly 1750-1914, through a variety of methodological approaches, specifically focusing on the way art is influenced by, as well as influential on, the society in which it is produced.

Prerequisite/Restriction: ARTH 2720

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

ARTh 3820 - History of Early Photography
3 credits

Reviews early history of photography, beginning before the 1839 public announcement by Daguerre and continuing through the early twentieth century. Explores social change, invention, and the fulfillment of the artist’s desire to represent reality.

Prerequisite/Restriction: ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Spring, Alternate Years

ARTh 3830 - History of Contemporary Photography
3 credits

Reviews history of contemporary photography, beginning with the modernist movements of the 1920s and progressing through the aesthetic, technical, and communicative changes, up to today’s contemporary uses of the medium. Examines photography’s relationship to the historical changes in society, through its evolution as an art form, a commercial venue, and a visual record.

Prerequisite/Restriction: ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Spring, Alternate Years
ARTH 3840 - Race and Visual Culture (CI)
CI Communications Intensive
3 credits

Examination of ways in which visual culture constructs and represents racial identities.

Prerequisite/Restriction: ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Fall, Even Years

ARTH 3850 - Film Studies (CI/DHA)
CI/DHA Communications Intensive/Depth Humanities and Creative Arts
3 credits

This course is designed as an overview of some of the key histories, methodologies and concepts in film studies. The course engages a number of significant films by way of investigating aesthetic, stylistic, political, and theoretical approaches to the study of cinema. We will be looking beyond the boundaries of American film to embrace Expressionism, the French New Wave, Neo-Realism and Third Cinema.

Prerequisite/Restriction: ART Majors, ARTH Majors, ARTH Minors or instructor permission

Semester(s) Traditionally Offered: Taught Alternate years

ARTH 3910 - Introduction to Film Theory (CI)
CI Communications Intensive
3 credits

Introductory survey of major theoretical and critical approaches to the study of film.

Prerequisite/Restriction: Instructor permission

Effective Term
Fall 2016

ARTH 4210 - Celtic Europe
3 credits

History of Celtic peoples in British Isles, Scandinavia, and continental Europe, from Neolithic times to the Norman Conquest in 1066. Computer intensive.

Semester(s) Traditionally Offered: Fall

ARTH 4310 - Common Threads: History of Fiber Arts (CI)
CI Communications Intensive
3 credits

Looking at the traditions of North and South Euro-and Native America, Europe, Asia, and the Pacifica Islands and Africa, this course will introduce students to some of the many ways fiber has been used.

Prerequisite/Restriction: ARTH 2710 ARTH 2720 Art and Art History majors, or Art History minors only

Cross-listed as: ARTH 6310

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

ARTH 4410 - Art of Small Scale Cultures (CI)
CI Communications Intensive
3 credits

Students will become familiar with a broad range of arts of Native North, Meso, Central and South America, Africa, and the South Pacific regions.

Prerequisite/Restriction: ARTH 2710 ARTH 2720 ART Majors, ARTH Majors or ARTH Minors only

Cross-listed as: ARTH 6410

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

ARTH 4520 - The Visual Cultures of Empire (CI)
CI Communications Intensive
3 credits

Examining a wide variety of visual formations of the last 200 years this course will investigate the multiple ways in which “empire” has been imagined and constituted in Western European visual culture since the early 19th century. This is not a social or political history of colonialism but an analysis of the visual articulations of empire as they are culturally and creatively expressed.

Prerequisite/Restriction: ART Majors, ARTH Majors, ARTH Minors or permission
ARTH 4710 - Feminist Theory and Practice in the Visual Arts (CI)
CI Communications Intensive
3 credits
This course examines contemporary feminist theory and practice in the arts from the beginning of the women’s movement in the 1960’s to the present. Course takes an in-depth look at feminist manifestos and political protests, organizations and art education programs, art and aesthetics, critiques of art history and visual culture, and impact of the movement.
Prerequisite/Restriction: ART Majors, ARTH Majors, ARTH Minors or instructor permission

ARTH 4800 - Directed Reading and Research in Art History
1-3 credits
Directed reading, writing, and research in art history.
Prerequisite/Restriction: Instructor permission

ARTH 4900 - Senior Capstone Research Seminar in Art History
3 credits
Current issues in art historical research and theory, emphasizing student-driven learning and original research. Topics may include the history of the discipline, ethical considerations, and methodologies.
Prerequisite/Restriction: One 3000 or 4000 level Art History course
**ARTH 4910** - Senior Thesis in Art History and Visual Studies  
3 credits  
An intensive, one-on-one research-based course for advanced students in art history intended to facilitate the writing of a senior thesis.  
Prerequisite/Restriction: Instructor signature  

**ARTH 5730** - The Art Museum  
3 credits  
The history of museums and display practice has become a significant field in studies of contemporary art and art history. Topics covered include: cabinets of curiosity and historical origins, art museums and their publics, blockbusters, revisionism, architecture, museums, and memory.  

**ARTH 5740** - Art and Religion: Topics in Sacred Art  
3 credits  
Discussion-based course investigating relationships between religion and the arts. May focus on any period of history or region of the world, depending on scholarly interests of instructor.  
Cross-listed as: RELS 5740.  

**ARTH 6270** - Graduate Native North American Art  
3 credits  
Through geographically and thematically oriented slide lectures, class discussions, online video, independent research, local event attendance and displays at NEHMA and the Anthropology Museum, the students will become familiar with the people, the lifestyles and the objects of material culture of several different geographical areas of Native North America. We will look at ancient traditions, how the arts changed after European contact and briefly, more contemporary art forms as well.  
Prerequisite/Restriction: Graduate Status  

**ARTH 6310** - Graduate Common Threads: History of Fiber Arts  
3 credits  
Looking at the traditions of North and South Euro- and Native America, Europe, Asia, and the Pacifica Islands and Africa, this course will introduce students to some of the many ways fiber has been used.  
Prerequisite/Restriction: Graduate status  
Cross-listed as: ARTH 4310  

**ARTH 6320** - Graduate Pre-Columbian Art  
3 credits  
Through thematically oriented slide lectures, class discussions, online video, independent research, local event attendance and displays at NEHMA and the Anthropology Museum, the students will become familiar with several different art forms from Native Meso-, Central and South America. While we will be looking primarily at the art and architecture popularly termed “Pre-Columbian”, I will also include some more contemporary forms of Latin American art.  
Prerequisite/Restriction: Graduate Status  

**ARTH 6340** - Graduate African Art  
3 credits  
Through geographically and thematically oriented Power Point based lectures, online video and DVD, class discussions, independent research, local event attendance and displays at NEHMA and the Anthropology Museum, the students will become familiar with a broad range of arts, primarily of West and Central Africa, as well as North, East and Southern Africa. While we will look at a few instances of contemporary art, the course will concentrate primarily on how the arts were and are...
used in the daily life of the traditional small scale societies of these particular areas of Africa. The last set of lectures will be devoted to contemporary African and African-American Art.

Prerequisite/Restriction: Graduate Status

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

ARTH 6410 - Graduate Art of Small Scale Cultures
3 credits

Students will become familiar with a broad range of arts of Native North, Meso, Central and South America, Africa, and the South Pacific regions.

Prerequisite/Restriction: Graduate status

Cross-listed as: ARTH 4410

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

ARTH 6500 - Graduate Art History Section
3 credits

A contract-based course for graduate students interested in studying upper-level art history to complement their degree program. Is particularly directed towards MFA students in the Department of Art and Design.

Prerequisite/Restriction: Graduate status

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

ARTH 6510 - Graduate Islamic Visual Cultures ca. 600-1500
3 credits

Graduate level study of Islamic art and visual culture from origins to the early modern period.

Semester(s) Traditionally Offered: Spring, Alternate Years

ARTH 6610 - Greek and Roman Art
3 credits

Origin and development of art and architecture of Crete, Mycenae, Greece, and the Roman world.

ARTH 6620 - Byzantine Art
3 credits

Focuses on the art and architecture of the Byzantine empire from late antiquity to the fifteenth century. In addition to including study of the visual arts, course incorporates readings in the history of religion and gender studies.

Prerequisite/Restriction: ARTH 2710 (recommended)

Semester(s) Traditionally Offered: Fall

ARTH 6630 - Graduate Medieval Art
3 credits

Graduate level study of medieval art and visual culture from 400-1500.

Semester(s) Traditionally Offered: Fall, Alternate Years

ARTH 6720 - Graduate Renaissance Art
3 credits

Development of European art and architecture from the thirteenth to the sixteenth centuries.

Prerequisite/Restriction: Graduate status

Semester(s) Traditionally Offered: Fall

ARTH 6730 - Graduate Baroque and Rococo Art
3 credits

Development of art and architecture in Europe from the sixteenth to the eighteenth centuries.

Prerequisite/Restriction: Graduate status

Semester(s) Traditionally Offered: Spring

ARTH 6740 - Art of the Avant-Gardes: 1872-1945
3 credits

This course examines the role of the avant-garde in developing new forms of visual art and artistic engagement from 1872 to 1945.

Prerequisite/Restriction: ARTH 2720 or instructor
permission and graduate status

Semester(s) Traditionally Offered: Spring, Taught
Alternate Years
Effective Term
Fall 2016

ARTH 6750 - High-Modernism to Post-Modernism: 1945-1989
3 credits

This course examines the aesthetic and theoretical shifts in global artistic productions, visual culture, and art criticism from 1945 to 1989.

Prerequisite/Restriction: Graduate status

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

ARTH 6760 - American Art and Visual Culture
3 credits

This course examines the development of art and visual culture from the Colonial Period to WWII.

Prerequisite/Restriction: Graduate status

Semester(s) Traditionally Offered: Fall
Spring 2017

ARTH 6770 - Graduate Gender Issues in Art
3 credits

Discussion of major issues and debates regarding gender in the visual arts. Topics include: revising the canon, representing gender, and theories of gender and spectatorship. Readings are discussed and applied to visual works of art.

Semester(s) Traditionally Offered: Spring

ARTH 6790 - Art History Seminar and Special Problems
1-6 credits

Focuses on special topics in the discipline of art history. Allows students to develop advanced research projects related to the topic of the course. Covers critical theory and methods of art history research and writing.

Prerequisite/Restriction: Graduate status and instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Spring

ARTH 6900 - Graduate Seminar: Issues in Contemporary Art
3 credits

Sessions devoted to select issues prevalent in contemporary art, including the body, the real, text, gender, display, and conceptualism. Requires intensive verbal and written participation.

Semester(s) Traditionally Offered: Spring

Automotive Technology (USU Eastern)

AUTO 0010 - AUTO I Introduction to Automotive Technology
1-180 contact hours

Students will learn basic safety and shop practices, different automotive systems and how they work. They will learn proper vehicle care and be able to demonstrate proper oil change and tire repair techniques and preventative maintenance.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

AUTO 0020 - AUTO II Suspension/Alignment
1-180 contact hours

Students will learn the different steering and suspension systems and their proper parts and locations. They will learn how to diagnose and repair the different systems. Students will learn how to properly perform a front end and a four wheel alignment on the vehicles.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

AUTO 0021 - AUTO II Brakes
1-180 contact hours

Students will learn the basics of brake system operations,
the difference between service and parking brakes, drum and disc brake systems, hydraulics, and ABS systems. Students will also be instructed in diagnosis and repair of problems and proper inspection techniques.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring
AUTO 0030 - AUTO III Engine Performance
1-180 contact hours

Students will learn drive ability, diagnosis and repair. They will use scan tools, scopes and other equipment to work on tune-up, fuel systems, air induction, and emissions.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring
AUTO 0031 - AUTO III Electrical
1-180 contact hours

Students will learn basic electricity schematics and symbols, batteries, charging and starting systems, multimeter use and maintenance, lighting and horn systems, and supplemental restraint systems.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring
AUTO 0035 - AUTO IV Electrical Lab
1-180 contact hours

Shop laboratory where students do live work to demonstrate their knowledge and hands-on skills for electrical problems.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring
AUTO 0040 - AUTO IV Heating and Air Conditioning
1-180 contact hours

Students will learn the different parts and their functions of the heating and air conditioning systems. They will learn the proper technique for discharging and recharging the air conditioning system.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring
AUTO 0045 - AUTO V Engine Performance Lab
1-180 contact hours

Shop laboratory where students do live work to demonstrate their knowledge and hands-on skills for engine performance problems.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring
AUTO 0050 - Vehicle Maintenance
1-180 contact hours

The purpose of this class is to give students a basic understanding of the operation of an automobile. Whether or not they currently own or drive a car, the time will come when they will. If the student learns some basic things about a car it can save them thousands of dollars in their lifetime and maybe at some specific time when they look into purchasing or repairing a car.

Pass/Fail only
Effective Term
Spring
AUTO 0099 - ASE Test Prep
3 contact hours

This course prepares technicians for the ASE certification exams. Different subject areas will be covered each week. Students may enroll for the entire course or just for the areas needed.

Campus: USU Eastern only
AUTO 0100 - Basic Auto for Beginners
21 contact hours

This course begins from under-the-hood checks to changing tires and minor repairs. It is geared towards those who have no experience or knowledge regarding
the upkeep and maintenance.

Campus: USU Eastern only

AUTO 0110 - Basic Alignment
12 contact hours

This course is designed for the technician or service writer who is new to car and light truck alignments or has been working in the industry for up to one year.

Campus: USU Eastern only

AUTO 0111 - Alignment Diagnostics
16 contact hours

This course is designed for an experienced alignment technician. Instruction covers in-depth equipment operation including advanced diagnostic procedures and steering and suspension system related problems. Specialized OEM adjustment schemes and other alignment related diagnostic procedures are also covered.

Campus: USU Eastern only

AUTO 0121 - Engine Performance I
18 contact hours

Tune-up from points to computerized systems. Using meters and scan tools for diagnosis. Also, emissions and fuel delivery systems.

Campus: USU Eastern only

AUTO 0122 - Engine Performance II
21 contact hours

This course takes all the elements of AUTO 0121 to a more advanced level.

Campus: USU Eastern only

AUTO 0123 - Engine Rebuild
36 contact hours

This course includes some engine theory, as well as all aspects of engine tear-down, cleaning, boring, components servicing, and rebuilding.

Campus: USU Eastern only

AUTO 0130 - Basic Air Conditioning
18 contact hours

This course includes environmental issues, different refrigerants, basic systems and retrofitting older systems over to R134A.

Campus: USU Eastern only

AUTO 0140 - Basic Electrical
21 contact hours

Students will learn battery testing, refilling and fitting, headlight adjustment, ignition timing check, and fan belt adjustment. Basic starting and changing system check. Electrical measurements values and units, circuits, conductors and connectors, basic multimeter use. Use of Bosch Test and Diagnostic equipment.

Campus: USU Eastern only

AUTO 0150 - Brakes
18 contact hours

Conventional and Anti-Lock brakes and all components and their use. Turning of rotors with off-car and on-car lathers. New manufacture information will be shared.

Campus: USU Eastern only

AUTO 0160 - Steering and Suspension
18 contact hours

This course includes the study of different suspensions systems and their repair, also the use of a wheel alignment machine.

Campus: USU Eastern only

AUTO 0170 - Differentials
21 contact hours

This course includes the study of gear ratios, what they are, set up needed tools and proper techniques for their use. Also covers drive shafts, u-joints, constant velocity joints and other drive line parts.

Campus: USU Eastern only

AUTO 0180 - Transmission O & R
36 contact hours
Repair and overhaul of transmissions; including theory, diagnosis and proper repair.

Campus: USU Eastern only

AUTO 0190 - Automotive Electronics
21 contact hours

Basic electronics and newer electronic devices. Rebuild starters and alternators, read wiring diagrams, test sensors and output relays, and use DVOM meters and lab scopes for diagnosis.

Campus: USU Eastern only

AUTO 0191 - Auto Hobby
21 contact hours

Assist car buffs with skills in the areas of electrical, tune-up, brakes, fuel systems, and general mechanics. Students will work on their own vehicles or team up with others.

Campus: USU Eastern only

AUTO 0300 - Utah State Safety Inspection
16 contact hours

Course covering the required curriculum from the Utah Highway Patrol to inspect light duty vehicles such as cars, light duty trucks and motorcycles.

Campus: USU Eastern only

AUTO 0310 - Utah State Heavy Truck Inspection
16 contact hours

Course covering the required curriculum from the Utah Highway Patrol to inspect heavy duty vehicles such as large trucks and tractor trailers.

Campus: USU Eastern only

AUTO 0700 - CNG - CNG Conversions/Kit Installation
56 contact hours

This course will teach students the steps involved in the CNG conversion of a vehicle, as well as preparation and component installation procedures. Students will determine the correct location of all components, install them, and test them for safety/integrity. Post conversion, testing of the vehicle will confirm acceptable drivability and operation, and ensure proper functioning of emissions control devices.

Campus: USU Eastern only

AUTO 0710 - CNG - High Pressure Systems Inspection
30 contact hours

This course will offer the students the opportunity to learn about safety when working with high pressure compressed natural gas. Students will be introduced to natural gas fuel system components and the installation guidelines addressed by NFPA52. We will address the applicable standards for fuel storage cylinders and pressure relief devices. Last, students will perform a physical assessment of the CNG cylinders and system components.

Campus: USU Eastern only

AUTO 0720 - CNG - Tank Inspection
24 contact hours

You will learn inspection of high pressure cylinders, Cylinder parts, Materials, Methods of construction, valves, PRD’s, Strengths and weakness, Cylinder Defueling, “when and why” procedures & safety practices. As well as hazards, storage and installation. This training follows the strict guidelines of both NFPA-52 and CSA Tank Inspection.

Campus: USU Eastern only

AUTO 0730 - CNG - Fundamental Hybrid Repair
20 contact hours

Training will involve: Repairs on existing, basic Hybrid cars, checking insulation of Hybrid circuits to body of cars, reading and operating scan tools for Hybrid cars and covering of new items and information not yet released from manufactures.

Campus: USU Eastern only

AUTO 0740 - CNG - Transportation Fundamentals
16 contact hours

Students will gain needed skills in shop safety and other basic skills that will prepare students for specific automotive courses. The following topics will be covered: using manual and information systems, precision measurement, tires and wheels, bearings, oils and fluids, cleaning methods, gaskets and sealants, cooling systems
and belts and hoses.

Campus: USU Eastern only

AUTO 0750 - CNG - Engine Performance Basics
30 contact hours

Students will run test procedures to diagnose basic engine problems, fuel delivery systems, early fuel injection and ignition systems, and basic waveform diagnostics. Skill sets and procedures will include NATEF tasks as well as instructor assignments.

Campus: USU Eastern only

AUTO 0760 - CNG - Electrical Systems I
56 contact hours

A study of the automobile electrical system, which includes battery performance and testing, starting system diagnosis and repair, charging system diagnosis and repair. Coursework also includes proper use of wiring diagram and proper use of multi-meter and electrical troubleshooting procedures.

Campus: USU Eastern only

AUTO 0770 - CNG - Electrical Systems II
56 contact hours

Students will be required to complete advanced diagnostic procedures including lab scope use, voltage and amperage waveform analysis and the completion of NATEF tasks to national standards. Competency testing includes experimental learning and guided diagnostic approaches.

Campus: USU Eastern only

AUTO 0780 - First Responder for Hybrid and Alternative Vehicles
24 contact hours

Students will learn the skills to reduce the risks taken by first responders when responding to an incident involving alternative fuels, alternative fuel vehicles, and advanced technology vehicles.

Campus: USU Eastern only

AUTO 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

AUTO 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

AUTO 1000 - Introduction to Transportation Technology I
4 credits

First course in automotive or diesel technology. Students will gain needed skills in shop safety and other basic skills that will prepare students for specific automotive or diesel courses. Covers: using manual and information systems, precision measurement, tires and wheels, bearings, headlamp adjustment, oils and fluids, cleaning methods, gaskets and sealants, cooling systems and belts and hoses. This course can be articulated with high school automotive courses.

Cross-listed as: DSME 1000

Campus: USU Eastern only

AUTO 1010 - Introduction to Transportation Technology II
5 credits

Continuation of AUTO 1000. Students will continue to learn how to service, troubleshoot and repair modern automobiles.

Prerequisite/Restriction: AUTO 1000

Campus: USU Eastern only

AUTO 1100 - Engine Repair Theory
3 credits

Will study engine types, construction, operating principles, and performance. Related physics and mathematics are emphasized, detailed examination is made of lubricating systems, cooling systems, timing valves and bearings, as applied to gas and diesel-
powered units.

Corequisite: AUTO 1105

Campus: USU Eastern only

Page: 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 ... Forward 10 -> 64

Automotive Technology (USU Eastern)

AUTO 1105 - Engine Repair Lab
3 credits

Offers shop practice in engine disassembly and inspection, valve and seat reconditioning, and installation, checking tolerance, fitting parts, and engine reassembling. Students will complete all P-1 and P-2 NATEF tasks for the area of study.

Corequisite: AUTO 1100

Campus: USU Eastern only

AUTO 1100 - Engine Repair Lab
3 credits

Plan and use the time available wisely.

Corequisite: AUTO 1200

Campus: USU Eastern only

AUTO 1300 - Manual Drive Train and Axle Theory
3 credits

Studies the theory of manual transmission, trans axles, drive shafts, axle shafts, and differential assemblies. A study of four wheel drive and clutch components as used in manual drive trains will also be included.

Corequisite: AUTO 1305

Campus: USU Eastern only

AUTO 1305 - Manual Drive Train and Axle Lab
2 credits

Students will complete the removal, tear down, assembly, and installation procedure on a standard transmission, trans axle, differential assembly and clutch assembly. They will diagnose the need of required replacement parts on all manual drive train components. They will also complete all P-1 and P-2 NATEF requirements for this area of study.

Corequisite: AUTO 1400

Campus: USU Eastern only

AUTO 1400 - Suspension and Steering Theory
3 credits

Will study the theory of SRS Systems Manual, power steering systems, rack and pinion systems, McPherson Strut Suspension Systems, and short and long arm suspension systems. Will also study two and four wheel alignment procedures and steering geometry as well as tire wear problems. Students will also learn the theory behind tire and wheel vibrations. Where applicable, related math and physics will be taught.

Corequisite: AUTO 1405

Campus: USU Eastern only

AUTO 1405 - Suspension and Steering Lab
3 credits
Students will complete as many as four wheel alignment procedures and wheel balances as time permits, as well as all P-1 and P-2 NATEF tasks for this area of study.

Corequisite: AUTO 1400

Campus: USU Eastern only

AUTO 1500 - Brakes - Theory
3 credits

Covers the principles of the automotive braking system. Includes the study of ABS, manual and power brake system, covers disc brakes, and drum brakes as well as power assist units. Where applicable, related math and physics will be taught.

Corequisite: AUTO 1505

Campus: USU Eastern only

AUTO 1505 - Brakes - Lab
2 credits

Students will complete necessary pressure checks to diagnose and analyze brake problems and will complete major and minor brake work, which will include turning drums and rotors on a brake lathe. Students will complete all P-1 and P-2 NATEF tasks for this area of study.

Corequisite: AUTO 1500

Campus: USU Eastern only

AUTO 1550 - Professional Vocational Leadership (VICA) 1 credit

Supports and facilitates the goals and objectives of Vocational Industrial Clubs of America (VICA). Students will gain skills in the following areas: personal development, service, team building and leadership, workplace skills, and interview skills. Students may participate in regional, state and national competitions.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

AUTO 1600 - Electrical and Electronics I Theory
3 credits

Complete study of the automobile electrical system, which includes battery performance and testing, starting system diagnosis and repair, charging system diagnosis and repair. Proper use of a multimeter including Hz, dwell, ms on time, duty cycle, min/max. Coursework also includes proper use of wiring diagram and electrical troubleshooting procedures.

Corequisite: AUTO 1605

Campus: USU Eastern only

AUTO 1605 - Electrical and Electronics I Lab
3 credits

Students will complete all hands on testing of components using diagnostic routines and troubleshooting procedures. Use of diagrams, meters, test procedures, and NATEF tasks will be required.

Corequisite: AUTO 1600

Campus: USU Eastern only

AUTO 1800 - Engine Performance I Theory
3 credits

Coursework will include fuel systems, ignition systems, air intake and exhaust systems. Will also cover basic engine diagnostics and test procedures.

Corequisite: AUTO 1805

Campus: USU Eastern only

AUTO 1805 - Engine Performance I Lab
3 credits

Students will run test procedures to diagnose basic engine problems. Lab requirements include fuel delivery systems, early fuel injection and ignition systems, and basic waveform diagnostics. Skill sets and procedures will include NATEF tasks as well as instructor assignments.

Corequisite: AUTO 1800

Campus: USU Eastern only

AUTO 1600 - Electrical and Electronics II Theory
3 credits
Advanced diagnostic procedures on lighting systems, gauge systems, wiper systems, and warning systems. Students will use state of the art equipment including lab scope and waveform diagnostics.

Corequisite: AUTO 2605

Campus: USU Eastern only

AUTO 2605 - Electrical and Electronics II Lab
2 credits

Students will be required to complete advanced lab procedures including lab scope use, voltage and amperage waveform analysis and the completion of NATEF tasks to national standards. Competency testing includes experimental learning and guided diagnostic approaches.

Corequisite: AUTO 2600

Campus: USU Eastern only

AUTO 2700 - Heating and Air Conditioning Theory
3 credits

Will study the theory of heat transfer, pressure, and change of state necessary for heating and systems to operate. Will also cover vacuum and electronic controls, actuators and sensors. Emphasis will be placed on proper use of equipment, safety issues as well as diagnosis and repair.

Prerequisite/Restriction: AUTO 1000

Corequisite: AUTO 2705

Campus: USU Eastern only

AUTO 2705 - Heating and Air Conditioning Lab
2 credits

The use of equipment and job skills will be performed. Students will follow the national NATEF task list as well as instructor written tasks. Students will service heating and air conditioning systems. Procedures will cover diagnostic and test procedures, and removal and replacement of heater core, evaporators, condensers, pumps, valves and switches used in domestic and import vehicles.

Corequisite: AUTO 2700

AUTO 2800 - Engine Performance II Theory
3 credits

Includes the use of scanners, computer diagnostics, and proper use of the lab scope diagnostics for diagnostics.

Corequisite: AUTO 2805

Campus: USU Eastern only

AUTO 2805 - Engine Performance II Lab
2 credits

Will cover OBDII as well as IM240 test procedures. Students will learn about computer monitors, how to access and use available information in the PCM. Scanner use will include road trip and snapshot features. Lab scope use will require testing of both inputs and outputs and learning how to use the information available.

Corequisite: AUTO 2800

Campus: USU Eastern only

AUTO 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job experience for students in most aspects of automobile repair businesses. The student establishes learning objectives, hours to be worked, and a credit agreement with the instructor/coordinator at the beginning of the semester. Student and instructor/coordinator will meet periodically to review progress.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

AUTO 2988 - Special Problems
1-3 credits

Individual work approved by the department instructor. Time and credit to be arranged.

Repeatable for credit
Aviation Technology

AV 1000 - Private Pilot Introduction
1 credit

Students will participate in introductory study of private pilot ground school and prefatory exercises for flight activities.

Pass/Fail only
Semester(s) Traditionally Offered: Summer
Course Fee: $280.00

AV 1100 - The Aviation Profession
1 credit

Covers attributes of aviation professional, career planning, and certification process.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $5.00

AV 1130 - Flight Principles
3 credits

Basic flight theory and physics of flight. Aircraft control systems related to flight. Ground handling and servicing of aircraft. Special lab fee.

Semester(s) Traditionally Offered: Fall
Course Fee: $3.00
Effective Term
Spring 2017

AV 1140 - Aircraft Components and Principles
2 credits

Materials and hardware, as well as nondestructive inspection applicable to aircraft. Plumbing methods, maintenance publications, and aircraft weight and balance control.

Semester(s) Traditionally Offered: Fall
Course Fee: $45.00

AV 1170 - Aircraft Structures
3 credits

Accepted methods and repair for metal structures. Organic finishes and application techniques with laboratory applications and practical experience.

Semester(s) Traditionally Offered: Fall

AV 1240 - Aircraft Maintenance
3 credits

Maintenance, repair, alteration, and inspection of aircraft. Assembly and rigging of control systems with laboratory application of maintenance assembly and rigging procedures.

Prerequisite/Restriction: AV 1130 and AV 1140 and AV 1170

Semester(s) Traditionally Offered: Spring
Course Fee: $139.00

AV 2000 - Aerodynamics
3 credits

This course will provide a study of the physical principles of airplane aerodynamics. This will increase appreciation of the factors affecting aircraft including: performance, stability, and controllability. Attention to special flight conditions that could be encountered by fixed wing pilots.

Prerequisite/Restriction: AV 1130

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

AV 2100 - Aircraft Reciprocating Powerplants and Accessories
3 credits

Theory of operation, maintenance, and repair of reciprocating engines, propellers, exhaust systems, ignition systems, and fuel systems with laboratory applications of principles and components studied.

Corequisite: AV 2110.

Semester(s) Traditionally Offered: Fall

AV 2110 - Aircraft Reciprocating Powerplants and Accessories Lab
3 credits

Laboratory application of principles studied in AV 2100.
AV 2140 - Aircraft Turbine Powerplants and Maintenance Operations
3 credits

Theory of turbine powerplants, including turbine engine and components operation, hot section inspection, and servicing. Aircraft engine 100-hour inspections and maintenance, with laboratory applications of principles and components studied.

Prerequisite/Restriction: AV 2100

Corequisite: AV 2150

AV 2150 - Aircraft Turbine Powerplant Maintenance Operations Lab
3 credits

Theory of turbine powerplants, including turbine engine and components operation, hot section inspection, and servicing. Aircraft engine 100-hour inspections and maintenance, with laboratory applications of principles and components studied.

Prerequisite/Restriction: AV 2110

Corequisite: AV 2140

AV 2140 - Aircraft Systems for the Professional Pilot
3 credits

The student will obtain a working knowledge of the three aircraft they will be flying during their pilot training at USU: the Diamond Star DA40, Piper Arrow PA28R200 and the Twin Star DA42. The students will be able to identify and explain electric and hydraulic systems. They will gain a greater understanding of reciprocating engines, propellers, flight controls and landing gear systems.

Effective Term
Spring 2017

AV 2160 - Aircraft Systems Lab
1 credit

Laboratory application of principles and components studied in AV 2170.

Corequisite: AV 2170.

AV 2170 - Aircraft Systems
2 credits

Theory and operation of aerospace environmental systems, communication, navigation and guidance systems, fuel and propellant systems, fire detection, and warning.

AV 2175 - Robinson Helicopter Systems
2 credits

In depth look into Robinson R22 and R44 pilot operating handbook.

Prerequisite/Restriction: AV 2355

AV 2180 - Aircraft Hydraulic and Pneumatic Systems
2 credits

Theory and operation of aircraft hydraulic, landing gear, and brake systems.

AV 2190 - Aircraft Systems Lab
1 credit

Laboratory application of principles and components studied in AV 2170.

Corequisite: AV 2170.

AV 2200 - Aircraft Hydraulics and Pneumatics Systems Lab
1 credit

Laboratory application of principles and components studied in AV 2180.

Corequisite: AV 2180.

AV 2300 - Aircraft Maintenance and Operation
2 credits

Prerequisite/Restriction: AV 2355

AV 2185 - Robinson R44 Helicopter Systems
2 credits

In depth look into Robinson R44 helicopter systems.

Prerequisite/Restriction: AV 2355
AV 2250 - Internship
1-4 credits

Planned supervised work experience in industry.

Prerequisite/Restriction: Approval of department
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

AV 2330 - Private Pilot Ground School
4 credits

Instructions in principles of flight, aircraft and engine operation, weather, navigation, radio aids to navigation, radio communications, and federal air regulations. Preparation for FAA Private Pilot written exam.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $180.00Course Fee (additional): $15.00

AV 2335 - Private Pilot Ground School Helicopter
4 credits

Instructions in principles of flight, aircraft and engine operations, weather, navigation, radio aids to navigation, radio communications, and federal air regulations. Preparation for FAA Private Pilot written exam.

Semester(s) Traditionally Offered: Fall, Spring

AV 2350 - Private Pilot Certification
3 credits

FAA approved flight training program meeting all requirements for, and in the issuance of, the Private Pilot Airplane License.

Prerequisite/Restriction: AV 2330 (may be taken concurrently)
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10,820.00Course Fee (additional): $75.00
Effective Term
Fall 2016

AV 2355 - Private Pilot Helicopter Stage I Certification
3 credits

This is an FAA approved flight training program introducing requirements for issuance of the Private Pilot Helicopter License.

Corequisite: AV 2335
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $25,705.00 - Summer 2016Course Fee (additional): $13,850.00 (fall 2016)
Effective Term
Summer 2017

AV 2365 - Private Pilot Helicopter Stage II Certification
3 credits

FAA approved flight training program meeting all requirements for, and the issuance of, the Private Pilot Helicopter License.

Prerequisite/Restriction: AV 2355
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10,850.00
Effective Term
Summer 2017

AV 2400 - Commercial Multi-Engine Ground School
2 credits

Commercial flight operations including performance, cross country planning, advanced systems operations, complex airplanes, and multi-engine flight maneuvers.

Prerequisite/Restriction: AV 2350
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00Course Fee (additional): $165.00

AV 2410 - Commercial Pilot Stage I Certification
2 credits

Flight training program that introduces initial time building towards commercial rating. Includes cross country flight time.

Prerequisite/Restriction:
AV 2350
AV 2400 (may be taken currently)
AV 2415 - Commercial Pilot Stage II Certification
3 credits
This flight training program is designed to build time towards the commercial rating. Commercial maneuvers are introduced.
Prerequisite/Restriction:
AV 2350
AV 2410

AV 2420 - FAA Regulations, Records, and Certification
2 credits
Maintenance forms, records, and regulations releasing aircraft to airworthy status. Certification of maintenance technicians is also included.

AV 2430 - Aircraft Electrical Systems and Components
2 credits
Aircraft electrical power generating systems. Theory of generation, alternators, regulation, and control systems with laboratory application of principles and systems studied.
Prerequisite/Restriction: TEE 2300

AV 2440 - Aircraft Electrical Systems Laboratory
2 credits
Laboratory application of principles and systems studied in AV 2430.
Prerequisite/Restriction: TEE 2300
Corequisite: AV 2430.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $5,300.00
Effective Term
Fall 2016

AV 2450 - SE Flight Experience 5 Hours
1 credit
Students will gain additional aeronautical knowledge and experience through continued flight training. This course is designed for students not currently enrolled in another certification course to receive additional training and flight hours towards their FAA certifications as part of USU's Part 141 flight training program.
Prerequisite/Restriction: AV 2330 and AV 2350
Repeatable for credit
Pass/Fail

AV 2451 - SE Flight Experience 10 Hours
1 credit
Students will gain additional aeronautical knowledge and experience through continued flight training. This course is designed for students not currently enrolled in another certification course to receive additional training and 10 single engine flight hours towards their FAA certifications as part of USU's Part 141 flight training program.
Prerequisite/Restriction: AV 2330 and AV 2350

AV 2452 - SE Flight Experience 20 Hours
1 credit
Students will gain additional aeronautical knowledge and experience through continued flight training. This course is designed for students not currently enrolled in another certification course to receive additional training and 20 single engine flight hours towards their FAA certifications as part of USU's Part 141 flight training program.
Prerequisite/Restriction: AV 2330 and AV 2350

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $4,010.00
Effective Term
Fall 2016

AV 2503 - SE Flight Experience 25 Hours
1 credit

Students will gain additional aeronautical knowledge and experience through continued flight training. This course is designed for students not currently enrolled in another certification course to receive additional training and 25 single engine flight hours towards their FAA certifications as part of USUs Part 141 flight training program.

Prerequisite/Restriction: AV 2330 and AV 2350

Pass/Fail
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $4,990.00
Effective Term
Fall 2016

AV 2504 - ME Flight Experience 10 Hours
1 credit

Students will gain additional aeronautical knowledge and experience through continued flight training. This course is designed for students not currently enrolled in another certification course to receive additional training and 15 multi-engine flight hours towards their FAA certifications as part of USUs Part 141 flight training program.

Prerequisite/Restriction: AV 2330, AV 2350 and Multi-engine Rating

Pass/Fail
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $3,285.00
Effective Term
Fall 2016

AV 2505 - ME Flight Experience 15 Hours
1 credit

Students will gain additional aeronautical knowledge and experience through continued flight training. This course is designed for students not currently enrolled in another certification course to receive additional training and 25 multi-engine flight hours towards their FAA certifications as part of USUs Part 141 flight training program.

Prerequisite/Restriction: AV 2330, AV 2350 and Multi-engine Rating

Pass/Fail
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $5,085.00
Effective Term
Fall 2016

AV 2515 - Intermediate Flight Helicopter
4 credits

FAA approved flight training program that fulfills the cross country requirements for instrument and commercial helicopter ratings.

Prerequisite/Restriction: AV 2545

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $15,955.00
Effective Term
Summer 2016

AV 2520 - Instrument Pilot Ground School
4 credits

Ground school approved by FAA under Part 141 of the Federal Aviation Regulations. Designed to prepare students to pass the FAA oral and written examinations required for becoming instrument rated pilots.

Prerequisite/Restriction: AV 2350

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $190.00
Effective Term
Spring

AV 2525 - Instrument Pilot Ground School Helicopter
4 credits

Ground school approved by FAA under Part 141 of the Federal Aviation Regulations. Designed to prepare students to pass the FAA oral and written examinations required for becoming instrument rated pilots.

Prerequisite/Restriction: AV 2365
AV 2540 - Instrument Pilot Certification
3 credits

FAA approved flight training program that completes all requirements for issuance of the instrument pilot airplane rating.

Prerequisite/Restriction: AV 2350, AV 2410, AV 2415; and AV 2520 (may be taken concurrently)

AV 2545 - Instrument Helicopter Certification
3 credits

This is an FAA approved flight training program meeting all requirements for, and the issuance of, the Instrument Pilot Helicopter License.

Prerequisite/Restriction: AV 2365
Corequisite: AV 2525

AV 2550 - Instrument Pilot Certification II
1 credit

Continuation of AV 2540. Completes all requirements for issuance of the instrument pilot airplane rating.

Prerequisite/Restriction: AV 2540

AV 2555 - Instrument Pilot Helicopter Certification II
1 credit

Continuation of AV 2545. Completes all requirements for issuance of Instrument Pilot Helicopter rating.

Prerequisite/Restriction: AV 2545

AV 2620 - Commercial Pilot Ground School
2 credits

Commercial flight operations including performance, cross country planning, advanced systems operations, complex airplanes, and flight maneuvers.

Prerequisite/Restriction: AV 2350, AV 2520, AV 2540, and AV 2550

AV 2625 - Commercial Pilot Ground School Helicopter
2 credits

Commercial flight operations including performance, cross country planning, advanced systems operations, complex helicopters, and flight maneuvers.

Prerequisite/Restriction: AV 2355, AV 2525, AV 2545, AV 2555

AV 2660 - Commercial Pilot Certification
1 credit

Flight instruction to meet FAA requirements and completion of tests for certification.

Prerequisite/Restriction: AV 2540, AV 2550; and AV 2620 (may be taken concurrently)

AV 2665 - Commercial Pilot Certification II
1 credit

Continuation of AV 2660. Completes all requirements for issuance of the instrument pilot airplane rating.

Prerequisite/Restriction: AV 2540

AV 2665 - Commercial Pilot Certification II
1 credit

Continuation of AV 2660. Completes all requirements for issuance of the instrument pilot airplane rating.

Prerequisite/Restriction: AV 2540

AV 2665 - Commercial Pilot Certification II
1 credit

Continuation of AV 2660. Completes all requirements for issuance of the instrument pilot airplane rating.

Prerequisite/Restriction: AV 2540
AV 2665 - Commercial Helicopter Stage I Certification
3 credits
This course is an FAA approved flight training program introducing requirements for the issuance of Commercial Pilot Helicopter rating.

Prerequisite/Restriction:
AV 2545
AV 2555

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2017

AV 2670 - Commercial Multi-engine Certification
3 credits
This is an FAA approved flight training program meeting requirements and completion of tests for commercial multi-engine certification.

Prerequisite/Restriction: AV 2410, AV 2415
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $23,255.00
Effective Term
Summer 2017

AV 2675 - Commercial Helicopter Stage II Certification
3 credits
This is an FAA approved flight training program continuing requirements for the issuance of Commercial Pilot Helicopter rating.

Prerequisite/Restriction: AV 2665
Corequisite: AV 2625
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2017

AV 2685 - Commercial Helicopter Stage III Certification
3 credits
This is an FAA approved flight training program that finalizes all requirements for, and the issuance of, the Commercial Pilot Helicopter License.

Prerequisite/Restriction: AV 2675
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2017

AV 2870 - Commercial Single-Engine Add-On
1 credit
Flight training program designed to satisfy all requirements necessary to qualify a student for the FAA Single-Engine Airplane Rating practical test.

Prerequisite/Restriction: AV 2670
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $2,600.00
Effective Term
Fall 2016

AV 2880 - Multi-Engine Certification
1 credit
Flight training program designed to satisfy all requirements necessary to qualify a student for the FAA Multi-Engine Airplane Rating practical test.

Prerequisite/Restriction: AV 2660
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $4,295.00 Course Fee (additional): $25.00

AV 3010 - National Airspace, Air Traffic Control, and Airport Administration
3 credits
Study of air traffic control system, airspace usage, and facilities. Airport planning, development, and management and their importance to the achievement of a successful airport operation. Management of publicly owned and operated airports ranging in size from general aviation to the large air carrier hubs.

Prerequisite/Restriction: Aviation Technology majors with 40 credits completed
Semester(s) Traditionally Offered: Fall
Effective Term
Spring
AV 3120 - Aviation Law
3 credits

Law as it affects aviation industry. Rights and responsibilities of individual organizations and the aviation community. Regulation and liability pertaining to design, manufacturing, operation, and maintenance of aircraft.

Prerequisite/Restriction: Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Fall
Effective Term
Spring

AV 3140 - Advanced Avionics Systems and Flight Simulation
3 credits

Advanced instrument simulation training.

Prerequisite/Restriction: AV 2540 Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $500.00
Effective Term
Spring

AV 3145 - Helicopter Flight Training Device
3 credits

Advanced instrument simulation training.

Prerequisite/Restriction: AV 1100 and AV 2545 and a grade of C- or better in MATH 1050 or higher mathematics course or AP Calculus AB exam score of 3 or higher

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $4,050.00

AV 3280 - Advanced Aircraft Maintenance
2 credits

A capstone class, that through hands on review of skills gained throughout the curriculum, will prepare students for FAA written exams in General, Airframe, and Powerplant studies.

Prerequisite/Restriction: AV 2140, AV 2150, AV 2170, AV 2190, AV 2200, AV 2420, AV 2440, AV 4200 and PHYS 1800

Semester(s) Traditionally Offered: Fall
Course Fee: $35.00

AV 3610 - AeroTechnology Design I
1 credit

Students select and plan a senior project. Requires written proposal, including technical description of the project and management plans.

Prerequisite/Restriction: Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Spring

AV 3720 - CFI and CFII Ground School (CI)
CI Communications Intensive
3 credits

Designed to prepare students to pass the FAA oral and written examinations required for becoming certified flight and instrument instructors. Combines Certified Flight Instructor and Certified Flight Instructor-Instrument into one course.

Prerequisite/Restriction: AV 2670, Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $405.00

AV 3725 - Certified Flight Instructor Ground School
Helicopter
2 credits

Designed to prepare students to pass the FAA oral and written examinations required for becoming certified flight instructor-instrument.

Prerequisite/Restriction: AV 1100, AV 2625, AV 2665, and a grade of C- or better in MATH 1050 or higher mathematics course or AP Calculus AB exam score of 3 or higher Aviation Technology majors only

Semester(s) Traditionally Offered: Fall, Spring
AV 3735 - Certified Flight Instructor Certification
Helicopter
2 credits

This is an FAA approved flight training program introducing requirements for the issuance of Certified Flight Instructor Helicopter rating.

Prerequisite/Restriction: AV 2685

Corequisite: AV 3725

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $9,605.00
Effective Term
Summer 2017

AV 3740 - CFI Certification
2 credits

FAA-approved flight training program meeting all requirements for the issuance of the Certified Flight Instructor Airplane Rating.

Prerequisite/Restriction: AV 2670 and AV 3720 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $8,215.00
Effective Term
Summer 2017

AV 3760 - Certified Flight Instructor Instrument Certification
1 credit

FAA approved flight training program meeting all the requirements for, and issuance of, the Certified Flight Instructor, Airplane Instrument Rating.

Prerequisite/Restriction: AV 3720 and AV 3740 (may be concurrently enrolled in AV 3740)

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $2,385.00
Effective Term
Summer 2016

AV 3825 - Certified Flight Instructor-Instrument Ground School Helicopter
1 credit

Designed to prepare students to pass the FAA oral and written examinations required for becoming certified flight instructor-instrument.

Prerequisite/Restriction: AV 3735, AV 3725

Semester(s) Traditionally Offered: Fall, Spring

AV 3835 - Certified Flight Instructor Instrument Certification Helicopter
1 credit

This is an FAA approved flight training program introducing requirements for the issuance of Certified Flight Instructor Instrument Helicopter rating.

Prerequisite/Restriction: AV 3735

Corequisite: AV 3825

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $7,653.00
Effective Term
Summer 2017

AV 3860 - Multiple Engine Instructor Certification
1 credit

Multi-engine Instructor Rating course is designed to provide the student training required under Title 14 of the Code of Federal Regulations, Part 61 to qualify the student for the Multi-engine Instructor rating (MEI certificate).

Prerequisite/Restriction: AV 2660, AV 3740 and AV 3720; must have a Commercial Pilot Certificate and a Flight Instructor rating in airplanes

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $4,375.00
Effective Term
Fall 2016

AV 3885 - Helicopter Turbine Transition
2 credits

Introduction to turbine engines and helicopters.

Prerequisite/Restriction: AV 1100, AV 2665 and a grade
of C- or better in MATH 1050 or higher mathematics course or AP Calculus AB exam score of 3 or higher

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10,500.00

AV 3900 - Aviation Independent Study
1-3 credits

Customized study, projects, and/or readings on topics not covered in regular courses.

Prerequisite/Restriction: Approval of proposal written by students in consultation with Instructor

Repeatable

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring 2016

AV 4100 - National Intercollegiate Flying Association Flight Team Lab
2 credits

The course will help students prepare for the annual flight competition through leadership experience, fund raising and technical training. Preparation for the annual NIFA competition includes both flying and ground events, and students take on responsibilities as club officers in the USU Flight Team Club.

Prerequisite/Restriction: Must have Private Pilot License and faculty approval

Repeatable

Effective Term
Spring 2016

AV 4110 - National Intercollegiate Flying Team Certification
1 credit

Orientation with the USU Flying Team aircraft, skills and Cessna 152 certification. Students will be checked out in the Cessna 152 and fly training missions in preparation for the fall NIFA competition.

Prerequisite/Restriction: Private Pilot’s License and faculty advisor approval

Repeatable for credit.

AV 4200 - Composite Manufacturing Processes and Repair
3 credits

Composite manufacturing processes, composite materials survey, tooling design and fabrication, autoclave processes, vacuum bag techniques, filament winding processes, equipment requirements, materials cutting and storage, and composite materials testing.

Prerequisite/Restriction: Aviation technology majors only AV 1100 and a grade of C- or better in MATH 1050 or higher mathematics course or AP Calculus AB exam score of 3 or higher

Semester(s) Traditionally Offered: Fall
Course Fee: $60.00

AV 4250 - Internship
1-6 credits

Planned supervised work experience in industry.

Prerequisite/Restriction: Permission of department
Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring

AV 4280 - Aviation Management
3 credits

Study of airline operations and their organizational structure. Examines functions of airline dispatcher,
operations specialists, managers, and cockpit flight crew. Discussion of advanced flight planning, aircraft performance and loading considerations, and impact of weather on flight operations and routing priorities.

Prerequisite/Restriction: Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00
Effective Term
Spring

AV 4300 - History of Aviation in America
3 credits

This course highlights historical events, individuals and milestones in the development of aviation in America during the 20th century. This course will help students evaluate the explosive growth of aviation in relation to the economic, military, and social growth in the United States. The course is intended for upper level aviation students pursuing a career in aviation or aviation related fields, as well as anyone interested in learning about the history of aviation in America. We are re-using a course number for a course no longer taught.

Prerequisite/Restriction: Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Fall
Effective Term
Spring

AV 4490 - Human Factors in Aviation Safety
3 credits

Examines major causative agent in aircraft accidents: the human being. Emphasizes psychological and physiological factors enhancing accident probability. Includes detailed analysis of ergonomics (human engineering) and its influence on safety.

Prerequisite/Restriction: Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

AV 4505 - Advanced Robinson Helicopter Systems
3 credits

Robinson Safety course and maintenance seminar.

Prerequisite/Restriction: AV 2175, AV 2355, and Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring

AV 4605 - Helicopter History and Industry Applications
3 credits

An in-depth look into helicopter applications in the industry and an overview of helicopter commercial operations (part 135).

Prerequisite/Restriction: AV 2555 and Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Fall
Effective Term
Spring

AV 4610 - AeroTechnology Design II (CI)
CI Communications Intensive
3 credits

Execution and completion of a team or individual project. Requires design reviews and written reports.

Prerequisite/Restriction: AV 3610

Semester(s) Traditionally Offered: Fall
Effective Term
Spring

AV 4620 - AeroTechnology Design III (CI)
CI Communications Intensive
3 credits

Preparation and presentation of a team or individual project. Writing and speaking skills emphasized through technical reports and presentations.

Prerequisite/Restriction: AV 4610
Semester(s) Traditionally Offered: Spring
Effective Term
Spring

AV 4660 - Flight Senior Project (CI)
CI Communications Intensive
3 credits

Students select, plan, and execute an approved senior project. Writing and speaking skills emphasized through technical reports and presentations.

Prerequisite/Restriction: Aviation Technology majors with 60 credits completed

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring

3 credits

Introduction to crew resource management, safety management, and aeronautical decision making.

Prerequisite/Restriction: AV 2665 and Aviation Technology majors with 60 credits completed

Semester(s) Traditionally Offered: Spring
Course Fee: $1,600.00
Effective Term
Spring

AV 4710 - Crew Resource Management (CI)
CI Communications Intensive
3 credits

This course trains students to use all resources available to them in order to help ensure the safe completion of any flight they are involved with. Students will learn the importance of safety management, the use of available knowledge, and the importance of compliance in the aviation industry. Emphasis will be placed on the utilization of manuals and directives along with other aviation professionals’ input to enhance aviation safety. Case studies, role playing, textbook, and video materials will be used.

Prerequisite/Restriction: AV 1100, AV 2330, and ENGL 2010

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

AV 4720 - Aviation Safety and Security (CI)
CI Communications Intensive
3 credits

This course covers a brief history of aviation safety, and the development since the 1970s of today's safety culture. Students will gain an understanding of the importance of safety systems, safety training, and security surrounding the aviation environment. Topics will include flight and ground safety, safety management systems, government regulatory organizations, and an introduction to accident investigation. An overview of security will cover airline and airport security, operator considerations and general aviation security.

Prerequisite/Restriction: Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

AV 4750 - Aviation Symposium
1-3 credits

Students will attend aviation events, airshows visit museums, historical sites, maintenance facilities, and other aviation related locations as part of their development of their professional experience. Students may also plan, organize and conduct seminars, workshops, competitions, and other events for high school or college students. In consultation and approval of their faculty advisor, this course will help broaden and deepen their experience and preparation for their future career.

Prerequisite/Restriction: Students must have completed 30 Aviation Major Credits

Repeatable
Semester(s) Traditionally Offered: Fall, Spring or Summer
Effective Term
Summer 2016

AV 5400 - Regional Jet Ground School I
4 credits
Introduction to a typical commercial jet aircraft in use by Regional Airlines. Course includes the following: Aircraft Systems, Standard Operating Procedures, and Flight Planning and Performance. Introduction to Airline Flight Operations in preparation for entry-level pilot positions with a regional airline.

Prerequisite/Restriction: AV 2540 and Aviation Technology majors with 40 credits completed

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring

AV 5410 - Regional Jet Ground School II
4 credits

Continuation of AV 5400

Prerequisite/Restriction: Aviation technology majors only AV 1100, AV 2550 and a grade of C- or better in MATH 1050 or higher mathematics course or AP Calculus AB exam score of 3 or higher

Semester(s) Traditionally Offered: Fall

AV 5420 - Advanced Regional Jet Simulation
3 credits

Flight training introduction to a typical commercial jet aircraft simulator in use by regional airlines. Intended for Professional Pilot aviation students actively pursuing a career in the airline industry.

Prerequisite/Restriction: AV 5400

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $2,075.00
Effective Term
Spring

AV 5500 - Airline Transport Pilot (ATP) Ground School
QI Quantitative Intensive
4 credits

This course is designed to help student better transition into the air carrier sphere of aviation and will prepare the student to successfully pass the required FAA ATP/ADX Knowledge Exam. The course will cover a vast area of subject matter pertaining to Part 121 air carrier operations including: Part 121 domestics and international regulations and operations, dispatch release requirements and flight planning, MEL/CDL usage, RVSM, RNP, ETOPS regulations and calculations, advanced high-altitude meteorology, advanced high altitude operations and jet fundamentals. The course will also cover transport category performance and weight and balance requirements and calculations through the use of algebraic formulas, charts, graphs, and tables.

Prerequisite/Restriction: AV 2540, AV 2670, and must have completed 60 credit hours

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

AV 5910 - Aviation Special Topics
1-4 credits

Aviation Topics courses that may be current events, special courses, and other timely topics that do not fall under any other Aviation Courses.

Repeatable for credit
Effective Term
Fall 2016

AV 6110 - Air Transportation
3 credits

This online course will give students a broad perspective of the Air Transportation system. Students will gain an understanding of the marketing, pricing, scheduling, fleet planning and a historical perspective of commercial aviation including current trends. Maintenance managers, technicians, operations managers, dispatchers, and pilots will understand and appreciate the scope and complexity of managing an airline. Management and operational principles specific to the airline industry will be introduced as they interrelate to the peculiarities of this unique business environment.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

AV 6120 - Aviation Operations and Management
3 credits

This course introduces the student to business and corporate aviation management. Students will discover the many aspects of running a business in aviation, from
determining the needs of the industry, getting started in determining business strategy, hiring personnel and purchasing aircraft. Topics will include operations, maintenance, safety, and how to put it all together in a company students will create as a class, by taking on the various required roles.

Effective Term
Fall 2016

AV 6140 - Aviation Safety: History and Research
3 credits

This course reviews the history of aviation safety from the early days of powered flight till the modern day. Students will understand the development of aviation safety, changes as technology improved, and how standards have been developed in aviation safety.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

AV 6310 - Aviation Safety Management Systems
3 credits

This course covers the foundation of a good safety program: the Safety Management Systems (SMS). The course begins with the history and evolution of safety, the principles of quality management, and then delves into the rigors of safety analysis. Topics will include hazards, risks, controls, and the tools and methods of analysis. Students will create a program for a Part 141 Flight School, and utilize taxonomies in our modern aviation system.

Effective Term
Fall 2016

AV 6320 - Airport and Ground Safety Programs
3 credits

This course gives aviation students a broad understanding of the ground safety program. Students will become familiar with hazardous material management, emergency planning, ground handling procedures and ground structure protection. Other topics will include the impact of weather on ground operations, ramp and cargo operations, fuel safety and how to collect, manage and analyze safety data.

Effective Term
Fall 2016

AV 6330 - Flight Safety Program Management
3 credits

This course gives aviation students a deeper understanding of a flight safety program. Students will become familiar with the basics of an aviation safety program, how training, education, awards programs, motivation, and risk management come into play for organizing, managing and developing an aviation safety program.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

AV 6900 - Aviation Independent Study
3 credits

This course will be an independent study course where an individual student will plan, develop, create and obtain approval for a unique experience. The student and advisor will mutually agree on course objectives, measurement and requirements. Students will then update their advisor regularly as they progress through the course.

Prerequisite/Restriction: Must have completed 3 courses in Masters Program
Repeateable
Semester(s) Traditionally Offered: Fall, Spring & Summer
Effective Term
Spring 2017

AV 6930 - Aviation Special Topics
3 credits

This course will cover special topics that vary from semester to semester. Topics may include current events, new and emerging technologies, and other topics that do not fall into any other aviation masters course.

Semester(s) Traditionally Offered: Fall, Spring & Summer
Effective Term
Spring 2017

Biological Engineering
BENG 1000 - Introduction to Undergraduate Research and Engineering Design
1 credit

Introduction to research in biological engineering. Provides preview of research facilities and faculty programs within the Biological Engineering Department at USU. Teaches specific skills for searching scientific literature, database compilation, design of controlled experiments, lab tours, data analysis, and data presentation.

Semester(s) Traditionally Offered: Fall
Course Fee: $55.00

BENG 1880 - Engineering Quantification of Biological Processes
3 credits

Introduction to engineering practice of biological modeling and quantification of biological processes. Introduction to transport of heat and mass; bioenergetics, thermodynamics, and enzyme kinetics; metabolism; mechanical work processes; and modeling of biological systems. Recommended that students take BENG 1880 after taking calculus and biology.

Semester(s) Traditionally Offered: Spring
Course Fee: $40.00

BENG 2330 - Engineering Properties of Biological Materials
3 credits

This course provides a hands-on overview of natural and synthetic materials with application in medical, bioprocessing, and bioenvironmental engineering disciplines. Structure function relationships in biological materials and methods of materials characterization, with a focus on laboratory technique and instrumentation are presented. Technical writing fundamentals and elements of engineering design are emphasized through detailed, concise lab reports and topic presentations.

Prerequisite/Restriction: BIOL 1610 and BENG 1880
Prerequisite/Corequisites: CHEM 2300 or CHEM 2310; and CHEM 2315

Semester(s) Traditionally Offered: Fall
Course Fee: $95.00

BENG 2400 - Biological and Environmental Thermodynamics
3 credits


Prerequisite/Restriction: MATH 1220

Semester(s) Traditionally Offered: Spring
Course Fee: $35.00

BENG 3000 - Instrumentation for Biological Systems
3 credits

Fundamentals of measurement systems used in bioprocess, biomedical, agricultural, biological, and environmental applications. Selection and use of sensors, data acquisition systems, and elementary controls.

Prerequisite/Restriction: ENGR 2210 or TEE 2300 and Admission to the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

BENG 3200 - Introduction to Unit Operations in Biological Engineering
3 credits

Introduction to the fundamental unit operations required to process biological materials in bioprocessing, biomedical, and food engineering applications. Integration of biology and chemistry into biological engineering using basic concepts in heat, mass, and energy conservation and transport.

Prerequisite/Restriction: Prerequisites/Corequisites: CHEM 2300 or CHEM 2310; and CHEM 2315 Admission to Professional Engineering Program

Semester(s) Traditionally Offered: Fall

BENG 3500 - Fluid Mechanics in Biological Engineering
3 credits

Biological Engineering Fluid Mechanics covers fundamental fluid dynamics with applications in bioreactors, microfluidics, cardiovascular flow, and non-Newtonian fluids.
Prerequisite/Restriction: BENG 2400 or MAE 2300 and MATH 2250 or MATH 2270 and MATH 2280 and admission to Professional Program

Semester(s) Traditionally Offered: Fall
BENG 3670 - Transport Phenomena in Bio-Environmental Systems
3 credits

Core course in both biological and environmental engineering. Students develop a detailed understanding of the principles, concepts, modes, and methods of calculating heat and mass transfer. Emphasis given to contaminant and nutrient flux, along with their state transformations, in order for the biological or environmental engineer to evaluate options for production, clean-up, and control of bio-environmental systems.

Prerequisite/Restriction: Minimum grade of C- in BENG 2400 or MAE 2300 and CEE 3500 or MAE 3420 and Admission to the Professional Engineering Program

Cross-listed as: CEE 3670

Semester(s) Traditionally Offered: Spring
BENG 3870 - Biological Engineering Design I
1 credit

Students select and plan a senior design project. A project proposal, including a technical description of the project and management plans, is required.

Prerequisite/Restriction: Admission to the Professional Engineering Program

Semester(s) Traditionally Offered: Fall
BENG 4250 - Cooperative Practice
3 credits

Planned work experience in industry or government. Detailed program must be approved prior to registration. Written report required.

Prerequisite/Restriction: Admission to the Professional Engineering Program

Semester(s) Traditionally Offered: Fall, Spring, Summer
BENG 4880 - Biological Engineering Design II (CI)
CI Communications Intensive
3 credits

Capstone design series.

Prerequisite/Restriction: BENG 3670 and BENG 3870 or CEE 3670 BENG 3000 Corequisite

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017
BENG 4890 - Biological Engineering Design III (CI)
CI Communications Intensive
3 credits

Preparation and presentation of the senior design project. The presentation will involve a professional standard report and an evaluation and critique by Biological Engineering students and faculty.

Prerequisite/Restriction: BENG 4880 and Admission to the Professional Engineering Program

Semester(s) Traditionally Offered: Fall
BENG 4930 - Special Studies
1-4 credits

Independent or group study of biological and irrigation engineering subjects not covered in regular course offerings.

Prerequisite/Restriction: Admission to the Professional Engineering Program

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
BENG 5020 - Biological Modeling and Controls
3 credits

Development of mathematical models to describe biological systems. Emphasizes use of analogic techniques for development and numerical methods for solution. Systems to be considered include biotransport, population biology, and cellular engineering.

Prerequisite/Restriction: BENG 3670 or CEE 3670 and MATH 2250 and Admission to the Professional Engineering Program
Semester(s) Traditionally Offered: Fall

BENG 5500 - Systems Biology Modeling
3 credits

Living organisms are composed of multiple cellular components that work in an integrated fashion to support life processes. This course introduces students to network concepts and mathematical approaches used to model a cell as an integrated system.

Prerequisite/Restriction: MATH 2250, MATH 2270, or equivalent; BIOL 4040, CEE 2870, CS 1400, or equivalent. Student must be in the professional Engineering Program or have Graduate Standing.

Cross-listed as: BENG 6500

BENG 5600 - Downstream Processes in Biological Engineering
3 credits

Purification of proteins and other soluble/insoluble products from biochemical and/or chemical process streams. Emphasizes physical-chemical separation processes based on density, size, solubility, molecular interactions, etc.

Prerequisite/Restriction: BENG 3670 or CEE 3670 and admission to Professional Engineering.

Cross-listed as: BENG 6600

Semester(s) Traditionally Offered: Spring

BENG 5610 - Food and Bioprocess Engineering
3 credits

Standardization and compounding of biomaterials and food products; preservation processing using heat, refrigeration, concentration, and dehydration. Basic unit operations in the bioprocessing industry.

Prerequisite/Restriction: BENG 3200 and Admission to Professional Engineering Program.

Cross-listed as: BENG 6610 and NDFS 5610/NDFS 6610.

Semester(s) Traditionally Offered: Fall

BENG 5620 - Metabolic Engineering I
3 credits

Presents fundamental knowledge of cellular metabolic pathways, basic principles of metabolic engineering, metabolic flux analysis, regulation of metabolic pathways, metabolic engineering applications, and biosynthesis of primary/secondary metabolites. Students given opportunities to conduct experiments, as well as opportunities for hands-on gene cloning and work with genetic engineering techniques.

Prerequisite/Restriction: CHEM 3700 and MATH 2250 and admission to the Professional Engineering Program.

Cross-listed as: BENG 6620

BENG 5630 - Synthetic Biological Engineering
3 credits

Covers aspects of synthetic biological engineering, including overview of molecular biology and molecular cloning techniques, including PCR and analysis of nucleic acids and proteins. Introduces bioinformatics and practical use of these programs for biological design. Emphasizes principles of genetic engineering and use of standard biological parts and cellular engineering applications.

Prerequisite/Restriction: Admission to the Professional Engineering Program.

Cross-listed as: BENG 6630.

Semester(s) Traditionally Offered: Spring

BENG 5640 - Biofuels
3 credits

Biofuel potential as energy source, emphasis on biofuel impacts on the global environment and economy, and the role of biofuel towards sustainability. Evaluate factors driving biofuel policies and research. General discussion about fossil fuel, renewable energy forms, and availability of biomass feed stocks and their forms. Evaluate biofuel production from solid waste and wastewater systems.

Prerequisite/Restriction: Senior or Graduate student.
status, or instructor permission; and admission to the Professional Engineering Program

Cross-listed as: BENG 6640

Semester(s) Traditionally Offered: Fall

BENG 5660 - Environmental Quality Analysis
3 credits

Familiarizes students with various methods used for analysis of chemical parameters in environmental samples (water, soil, and air). Provides students with skills enabling them to make proper selection/evaluation of analytical procedure and evaluate data generated.

Prerequisite/Restriction: CHEM 1210 and Admission to the Professional Engineering Program

Cross-listed as: BENG 6660, CEE 5610, CEE 6610

Semester(s) Traditionally Offered: Fall

BENG 5670 - BioMEMS and Micro Medical Devices
3 credits

The course targets to introduce the fundamental design and microfabrication concepts of biomedical micro-electro-mechanical devices (BioMEMS) technologies and many BioMEMS devices and biomedical applicaitons.

Prerequisite/Restriction: Admission to the Professional Program

Cross-listed as: BENG 6670

Semester(s) Traditionally Offered: Spring

BENG 5680 - Soil-based Waste Management
2 credits

Engineering management of wastes present in the vadose zone, including extraction, containment, and biological, chemical, and physical destruction technologies for sustainable agriculture and environmental quality. Aspects include engineering characterization, problem definition, treatment, and monitoring. Analysis and design emphasized through problems, examinations, and report writing.

Prerequisite/Restriction: Admission to Professional Engineering Program

Cross-listed as: BENG 6680 and CEE 5680/CEE 6680.

Semester(s) Traditionally Offered: Spring

BENG 5700 - Introduction to Microfabrication
3 credits

Materials, wet chemical cleaning and etch, photolithography, metal deposition, doping, carrier density and conductivity, microfluidics, micro-electronic-mechanical-systems.

Prerequisite/Restriction: PHYS 2210, PHYS 2215, PHYS 2220 and PHYS 2225 or permission of instructor; and Admission to the Professional Engineering Program

Cross-listed as: ECE 5700 and PHYS 5700

Semester(s) Traditionally Offered: Spring

Course Fee: $100.00

BENG 5790 - Protein Structure/Function and Purification
3 credits

Protein biosynthesis, modification, folding, structure, and stability, protein purification and protein analysis will be discussed. Students will develop an original research proposal through oral and written presentations. For graduate (6000-level) credit, additional reading and writing assignments are required.

Prerequisite/Restriction: Microbiology or Biochemistry or equivalent and admission to the Professional Engineering Program

Cross-listed as: BENG 6790, BIOL 5790/BIOL 6790, CHEM 5790/CHEM 6790

Semester(s) Traditionally Offered: Spring, Odd Years

BENG 5810 - Biochemical Engineering
3 credits

Fundamentals of bioreactor design and bioengineering to produce biological commodities. Emphasizes mathematical models of microbial and enzymatic processes in environmental and industrial biotechnology.

Prerequisite/Restriction: BENG 3200 and BENG 3670/CEE 3670; or BENG 3670/CEE 3670, CEE 3610/PUBH 3610, and CEE 3640; and Admission to the
Professional Engineering Program

Cross-listed as: BENG 6810 and CEE 5810/CEE 6810.

Semester(s) Traditionally Offered: Fall

BENG 5830 - Management and Utilization of Biological Solids and Wastewater
3 credits

Focuses on production, management, and disposal of biosolids and wastewater generated in food processing and wastewater treatment. Emphasizes beneficial use of biosolids and wastewater for agricultural production, forest enhancement, and land reclamation.

Prerequisite/Restriction: BENG 3200, BENG 3670/CEE 3670, CEE 3610/PUBH 3610, CEE 3640; and Admission to the Professional Engineering Program

Cross-listed as: BENG 6830 and CEE 5830/CEE 6830.

Semester(s) Traditionally Offered: Fall

BENG 5840 - Introduction to Biophotonics
3 credits

Applications of light and tissues optical properties for the detection and diagnosis of protein, cell and tissues properties and pathologies. Scientific and engineering principles for developing techniques and devices that use light to probe cells and tissues. Optical and thermal aspects of the interactions between laser light and biological samples needed for microscopy, disease detection and surgical guidance. Overview of current topics and research.

Prerequisite/Restriction: MATH 2250 and PHYS 2210 and admission to the Professional Engineering Program

Cross-listed as: BENG 6840

Semester(s) Traditionally Offered: Spring

BENG 5910 - Introduction to Biosensors
3 credits

Principles of biologically based sensing elements and interfacing techniques. Design and analysis methods of biosensing and transducing components in bio-interface. Applications of biosensors and bioelectronics in biomedical, bioprocessing, and biomechanical engineering.

Prerequisite/Restriction: BENG 2330 or instructor permission; and admission to the Professional Engineering Program

Cross-listed as: BENG 6910.

Semester(s) Traditionally Offered: Spring

BENG 5930 - Special Studies
1-4 credits

Independent or group study of biological and irrigation engineering subjects not covered in regular course offerings.
Prerequisite/Restriction: Admission to the Professional Engineering Program

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BENG 6500 - Systems Biology Modeling
3 credits

Living organisms are composed of multiple cellular components that work in an integrated fashion to support life processes. This course introduces students to network concepts and mathematical approaches used to model a cell as an integrated system.

Prerequisite/Restriction: MATH 2250, MATH 2270, or equivalent; BIOL 4040, CEE 2870, CS 1400, or equivalent

Cross-listed as: BENG 5500

Semester(s) Traditionally Offered: Spring

BENG 6510 - Graduate Seminar
1 credit

Introduces graduate students to the current biological engineering research and applications in academia and industry.

Cross-listed as: BENG 7510

Semester(s) Traditionally Offered: Fall

BENG 6600 - Downstream Processes in Biological Engineering
3 credits

Purification of proteins and other soluble/insoluble products from biochemical and/or chemical process streams. Emphasizes physical-chemical separation processes based on density, size, solubility, molecular interactions, etc.

Prerequisite/Restriction: BENG 3670 or CEE 3670 and admission to Professional Engineering

Cross-listed as: BENG 5600

Semester(s) Traditionally Offered: Spring

BENG 6610 - Food and Bioprocess Engineering
3 credits

Standardization and compounding of biomaterials and food products; preservation processing using heat, refrigeration, concentration, and dehydration. Basic unit operations in the bioprocessing industry.

Prerequisite/Restriction: BENG 3200

Cross-listed as: BENG 5610 and NDFS 6610/NDFS 5610.

Semester(s) Traditionally Offered: Fall

BENG 6620 - Metabolic Engineering I
3 credits

Presents fundamental knowledge of cellular metabolic pathways, basic principles of metabolic engineering, metabolic flux analysis, regulation of metabolic pathways, metabolic engineering applications, and biosynthesis of primary/secondary metabolites. Students given opportunities to conduct experiments, as well as opportunities for hands-on gene cloning and work with genetic engineering techniques.

Prerequisite/Restriction: CHEM 3700 and MATH 2250 and admission to the Professional Engineering Program

Cross-listed as: BENG 5620

Semester(s) Traditionally Offered: Fall

BENG 6630 - Synthetic Biological Engineering
3 credits

Covers aspects of synthetic biological engineering, including overview of molecular biology and molecular cloning techniques, including PCR and analysis of nucleic acids and proteins. Introduces bioinformatics and practical use of these programs for biological design. Emphasizes principles of genetic engineering and use of standard biological parts and cellular engineering applications.

Cross-listed as: BENG 5630.

Semester(s) Traditionally Offered: Spring

BENG 6640 - Biofuels
3 credits
Biofuel potential as energy source, emphasis on biofuel impacts on the global environment and economy, and the role of biofuel towards sustainability. Evaluate factors driving biofuel policies and research. General discussion about fossil fuel, renewable energy forms, and availability of biomass feed stocks and their forms. Evaluate biofuel production from solid waste and wastewater systems.

Prerequisite/Restriction: Senior or Graduate student status, or instructor permission

Cross-listed as: BENG 5640

Semester(s) Traditionally Offered: Fall

BENG 6660 - Environmental Quality Analysis
3 credits

Familiarizes students with various methods used for analysis of chemical parameters in environmental samples (water, soil, and air). Provides students with skills enabling them to make proper selection/evaluation of analytical procedure and evaluate data generated.

Prerequisite/Restriction: CHEM 1210

Cross-listed as: BENG 5660, CEE 5610, CEE 6610

Semester(s) Traditionally Offered: Fall

BENG 6670 - BioMEMS and Micro Medical Devices
3 credits

The course targets to introduce the fundamental design and microfabrication concepts of biomedical micro-electro-mechanical devices (BioMEMS) technologies and many BioMEMS devices and biomedical applicaitons.

Prerequisite/Restriction: Admission to the Professional Program

Cross-listed as: BENG 5670

Semester(s) Traditionally Offered: Spring

BENG 6680 - Soil-based Waste Management
2 credits

Engineering management of wastes present in the vadose zone, including extraction, containment, and biological, chemical, and physical destruction technologies for sustainable agriculture and environmental quality. Aspects include engineering characterization, problem definition, treatment, and monitoring. Analysis and design emphasized through problems, examinations, and report writing.

Prerequisite/Restriction: Admission to Professional Engineering Program

Cross-listed as: BENG 5680 and CEE 6680/CEE 5680.

Semester(s) Traditionally Offered: Spring

BENG 6790 - Protein Structure/Function and Purification
3 credits

Protein biosynthesis, modification, folding, structure, and stability, protein purification and protein analysis will be discussed. Students will develop an original research proposal through oral and written presentations. For graduate (6000-level) credit, additional reading and writing assignments are required.

Prerequisite/Restriction: Microbiology or Biochemistry or equivalent

Cross-listed as: BENG 5790, BIOL 5790/BIOL 6790, CHEM 5790/CHEM 6790

Semester(s) Traditionally Offered: Spring, Odd Years

BENG 6810 - Biochemical Engineering
3 credits

Fundamentals of bioreactor design and bioengineering to produce biological commodities. Emphasizes mathematical models of microbial and enzymatic processes in environmental and industrial biotechnology.

Prerequisite/Restriction: BENG 3200 and BENG 3670/CEE 3670; or BENG 3670/CEE 3670, CEE 3610/PUBH 3610, and CEE 3640

Cross-listed as: BENG 5810 and CEE 6810/CEE 5810.

Semester(s) Traditionally Offered: Fall

BENG 6830 - Management and Utilization of Biological Solids and Wastewater
3 credits

Focuses on production, management, and disposal of
biosolids and wastewater generated in food processing and wastewater treatment. Emphasizes beneficial use of biosolids and wastewater for agricultural production, forest enhancement, and land reclamation.

Prerequisite/Restriction: BENG 3200, BENG 3670/CEE 3670, CEE 3610/PUBH 3610, CEE 3640

Cross-listed as: BENG 5830 and CEE 6830/CEE 5830.

Semester(s) Traditionally Offered: Fall

BENG 6840 - Introduction to Biophotonics
3 credits

Applications of light and tissues optical properties for the detection and diagnosis of protein, cell and tissues properties and pathologies. Scientific and engineering principles for developing techniques and devices that use light to probe cells and tissues. Optical and thermal aspects of the interactions between laser light and biological samples needed for microscopy, disease detection and surgical guidance. Overview of current topics and research.

Prerequisite/Restriction: MATH 2250 and PHYS 2210 and admission to the Professional Engineering Program

Cross-listed as: BENG 5840

Semester(s) Traditionally Offered: Spring

BENG 6850 - Biomaterials Engineering
3 credits

Explores identification and modification of properties of natural and artificial biomaterials. Design of applications for by-product recovery and recycling, environmental, food processing, and biomedical industries. Commercialization of biomaterial feed stocks, biotechnology output, and bioprocessing by-products into traditional and alternative products.

Prerequisite/Restriction: BENG 2330 and BENG 5020

Cross-listed as: BENG 5850.

Semester(s) Traditionally Offered: Fall

BENG 6860 - Research Orientation and Planning
2 credits

Promotes familiarization with departmental and graduate school rules, procedures, and research. Tools and techniques for writing research proposals and giving presentations.

Cross-listed as: BENG 7860

Semester(s) Traditionally Offered: Fall

Effective Term
Spring 2017

BENG 6890 - Tissue Engineering
3 credits

Introduction to fundamentals of tissue engineering. Investigation of engineering design strategies for artificial organs, as well as treatments for disease disorders of nerves, blood vessels, bones, cartilage, skin, and liver. Exploration of the use of stem cell gene therapy in tissue engineering.

Prerequisite/Restriction: BENG 2330 or instructor permission

Cross-listed as: BENG 5890

Semester(s) Traditionally Offered: Spring

BENG 6910 - Introduction to Biosensors
3 credits

Principles of biologically based sensing elements and interfacing techniques. Design and analysis methods of biosensing and transducing components in bio-interface. Applications of biosensors and bioelectronics in biomedical, bioprocessing, and biomechanical engineering.

Prerequisite/Restriction: BENG 2330 or instructor permission

Cross-listed as: BENG 5910.

Semester(s) Traditionally Offered: Spring

BENG 6930 - Special Problems
1-4 credits

Independent study of problems in biological and agricultural engineering.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BENG 6970 - Thesis Research
1-10 credits

Credit for MS research and report requirements.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BENG 6990 - Continuing Graduate Advisement for MS Students
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BENG 7510 - Graduate Seminar
1 credit

Introduces graduate students to the current biological engineering research and applications in academia and industry.

Cross-listed as: BENG 6510

Semester(s) Traditionally Offered: Fall

BENG 7600 - Advanced Research Topics
3 credits

Study of advanced biological and engineering topics. Analysis of project scale water management issues, software development, crop modeling, advanced drainage systems, remote sensing, groundwater systems, and other topics taken from the research interests of the faculty.

Prerequisite/Restriction: PhD enrollment

Semester(s) Traditionally Offered: Spring

BENG 7860 - Research Orientation and Planning
2 credits

Promotes familiarization with departmental and graduate school rules, procedures, and research. Tools and techniques for writing research proposals and giving presentations.

Cross-listed as: BENG 6860.

Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2017

BENG 7960 - Supervised Teaching
1-3 credits

Faculty members mentor PhD students in teaching and in understanding principles of pedagogy, including: (1) planning/organizing lectures and other teaching activities, (2) conducting teaching/instruction activities, (3) involvement in grading student work, and (4) assessment of activities by faculty mentor.

Semester(s) Traditionally Offered: Fall, Spring

BENG 7970 - Dissertation Research
1-10 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BENG 7990 - Continuing Graduate Advisement for PhD Students
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Biology

BIOL 1010 - Biology and the Citizen (BLS)
BLS Breadth Life Sciences
3 credits

Principles and methods of biology and how they impact the daily life and environment of the individual.

Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 1013 - Biology and the Citizen Lab
1 credit

Mixed virtual and actual laboratory experiences covering introductory topics in general biology for the non-science major. Designed to complement BIOL 1010 with emphasis on the scientific method. Includes actual experiences with living organisms, use of the microscope,
field excursions and introduction to techniques used in
the study of life.

Campus: USU Eastern only

BIOL 1015 - Biological Discovery: A Lab Course
1 credit

Field and laboratory investigative exercises. Emphasizes
observation, hypothesis formulation and testing, data
analysis, and writing.

Semester(s) Traditionally Offered: Fall
Course Fee: $40.00

BIOL 1030 - Medical College Admissions Test (MCAT)
Preparation
1 credit

Classroom instruction, tutorials, and readings to review
material expected to be covered on the MCAT. Several
Saturday practice exams are scheduled.

Pass/Fail only.
Semester(s) Traditionally Offered: Spring

BIOL 1040 - Dental Admissions Test (DAT) Preparation
1 credit

Classroom instruction, tutorials, and readings to review
material expected to be covered on the DAT. Several
Saturday practice exams are scheduled.

Pass/Fail only.
Semester(s) Traditionally Offered: Spring

BIOL 1050 - Biology Professions
1 credit

Career exploration in biology professions. Weekly
presentation on career possibilities by professional
biologists and development of career related skills,
including exploring graduate school admission
requirements, resume’ preparation, developing
professional networks, and investigation of research and
internship opportunities.

Semester(s) Traditionally Offered: Fall

BIOL 1060 - Prehealth Professions
1 credit

Career exploration in prehealth professions. Weekly
presentations on careers by health professionals and
development of career related skills, including exploring
professional school admission requirements, honing
professional school applications, investigation of
research and professional shadowing opportunities.

Semester(s) Traditionally Offered: Fall

BIOL 1410 - General Botany (BLS)
BLS Breadth Life Sciences
3 credits

Principles of flowering plant and conifer biology,
including molecular and cell biology, genetics, anatomy,
physiology, diversity, systematics and ecology.

Campus: USU Eastern only

BIOL 1415 - General Botany Lab
1 credit

Lab course to accompany General Botany (BIOL 1410).
Emphasizes application of scientific method in
exploration of plant anatomy, physiology, diversity, and
systematics through both observational and investigative
laboratories.

Campus: USU Eastern only

BIOL 1500 - Anatomy and Physiology (BLS)
BLS Breadth Life Sciences
3 credits

Structure and function of major human organ systems.
Not intended for Biology majors or for preparation for
allied-health professions.

Campus: USU Eastern only

BIOL 1610 - Biology I
3 credits

Principles of cell biology, energetics, and genetics; plant
structure, function, and development. Three lectures.
BIOL 1615, Biology I Laboratory, should be taken
concurrently with BIOL 1610. To receive University
Studies Breadth Life Sciences (BLS) credit, students must
complete BIOL 1610 and BIOL 1615, and BIOL 1620 and
BIOL 1625, or BIOL 3300. The BIOL 1610/BIOL 1615 and
BIOL 3300 option for BLS credit is available only to
students majoring in Biological Engineering or
Environmental Engineering.

Semester(s) Traditionally Offered: Fall
Course Fee: $110.00
Effective Term
Fall 2016

BIOL 1615 - Biology I Laboratory
1 credit

Investigative laboratory course with studies focused on genetics, cell, and molecular biology. Designed to be taken concurrently with BIOL 1610. Students will apply information learned in BIOL 1610 lectures as they ask and answer biological questions while developing the skills and competencies needed for biological research. To receive University Studies Breadth Life Sciences (BLS) credit, students must complete BIOL 1610 and BIOL 1615, or BIOL 3300. The BIOL 1610/BIOL 1615 and BIOL 3300 option for BLS credit is available only to students majoring in Biological Engineering or Environmental Engineering.

Prerequisite/Restriction: BIOL 1610 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

BIOL 1620 - Biology II (BLS)
BLS Breadth Life Sciences
3 credits

Animal structure, function, and development; principles of evolution, ecology, and behavior. Three lectures. BIOL 1625, Biology II Laboratory, should be taken concurrently with BIOL 1620. For students using BIOL 1620 to receive University Studies Breadth Life Sciences (BLS) credit, both BIOL 1620 and BIOL 1625 must be completed.

Prerequisite/Restriction: BIOL 1610

Semester(s) Traditionally Offered: Spring
Course Fee: $110.00
Effective Term
Spring

BIOL 1625 - Biology II Laboratory
1 credit

Investigative laboratory course with studies focused on ecology and evolution. Designed to be taken concurrently with Biology 1620. Students will apply information learned in Biology 1620 lectures as they ask and answer biological questions while developing the skills and competencies needed for biological research. To receive University Studies Breadth Life Sciences (BLS) credit, students must complete BIOL 1620 and BIOL 1625.

Prerequisite/Restriction: BIOL 1620 (may be taken concurrently)

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

BIOL 1750 - Topics in Biology
1-3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

BIOL 2030 - Genetics
3 credits

Study of the mechanisms of inheritance and variation in microorganism, animals and plants. Emphasis will be given to classical genetics, DNA technologies, and the genetics populations and evolution. Recommended for science majors and preprofessional students in the health professions.

Prerequisite/Restriction: BIOL 1610 and CHEM 1010 and Intermediate Algebra competency

Corequisite: BIOL 2035

Campus: USU Eastern only

Semester(s) Traditionally Offered: Spring

BIOL 2035 - Genetics Lab
1 credit

Strictly a laboratory course with focus on conducting experiments in classical genetics, population genetics, and biotechnology. Students will complete a series of experiments and individual projects designed to acquaint them with the techniques employed in genetics research. Instructional methods employed will involve student use of the scientific method to design and conduct research experiments in genetics and DNA technologies. Laboratory design will allow students to progress from
Corequisite: BIOL 2030

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

BIOL 2060 - Elementary Microbiology
4 credits

Biology and role of microorganisms in the world around us, with emphasis on their contributions to human disease. Course includes lectures, an integral laboratory component. Not intended for biology majors.

Prerequisite/Restriction: Any one of the following: USU 1350, BIOL 1010, BIOL 1500, BIOL 1610, BIOL 2060, BIOL 2320, CHEM 1010, CHEM 1110, CHEM 1210, or AP Biology or AP Chemistry with a score of 3 or higher

Semester(s) Traditionally Offered: Fall
Course Fee: $120.00

BIOL 2220 - General Ecology
3 credits

Study of the interrelationships among organisms and their environments, addressing where and how organisms live. Adaptation, population growth, species interactions, biodiversity, and ecosystem function are explored for a wide variety of organisms and ecosystems.

Prerequisite/Restriction: BIOL 1610 and BIOL 1620, (BIOL 1620 can be taken concurrently)

Cross-listed as: WATS 2220

Semester(s) Traditionally Offered: Fall, Spring

BIOL 2320 - Human Anatomy
4 credits

Study of the human body, with emphasis on the structure of each of the body's essential organ systems. Three lectures, one lab. As preparation for this course, it is highly recommended that students have a background in basic biology and/or human biology.

Semester(s) Traditionally Offered: Spring, Summer
Course Fee: $90.00

BIOL 2420 - Human Physiology
4 credits

Functioning of the human body, with emphasis upon major organ systems. Medical and athletic examples used to illustrate important concepts. Three lectures, one lab.

Prerequisite/Restriction: Any one of the following: USU 1350, BIOL 1010, BIOL 1500, BIOL 1610, BIOL 2060, BIOL 2320, CHEM 1010, CHEM 1110, CHEM 1210, AP Biology or AP Chemistry with a score of 3 or higher

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $88.00

BIOL 2520 - Pathophysiology
3 credits

Promotes an understanding of disease and dysfunctional variations of normal health across the body.

Prerequisite/Restriction: BIOL 2320 and BIOL 2420, each with a minimum grade of C

Campus: Course offered only at select branch campuses, not at the Logan campus.
Semester(s) Traditionally Offered: Fall, Spring

BIOL 2700 - Predental Orientation and Observation
3 credits

Introduces predental students to the dental curriculum and characteristics of the dental profession. Each student assigned to a practicing dentist for part of the course.

Prerequisite/Restriction: Permission of advisor

Semester(s) Traditionally Offered: Spring

BIOL 2800 - Science Excursion
1 credit

Extended field trips to study the biology, geology,
geography, and historical aspects of areas in Utah. Human-powered transportation is required for many trips. Included attendance of one or more pre- or post-trip lecture. Students with physical disabilities should contact the instructor before enrolling.

Campus: USU Eastern only

BIOL 2977 - Cooperative Education
1-3 credits

Life science majors may gain "hands-on" experience working with life science professionals in industry, business, or government. The work supervisor and life science instructor determine/approve the student's curriculum and credit hours earned.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Eastern only

BIOL 2988 - Special Problems
1-3 credits

Enables an individual to probe/study a biological topic of specific interest. The topic must be approved by a supervising instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

BIOL 3010 - Evolution (DSC)
DSC Depth Life and Physical Sciences
3 credits

Origins and evidence for the theory of biological evolution, and its significance for society and science.

Prerequisite/Restriction: University Studies Breadth Life Sciences (BLS) course
Semester(s) Traditionally Offered: Spring

BIOL 3030 - Genetics and Society (DSC)
DSC Depth Life and Physical Sciences
3 credits

Course for non-science majors. Addresses basic genetic principles applicable to humans and contemporary issues in human genetics as well as ethical and social implications of advances in genetics.

Prerequisite/Restriction: BIOL 1010 or BIOL 1610 or USU 1350 or HONR 1350 or AP Biology score of 3 or greater Not open to biology majors or to those with credit in BIOL 3060
Semester(s) Traditionally Offered: Fall

BIOL 3050 - Genetics Laboratory
2 credits

Experimental approach to genetics using bacteria, fungi, plants, insects, and humans. Students will be introduced to several computer and laboratory techniques, and will design many of the experiments.

Prerequisite/Restriction: BIOL 3060 (may be taken concurrently)
Semester(s) Traditionally Offered: Fall, alternate years
Course Fee: $75.00

BIOL 3100 - Bioethics (CI)
CI Communications Intensive
3 credits

Discussion of current controversial ethical issues in medicine, animal rights, and environmental conservation.

Semester(s) Traditionally Offered: Spring

BIOL 3220 - Field Ecology (QI)
QI Quantitative Intensive
2 credits

Field trips and exercises to study ecological patterns and processes in terrestrial and aquatic habitats. Emphasis on hypothesis testing and collection and analysis of data from the field.

Prerequisite/Restriction: BIOL 2220 (may be taken concurrently); MATH 1100 or MATH 1210
Recommended: Course in statistics

Semester(s) Traditionally Offered: Fall
Course Fee: $120.00

BIOL 3300 - General Microbiology
4 credits

Biology, ecology, and diversity of microorganisms. Emphasis placed on bacteria, viruses, fungi, and protists, and their role in the environment. Two lectures, two labs.

Prerequisite/Restriction: BIOL 1610 (with a grade of C- or better); CHEM 1120 or CHEM 1220 or CHEM 2300 or CHEM 2310 (may be taken concurrently) To receive University Studies Breadth Life Sciences (BLS) credit, students must complete both BIOL 1610 and BIOL 3300
The BIOL 1610 and BIOL 3300 option for BLS credit is available only to students majoring in Biological Engineering or Environmental Engineering

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $140.00

BIOL 4230 - Applied Mathematics in Biology (QI)
QI Quantitative Intensive
3 credits

Prerequisite/Restriction: University Studies Breadth Life Sciences (BLS) course

Semester(s) Traditionally Offered: Spring

BIOL 3760 - Independent Study
1-3 credits

Directed individual or group study. Not counted as Biology degree elective or toward the Biology, Biomath, or Public Health minors.

Prerequisite/Restriction: BIOL 1620 and instructor permission
Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 4000 - Human Dissection
1 credit

Exposure and dissection of the human body, with an emphasis on bones, joints, muscles, and internal organs. One evening lab per week.

Prerequisite/Restriction: BIOL 2320

Semester(s) Traditionally Offered: Fall
Course Fee: $190.00

BIOL 4060 - Exploring Animal Behavior (CI)
CI Communications Intensive
3 credits

In-depth investigation into current topics. Students will generate hypotheses; design and complete experiments in field and lab; and prepare a written lab report, book review, and poster for public presentation. Two lectures, one lab.

Prerequisite/Restriction: BIOL 1620 and; BIOL 2220 or WATS 2220

Semester(s) Traditionally Offered: Fall
Course Fee: $80.00
Effective Term
Spring

BIOL 4230 - Applied Mathematics in Biology (QI)
QI Quantitative Intensive
3 credits
Formulation, analysis, and experimental tests of mathematical models in biology. Combines mathematics, computing, experimental design, and statistical analysis while applying the scientific method to biological systems. Lectures, recitations, and a laboratory.

Prerequisite/Restriction: Prerequisites: C- or better in BIOL 1620 and MATH 2250; or Instructor permission. Programming recommended.

Cross-listed as: MATH 4230.

Semester(s) Traditionally Offered: Spring

BIOL 4250 - Internship/Co-op
1-2 credits

Internship/cooperative work experience in biology or prehealth biology to allow student to gain a professional level of experience.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 4400 - Plant Physiology (QI)
QI Quantitative Intensive
4 credits

Introduction to plant metabolism, water relations, and growth.

Prerequisite/Restriction: BIOL 1620; MATH 1050 or higher or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall
Course Fee: $90.00

BIOL 4410 - Plant Structure
3 credits

Morphology, anatomy, and development of seed plants, with an emphasis on angiosperms. Two lectures and one lab.

Prerequisite/Restriction: BIOL 1610

Semester(s) Traditionally Offered: Spring
Course Fee: $30.00

BIOL 4421 - Plant Taxonomy I
2 credits

Laboratory course developing understanding of vascular plant structures by showing students how they are used in plant classification and identification, how they affect a plant’s adaptive ability, and how they differ among major plant groups. Students learn how to use identification keys and document vegetation studies. For 6000-level (graduate) credit, additional reading, recitation, writing, or lab work is required.

Prerequisite/Restriction: BIOL 1610

Cross-listed as: BIOL 6421.

Semester(s) Traditionally Offered: Spring

BIOL 4422 - Plant Taxonomy II
1 credit

In this field and laboratory course, students develop ability to recognize the most common plant families in Western North America, to use principles of phylogenetic analysis in plant biology, and to understand how plant classification systems have changed over time. As an integral part of the course, students prepare a pre-semester, summer plant field collection. For 6000-level (graduate) credit, additional work is required.

Prerequisite/Restriction: BIOL 4421 and instructor permission

Cross-listed as: BIOL 6422.

Semester(s) Traditionally Offered: Fall

BIOL 4430 - Introduction to Plant Pathology
4 credits

Combined lecture-lab course emphasizing concepts in plant pathology. Symptoms and disease-causing organisms are described. Methods of control, the nature of epidemics, and disease prediction.

Prerequisite/Restriction: BIOL 1610

Semester(s) Traditionally Offered: Spring
Course Fee: $100.00

BIOL 4450 - Neurobiology
3 credits
Physiology, organization, and development of nervous systems. Examples taken from vertebrate and invertebrate systems. Special emphasis placed on cellular and molecular substrates of electrical excitability.

Prerequisite/Restriction: BIOL 1620; CHEM 1220; and PHYS 2120 or PHYS 2220

Semester(s) Traditionally Offered: Spring, Even Years
Effective Term
Spring 2016

BIOL 4500 - Applied Entomology
3 credits

Fundamentals of insect biology, emphasizing species of economic importance. Principles and tactics of pest management. Laboratory includes survey of beneficial and harmful insects affecting humans and agriculture.

Prerequisite/Restriction: BIOL 1610 and BIOL 1620

Semester(s) Traditionally Offered: Spring
Course Fee: $90.00

BIOL 4600 - Advanced Human Physiology
5 credits

Advanced study of the functions of the human body, emphasizing major organ systems. Four lectures and one lab.

Prerequisite/Restriction: BIOL 1620 or BIOL 2320, or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $60.00

BIOL 4710 - Teaching Internship
1 credit

Advanced undergraduates function as teaching interns under supervision of a faculty member. Only 1 credit may be counted toward Biology degree electives.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 4750 - Topics in Biology
1-3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 5010 - Biogeography
3 credits

Distributions of plants and animals, including invertebrates, from terrestrial, freshwater, and marine systems, discussed from historical and ecological perspectives. Explores ecological patterns of body size, color, species density, home range, etc., as well as their causes.

Prerequisite/Restriction: BIOL 1620

Cross-listed as: BIOL 6010.

Semester(s) Traditionally Offered: Spring

BIOL 5150 - Immunology
3 credits

Immune response in health and disease. Experimental approach to investigating immune function and abnormalities.

Prerequisite/Restriction: CHEM 1220; BIOL 3060; and BIOL 3300 or BIOL 5210

Semester(s) Traditionally Offered: Fall

BIOL 5160 - Methods in Biotechnology: Cell Culture
3 credits

Techniques and fundamental knowledge for culturing mammalian and insect cells. Students will learn maintenance, growing, genetic engineering of cells, cytotoxicity, hybridoma creation, cloning, etc. Extensive laboratory experience is provided.

Cross-listed as: ADVS 5160 and NDFS 5160 and PSC 5160.

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

BIOL 5190 - Molecular Genetics
3 credits
Molecular aspects of genetics, including DNA replication, structure, rearrangement, transposition, recombination, repair, genetic engineering, and gene expression. For 6000-level (graduate) credit, additional reading, recitation, and/or writing is required.

Prerequisite/Restriction: BIOL 3060; and CHEM 3700 or CHEM 5700

Cross-listed as: BIOL 6190.

Semester(s) Traditionally Offered: Spring
BIOL 5210 - Cell Biology
3 credits

Examines the mechanisms of cell structure and function at the molecular level.

Prerequisite/Restriction: BIOL 1620, BIOL 3060; CHEM 2300 or CHEM 2320; CHEM 3700 or CHEM 5700 highly recommended

Semester(s) Traditionally Offered: Fall
BIOL 5220 - Endocrine Aspects of Nutrition
3 credits

Provides physiological background into hormones involved in nutrient regulation, as well as mechanisms of hormone action at the cellular and molecular levels. Includes action of steroids in the nucleus and membrane-based signal transduction pathways. Course includes lectures and literature reviews/presentations.

Prerequisite/Restriction: CHEM 3700 or instructor permission

Cross-listed as: BIOL 6220 and ADVS 5220/ADVS 6220 and NDFS 5220/NDFS 6220.

Semester(s) Traditionally Offered: Fall
BIOL 5230 - Developmental Biology
3 credits

Examines the mechanisms of biological development using classical embryological and modern molecular and cellular approaches.

Prerequisite/Restriction: BIOL 3060 and BIOL 5210; CHEM 3700 and CHEM 5700 strongly recommended.

Semester(s) Traditionally Offered: Spring
BIOL 5240 - Virology
3 credits

Structure, replication, genetics, and molecular biology of viruses, as well as virus-host interactions, and viral diseases and antiviral agents.

Prerequisite/Restriction: BIOL 3060

Semester(s) Traditionally Offered: Fall, alternate years, beginning 2017 (not the 2015 date indicated below). Effective Term Fall
BIOL 5250 - Evolutionary Biology (CI)
CI Communications Intensive
3 credits

Current topics in organic evolution from molecular to macroevolutionary scales.

Prerequisite/Restriction: BIOL 3060 or WILD 4880 or instructor permission; BIOL 2220/WATS 2220 recommended

Semester(s) Traditionally Offered: Fall, Spring Effective Term Spring
BIOL 5260 - Methods in Biotechnology: Molecular Cloning
3 credits

Laboratory-oriented course designed to teach molecular biology techniques such as DNA cloning, genetic probes, polymerase chain reaction, and DNA sequencing.

Prerequisite/Restriction: CHEM 3700 or CHEM 5710; or BIOL 3060; or instructor permission

Cross-listed as: ADVS 5260 and NDFS 5260 and PSC 5260.

Semester(s) Traditionally Offered: Fall Course Fee: $75.00
BIOL 5280 - Animal Molecular Biology
3 credits
Laboratory-based course designed to present the theory and provide an in-depth laboratory experience in RNA detection, differential gene expression analysis, real-time RT-PCR, protein detection and purification, 2-D gel electrophoresis, and microarrays.

Prerequisite/Restriction: ADVS 5260 or instructor permission

Cross-listed as: BIOL 6280 and ADVS 5280/ADVS 6280.

Semester(s) Traditionally Offered: Spring
Course Fee: $125.00

BIOL 5300 - Microbial Physiology (QI)
QI Quantitative Intensive
4 credits

Lectures, discussions, and laboratory investigations concerning the physiology, structure, and metabolism of prokaryotic and eukaryotic microbes.

Prerequisite/Restriction: BIOL 3300, MATH 1210

Semester(s) Traditionally Offered: Fall
Course Fee: $110.00

BIOL 5310 - Soil Microbiology
3 credits

Ecology and diversity of microorganisms in soils. Emphasis on factors controlling microbial activity and the role of microorganisms in organic matter decomposition and nutrient cycling.

Prerequisite/Restriction: BIOL 1610, BIOL 1620; CHEM 1220 or equivalent; PSC 3000

Cross-listed as: PSC 5310.

Semester(s) Traditionally Offered: Fall

BIOL 5321 - Programming for Biologists
2 credits

Introduction to programming using biological examples. Students learn to write programs, automate data analysis, and produce scientific results using Python. For graduate (6000-level) credit, an additional project will be required.

Cross-listed as: BIOL 6321

Semester(s) Traditionally Offered: Fall

BIOL 5322 - Database Management for Biologists
1 credit

Introduction to database management using biological examples. Students learn to design databases, make data entry easy and ensure the quality of entered data, extract useful data, and produce automated reports using Access. For graduate (6000-level) credit, an additional project will be required.

Cross-listed as: BIOL 6322

Semester(s) Traditionally Offered: Fall

BIOL 5323 - Computational Biology Research Project
1 credit

Introduction to conducting computational biology research projects. Students learn to use programming and database management in biology research projects by conducting an individual project using either Python or Access. For graduate (6000-level) credit, a higher-level project relative to the undergraduate (5000-level) course will be required.

Cross-listed as: BIOL 6323

Semester(s) Traditionally Offered: Fall

BIOL 5324 - Advanced Programming and Database Management for Biologists
3 credits

Advanced programming and database management using biological examples. Students learn Program Design, Object Oriented Programming, Version Control, SQL and other advanced tools for scientific programming. For graduate (6000-level) credit, a project will be required.

Prerequisite/Restriction: BIOL 5321/BIOL 6321 and BIOL 5322/BIOL 6322 or instructor permission

Cross-listed as: BIOL 6324

Semester(s) Traditionally Offered: Fall

BIOL 5380 - Evolutionary Genetics
4 credits
Examines theoretical and applied aspects of genes in natural and artificial populations. Topics include molecular evolution, population, and quantitative genetics, with emphasis on the intersection of genetics with evolution, ecology, and conservation biology.

Prerequisite/Restriction: BIOL 3060 or instructor permission

Cross-listed as: BIOL 6380.

Semester(s) Traditionally Offered: Fall

BIOL 5390 - Genes and Behavior (CI)
CI Communications Intensive
3 credits

Molecular genetic principles of animal behavior and its evolution, including methods used to study behavioral genetics and case studies in behavior.

Prerequisite/Restriction: ENGL 2010; BIOL 3060 or WILD 4880; BIOL 5250

Semester(s) Traditionally Offered: Sp
Effective Term
Spring

BIOL 5400 - Environmental Toxicology
3 credits

Presents in-depth survey of toxic chemicals present in the environment, environmental factors impacting fate of chemicals, potential biological effects associated with chemical exposures, and methods of reducing associated risks.

Prerequisite/Restriction: CHEM 1220 and BIOL 1620

Cross-listed as: BIOL 6400 and ADVS 5400/ADVS 6400 and PUBH 5400/PUBH 6400.

Semester(s) Traditionally Offered: Spring

BIOL 5550 - Freshwater Invertebrates
3 credits

Ecology, collection, and systematics of freshwater aquatic invertebrates. Focuses on insects, but also covers crustaceans, molluscs, and annelids. Several weekend field trips and a collection are required.

Prerequisite/Restriction: One year of general biology or zoology, or instructor permission

Cross-listed as: WATS 5550.

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

BIOL 5560 - Ornithology
3 credits

Surveys evolution, systematics, physiology, anatomy, ecology, behavior, and identification of birds. Includes lectures, laboratory and field exercises, field trips, and an independent project. Attendance required at one Saturday and one Friday-Sunday field trip.

Prerequisite/Restriction: BIOL 1620

Semester(s) Traditionally Offered: Spring
Course Fee: $140.00

BIOL 5570 - Herpetology
3 credits

Evolution, adaptations, distribution, natural history, behavior, and identification of amphibians and reptiles of the world, with special emphasis on North American species. Two lectures and one lab.

Prerequisite/Restriction: BIOL 1620

Semester(s) Traditionally Offered: Spring
Course Fee: $125.00

BIOL 5580 - Mammalogy
3 credits

Evolution, adaptations, distribution, natural history,
behavior, and identification of mammals of the world, with special emphasis on North American species. Two lectures and one lab.

Prerequisite/Restriction: BIOL 1620

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

BIOL 5590 - Animal Community Ecology
4 credits

Concepts and controversies in modern community ecology emphasizing aquatic and terrestrial animals. Covers the community concept, diversity and stability, null models, relative importance of competition and predation, food webs, disturbance, metapopulations, biogeography, and new directions.

Prerequisite/Restriction: BIOL 2220, STAT 3000
Cross-listed as: BIOL 6590.

Semester(s) Traditionally Offered: Fall

BIOL 5600 - Comparative Animal Physiology
3 credits

Principles and mechanisms of physiology in vertebrate and invertebrate animals. For graduate (6000-level) credit, additional reading, recitation, and/or writing will be required.

Prerequisite/Restriction: BIOL 1620 and one of CHEM 1110, CHEM 1120, and CHEM 1220 or instructor permission
Cross-listed as: BIOL 6600.

Semester(s) Traditionally Offered: Fall

BIOL 5610 - Animal Physiology Laboratory (QI)
QI Quantitative Intensive
2 credits

Laboratory exercises designed to explore principles of animal physiology, using computer simulations, tissue models, and animal preparations. Emphasis placed on hypothesis design and data interpretation.

Prerequisite/Restriction: BIOL 2420 or BIOL 5600 (any prerequisite may be taken concurrently)

Semester(s) Traditionally Offered: Fall
Course Fee: $120.00

BIOL 5630 - Endocrinology
3 credits

Molecular, cellular and physiological aspects of the endocrine system in vertebrates, presented with a species comparative approach. Clinical aspects and diseases associated with dysfunction of the endocrine system.

Prerequisite/Restriction: BIOL 1620
Cross-listed as: ADVS 5630, ADVS 6630, BIOL 6630

Semester(s) Traditionally Offered: Fall, Alternate Odd Years

BIOL 5790 - Protein Structure/Function and Purification
3 credits

Protein biosynthesis, modification, folding, structure, and stability, protein purification and protein analysis will be discussed. Students will develop an original research proposal through oral and written presentations. For graduate (6000-level) credit, additional reading and writing assignments are required.

Prerequisite/Restriction: Microbiology or Biochemistry or equivalent
Cross-listed as: BIOL 6790, BENG 5790/BENG 6790, CHEM 5790/CHEM 6790

Semester(s) Traditionally Offered: Spring, Odd Years

BIOL 5800 - Undergraduate Research
1-3 credits

Faculty-directed research in biology. Maximum of 3 credits of BIOL 5800 are acceptable toward Biology degree elective requirements.

Prerequisite/Restriction: BIOL 1620 and instructor permission
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisite/Restriction</th>
<th>Semester(s) Traditionally Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 5810</td>
<td>Bachelor’s Thesis</td>
<td>3 credits</td>
<td>Preparation of a written thesis, based upon individual investigation, under the supervision of faculty.</td>
<td></td>
<td>Fall, Spring, Summer</td>
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<tr>
<td>BIOL 5850</td>
<td>Microbiology Seminar</td>
<td>1 credit</td>
<td></td>
<td>Cross-listed as: BIOL 6850.</td>
<td>Repeatable for credit. Pass/Fail only.</td>
</tr>
<tr>
<td>BIOL 6010</td>
<td>Biogeography</td>
<td>3 credits</td>
<td>Distributions of plants and animals, including invertebrates, from terrestrial, freshwater, and marine systems, discussed from historical and ecological perspectives. Explores ecological patterns of body size, color, species density, home range, etc., as well as their causes.</td>
<td>Prerequisite/Restriction: BIOL 1620</td>
<td>Spring</td>
</tr>
<tr>
<td>BIOL 6190</td>
<td>Molecular Genetics</td>
<td>3 credits</td>
<td>Molecular aspects of genetics, including DNA replication, structure, rearrangement, transposition, recombination, repair, genetic engineering, and gene expression. For 6000-level (graduate) credit, additional reading, recitation, and/or writing is required.</td>
<td>Prerequisite/Restriction: BIOL 3060; and CHEM 3700 or CHEM 5700</td>
<td>Fall</td>
</tr>
<tr>
<td>BIOL 6200</td>
<td>Biogeochemistry of Terrestrial Ecosystems</td>
<td>3 credits</td>
<td>Inputs, outputs, and cycling patterns of major nutrients. Emphasizes mechanisms for transformations, factors influencing process rates, and the impacts of management and global change on nutrient cycles and air and water quality.</td>
<td>Prerequisite/Restriction: BIOL 1620, PSC 3000, CHEM 2300 or CHEM 2310, or instructor permission</td>
<td>Fall</td>
</tr>
<tr>
<td>BIOL 6220</td>
<td>Endocrine Aspects of Nutrition</td>
<td>3 credits</td>
<td>Provides physiological background into hormones involved in nutrient regulation, as well as mechanisms of hormone action at the cellular and molecular levels. Includes action of steroids in the nucleus and membrane-based signal transduction pathways. Course includes lectures and literature reviews/presentations.</td>
<td>Prerequisite/Restriction: CHEM 3700 or instructor permission</td>
<td>Fall</td>
</tr>
<tr>
<td>BIOL 6240</td>
<td>Physiological Ecology of Vertebrates</td>
<td>3 credits</td>
<td>Study of how interactions between vertebrate physiology and behavior shape vertebrate biology in an ecological context. Course takes a case studies approach to current research topics and involves in-class discussions, an oral presentation and writing.</td>
<td>Prerequisite/Restriction: Instructor permission</td>
<td>Fall</td>
</tr>
<tr>
<td>BIOL 6250</td>
<td>Graduate Internship</td>
<td>1-6 credits</td>
<td>Work experience, for which the student is paid, tied to academics in a graduate student’s field of study.</td>
<td></td>
<td>Fall</td>
</tr>
</tbody>
</table>
Prerequisite/Restriction: Permission of department head prior to enrollment

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 6260 - Behavioral Ecology
3 credits

Focuses on current topics, emphasizing critical reading and thinking skills. Includes lectures, student presentations, and discussions of primary literature.

Semester(s) Traditionally Offered: Spring

BIOL 6280 - Animal Molecular Biology
3 credits

Laboratory-based course designed to present the theory and provide an in-depth laboratory experience in RNA detection, differential gene expression analysis, real-time RT-PCR, protein detection and purification, 2-D gel electrophoresis, and microarrays.

Prerequisite/Restriction: ADVS 5260 or instructor permission

Cross-listed as: BIOL 5280 and ADVS 6280/ADVS 5280.

Semester(s) Traditionally Offered: Spring

Course Fee: $125.00

BIOL 6321 - Programming for Biologists
2 credits

Introduction to programming using biological examples. Students learn to write programs, automate data analysis, and produce scientific results using Python. For graduate (6000-level) credit, an additional project will be required.

Cross-listed as: BIOL 5321

Semester(s) Traditionally Offered: Fall

BIOL 6322 - Database Management for Biologists
1 credit

Introduction to database management using biological examples. Students learn to design databases, make data entry easy and ensure the quality of entered data, extract useful data, and produce automated reports using Access. For graduate (6000-level) credit, an additional project will be required.

Cross-listed as: BIOL 5322

Semester(s) Traditionally Offered: Fall

BIOL 6323 - Computational Biology Research Project
1 credit

Introduction to conducting computational biology research projects. Students learn to use programming and database management in biology research projects by conducting an individual project using either Python or Access. For graduate (6000-level) credit, a higher-level project relative to the undergraduate (5000-level) course will be required.

Cross-listed as: BIOL 5323

Semester(s) Traditionally Offered: Fall

BIOL 6324 - Advanced Programming and Database Management for Biologists
3 credits

Advanced programming and database management using biological examples. Students learn Program Design, Object Oriented Programming, Version Control, SQL and other advanced tools for scientific programming. For graduate (6000-level) credit, a project will be required.

Prerequisite/Restriction: BIOL 5321/BIOL 6321 and BIOL 5322/BIOL 6322 or instructor permission

Cross-listed as: BIOL 5324

Semester(s) Traditionally Offered: Fall

BIOL 6325 - Bayesian Analysis of Biological Data
3 credits

Theory, conceptual foundations, and practical applications of Bayesian statistics applied to biological data sets.

Semester(s) Traditionally Offered: Fall (alternate even years beginning 2016)

Effective Term

Fall 2016
BIOL 6380 - Evolutionary Genetics  
4 credits

Examines theoretical and applied aspects of genes in natural and artificial populations. Topics include molecular evolution, population, and quantitative genetics, with emphasis on the intersection of genetics with evolution, ecology, and conservation biology.

Prerequisite/Restriction: BIOL 3060 or instructor permission

Cross-listed as: BIOL 5380

Semester(s) Traditionally Offered: Fall

BIOL 6390 - Genes and Behavior  
3 credits

Molecular genetic principles of animal behavior and its evolution, including methods used to study behavioral genetics and case studies in behavior.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Sp

Effective Term: Spring

BIOL 6400 - Environmental Toxicology  
3 credits

Presents in-depth survey of toxic chemicals present in the environment, environmental factors impacting fate of chemicals, potential biological effects associated with chemical exposures, and methods of reducing associated risks.

Cross-listed as: BIOL 5400 and ADVS 6400/ADVS 5400 and PUBH 6400/PUBH 5400.

Semester(s) Traditionally Offered: Spring

BIOL 6421 - Plant Taxonomy I  
2 credits

Laboratory course developing understanding of vascular plant structures by showing students how they are used in plant classification and identification, how they affect a plant's adaptive ability, and how they differ among major plant groups. Students learn how to use identification keys and document vegetation studies. For 6000-level (graduate) credit, additional reading, recitation, writing, or lab work is required.

Prerequisite/Restriction: BIOL 1610

Cross-listed as: BIOL 4421.

Semester(s) Traditionally Offered: Spring

Course Fee: $40.00

BIOL 6422 - Plant Taxonomy II  
1 credit

In this field and laboratory course, students develop ability to recognize the most common plant families in Western North America, to use principles of phylogenetic analysis in plant biology, and to understand how plant classification systems have changed over time. As an integral part of the course, students prepare a pre-semester, summer plant field collection. For 6000-level (graduate) credit, additional work is required.

Prerequisite/Restriction: BIOL 4421 and instructor permission

Cross-listed as: BIOL 4422.

Semester(s) Traditionally Offered: Fall

BIOL 6510 - Insect-Plant Interactions  
2 credits

Ecology, evolution, and physiology of the interactions between insects and plants, including herbivory, defenses/compensations of plants to insect attack, pollination, and other mutualisms.

Semester(s) Traditionally Offered: Fall

BIOL 6520 - Ecological Vertebrate Physiology  
3 credits

Physiological responses and adaptations of vertebrates to physical, chemical, and biological environments. Bioenergetics at the species level. Three lectures.

Prerequisite/Restriction: One course in physiology and one course in ecology

Semester(s) Traditionally Offered: Fall
BIOL 6590 - Animal Community Ecology
4 credits

Concepts and controversies in modern community ecology emphasizing aquatic and terrestrial animals. Covers the community concept, diversity and stability, null models, relative importance of competition and predation, food webs, disturbance, metapopulations, biogeography, and new directions. For graduate (6000-level) credit, additional reading, recitation, and/or writing will be required.

Prerequisite/Restriction: BIOL 2220, STAT 3000

Cross-listed as: BIOL 5590.

Semester(s) Traditionally Offered: Fall

BIOL 6600 - Comparative Animal Physiology
3 credits

Principles and mechanisms of physiology in vertebrate and invertebrate animals. For graduate (6000-level) credit, additional reading, recitation, and/or writing will be required.

Prerequisite/Restriction: BIOL 1620 and one of CHEM 1110, CHEM 1120, and CHEM 1220 or instructor permission

Cross-listed as: BIOL 5600.

Semester(s) Traditionally Offered: Fall

BIOL 6630 - Endocrinology
3 credits

Molecular, cellular and physiological aspects of the endocrine system in vertebrates, presented with a species comparative approach. Clinical aspects and diseases associated with dysfunction of the endocrine system.

Prerequisite/Restriction: BIOL 1620

Cross-listed as: ADVS 5630, ADVS 6630, BIOL 5630

Semester(s) Traditionally Offered: Fall, Alternate Odd Years

BIOL 6740 - Cellular Communication by Small Molecules and Proteins

3 credits

Using post-translational modifications, small molecules, and protein motifs in cellular communication. Variances in the communication systems related to disease state and/or cell stress and therapeutic strategies to manipulate the communication systems.

Prerequisite/Restriction: CHEM 5700 or CHEM 6700 or instructor permission

Cross-listed as: CHEM 6740.

Semester(s) Traditionally Offered: Spring

BIOL 6750 - Topics in Biology
1-3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 6790 - Protein Structure/Function and Purification
3 credits

Protein biosynthesis, modification, folding, structure, and stability, protein purification and protein analysis will be discussed. Students will develop an original research proposal through oral and written presentations. For graduate (6000-level) credit, additional reading and writing assignments are required.

Prerequisite/Restriction: Microbiology or Biochemistry or equivalent

Cross-listed as: BIOL 5790, BENG 5790/BENG 6790, CHEM 5790/CHEM 6790

Semester(s) Traditionally Offered: Spring, Odd Years

BIOL 6800 - Biology Seminar
1 credit

Format for general graduate-level seminar topics.

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

BIOL 6850 - Microbiology Seminar
1 credit

Cross-listed as: BIOL 5850.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

BIOL 6870 - Ecology Seminar
1 credit

The Ecology Center schedules regular seminars throughout the school year with ecological scientists from other institutions participating. Ecology majors are required to attend a minimum of 10 such lectures.

Cross-listed as: ENVS 6870, PSC 6870, WATS 6870, and WILD 6870.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall

BIOL 6910 - Special Problems
1-3 credits

Individual or group study under faculty guidance.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 6950 - Navigating Science’s Terra Incognita: Communicating to Non-Scientists
2 credits

Graduate students learn to communicate their research to lay audiences by identifying the audience and appropriately tailoring the most relevant points of that research.

Cross-listed as: PSC 6950

Pass/Fail
Semester(s) Traditionally Offered: Fall

BIOL 6960 - Graduate General Ecology
4 credits

General concepts, history, and issues in all major areas of the science of ecology including: environmental biophysics; and physiological, behavioral, evolutionary, community, ecosystem, and applied ecology in both terrestrial and aquatic environments.

Cross-listed as: ENVS 6960, PSC 6960, WATS 6960, and WILD 6960.

Semester(s) Traditionally Offered: Fall

BIOL 6970 - Thesis Research
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 6990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 7750 - Topics in Biology
1-3 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 7970 - Dissertation Research
1-12 credits

Repeatable for credit
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

BIOL 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Building Construction and Construction Management (USU Eastern)

BCCM 0010 - Green Construction - Blueprint Reading & Codes
90 contact hours

Principles of traditional and green construction designs, familiarization of symbols, specifications, measurements, and codes will be introduced. The relationship of plot, foundation, floor, elevation, and section plans will be included.
Instruction covers using a builder's level, establishing grades, setback requirements, and squaring a building. Also included are principles of quality concrete and placement in footing, foundation walls, flatwork, and steps.

Campus: USU Eastern only

BCCM 0030 - Green Construction - Framing Methods
150 contact hours

Instruction covers the layout and erection of floors, walls, stairs, and roofs to achieve the highest energy efficiency. An introduction to calculating material quantities and computing costs related to residential construction. A study of the common wood and metal materials used in building an energy efficient home.

Campus: USU Eastern only

BCCM 0040 - Green Construction - Exterior Finishes
150 contact hours

This course provides an introduction to the application of siding, stucco, brick, and other typical exterior wall finishing materials. Introduction to materials and methods used in the application of a residential roof. Course will introduce a variety of green concepts to ensure efficient energy consumption and air distribution.

Campus: USU Eastern only

BCCM 0050 - Green Construction - Interior Finishes
90 contact hours

Introduce students to the materials and methods of interior wall, floor, and ceiling finishes that increase energy efficiencies. Introduce students to the advantages and disadvantages of using solar techniques. The effect, propose, and codes regarding trim will be emphasized.

Campus: USU Eastern only

BCCM 0060 - Green Construction - Industry Intro/Safety & Tool Use
30 contact hours

Includes an overview of the construction trades industry, green construction, current market trends, and employment opportunities. Hand and power tool identification, common safety procedures, and proper safety management principles will be covered.

Campus: USU Eastern only

BCCM 0100 - Building Construction Safety
1-180 contact hours

A study of OSHA and common safety rules for use of hand tools, power tools, ladders, scaffolds, etc. Also covers concepts of waste disposal and maintaining a clean working environment.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0200 - Basic Print Reading
1-180 contact hours

For anyone who needs to learn how to interpret and understand the drawings used in the construction industry. Prints provide a common set of information for all parties involved in the design and construction of a building. Theory of projection architectural symbols, materials, and construction methods are covered. Information taken from plot plans, foundation plans, floor plans, elevation drawings, details, and specifications will be stressed.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0300 - Concrete I
1-180 contact hours

Instruction covers using a builders' level, establishing grades, setback requirements, and squaring a building. Also included are principles of quality concrete and placement in footing, foundation walls, flatwork, and steps.
grades, setbacks requirements, and squaring a building. Principles and methods of concrete construction including forming, placement, finishing, and testing of concrete footings, walls, and slabs on residential and commercial construction.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0310 - Concrete II
1-180 contact hours

Principles in forming, placing and finishing of concrete in actual construction settings including footing, walls and slabs.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0400 - Framing I
1-180 contact hours

This course focuses on hands-on instruction in framing safety, codes, materials and layout methods. These techniques are taught through construction of a full-size project home.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0410 - Framing II
1-180 contact hours

This course focuses on hands-on instruction in erection of floors, walls, stairs and roofs. These techniques are taught through construction of a full-size project home.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0500 - Exterior Finish I
1-180 contact hours

This course provides an introduction to the application of siding, stucco, brick, rock and other typical exterior wall finishing materials.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0510 - Exterior Finish II
1-180 contact hours

Proper installation of exterior doors, windows and cornice finish are included.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0520 - Interior Finish I
1-180 contact hours

This course focuses on materials and methods of interior wall and ceiling finish. This will include installing insulation, along with hanging, taping and texturing drywall.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0530 - Interior Finish II
1-180 contact hours

This course focuses on materials and methods of interior wall and ceiling finish. This will include installing insulation, along with hanging, taping and texturing drywall.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCCM 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.
BCCM 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

BCCM 1010 - Building Construction Safety
1 credit

A study of OSHA and common safety rules for use of hand tools, power tools, ladders, scaffolds, etc. Also covers concepts of waste disposal and maintaining a clean working environment.

Campus: USU Eastern only

BCCM 1150 - Basic Print Reading
2 credits

For anyone who needs to learn how to interpret and understand the drawings used in the construction industry. Prints provide a common set of information for all parties involved in the design and construction of a building. Theory of projection architectural symbols, materials, and construction methods are covered. Information taken from plot plans, foundation plans, floor plans, elevation drawings, details, and specifications will be stressed.

Campus: USU Eastern only

BCCM 2010 - Framing I
2 credits

This course focuses on hands-on instruction in framing safety, codes, materials and layout methods. These techniques are taught through construction of a full-size project home.

Prerequisite/Restriction: A signed release form and insurance information is required

Campus: USU Eastern only

BCCM 2080 - Concrete I
2 credits

Instruction covers using a builder's level, establishing grades, setbacks requirements, and squaring a building. Principles and methods of concrete construction including forming, placement, finishing, and testing of concrete footings, walls, and slabs on residential and commercial construction.

Prerequisite/Restriction: BCCM 2010 must be completed or taken concurrently A signed release form and insurance information is required

Campus: USU Eastern only

BCCM 2090 - Concrete II
2 credits

Principles in forming, placing and finishing of concrete in actual construction settings including footings, walls and slabs.

Prerequisite/Restriction: BCCM 2080 must be completed or taken concurrently A signed release form and insurance information is required

Campus: USU Eastern only

BCCM 2100 - Interior Finish I
2 credits

This course focuses on materials and methods of interior wall and ceiling finish. This will include installing insulation, along with hanging, taping and texturing drywall.

Prerequisite/Restriction: A signed release form and insurance information is required

Campus: USU Eastern only

BCCM 2110 - Interior Finish II
2 credits

This course focuses on materials and methods of interior
wall and ceiling finish. This will include installing insulation, along with hanging, taping and texturing drywall.

Prerequisite/Restriction: BCCM 2100 must be completed or taken concurrently A signed release form and insurance information is required.

Campus: USU Eastern only

BCCM 2125 - Basic Cabinet Making and Millwork
3 credits

Students will become familiar with the advanced set-ups and operations of the tools and machines used in cabinetmaking and millwork. Students will explore several different types of construction methods and styles, e.g. face frame, European, casework, raised panel door, decorative use of molding and trim, and stains and finishes. Students will be introduced to the role of cabinetmaking in the world today, as well as participating in the design, construction, and finish of their own project.

Campus: USU Eastern only

BCCM 2130 - Finish Lab
3 credits

Application of insulation, wallboard, interior finish, handrails, moldings, and cabinets by on-site construction.

Campus: USU Eastern only

BCCM 2170 - Exterior Finish I
2 credits

This course provides an introduction to the application of siding, stucco, brick, rock and other typical exterior wall finishing materials.

Prerequisite/Restriction: A signed release form and insurance information is required.

Campus: USU Eastern only

BCCM 2180 - Exterior Finish II
2 credits

Proper installation of exterior doors, windows and cornice finish are included.

Prerequisite/Restriction: BCCM 2170 must be completed or taken concurrently A signed release form and insurance information is required.

Campus: USU Eastern only

BCCM 2200 - Construction Management
3 credits

Covers the theory of project organization, contracts, change orders, records, and project supervision.

Campus: USU Eastern only

BCCM 2230 - Construction Management Lab I
3 credits

Practice and application of construction management techniques through organization and supervision of layout and framing in an on-site construction setting.

Campus: USU Eastern only

BCCM 2240 - Construction Estimating
3 credits

Principles of construction estimating including take-offs, labor costs, equipment costs, overhead expenses and markups. Limited exposure to computer applications in construction estimating may also be taught.

Campus: USU Eastern only

BCCM 2250 - Construction Management Lab II
3 credits

Practice and application of construction management techniques through organization and supervision of interior construction.

Campus: USU Eastern only

BCCM 2270 - Building Codes and Inspections
2 credits

Covers the nature and use of building codes and zoning ordinances. Also covers inspection procedures used to enforce building codes and ordinances.

Campus: USU Eastern only

BCCM 2500 - Specialty Construction Lab
2 credits
Practice and application methods and materials in exterior construction for second year building construction students.

Campus: USU Eastern only

BCCM 2600 - Contractor Preparation
2 credits

Review of the construction industry, business ownership, company organization, bidding procedures, contracts, bonds and insurance, labor laws, lien laws, and cost management.

Campus: USU Eastern only

BCCM 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job experience for students in most aspects of building construction and construction management. The student establishes learning objectives, hours to be worked, and a credit agreement with the instructor at the beginning of the semester.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

BCCM 2988 - Special Problems
1-3 credits

Individual work approved by instructor. May prepare for State Examinations. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

Business

BUS 1000 - Business by Design
3 credits

Intended to foster lively dialogue around the foundational theories and practices designed to serve the mission, vision, and purpose of highly effective organizations. Organizing frame for the course primarily based on historical and contemporary readings in business and the social sciences. As students are exposed to theory and practice and encouraged to read broadly, course fosters a commitment to lifelong learning.

Semester(s) Traditionally Offered: Fall

BUS 2000 - Foundations for Global Learning Experiences
0.5-3 credits

Provides context for the Huntsman School’s Global Learning Experiences. Topics include political, historical, economic, and cultural factors that shape the social and business environment of the countries to be visited; relations between program countries; and relations between program countries and the United States.

Repeatable
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $2,300.00
Effective Term
Summer 2016

BUS 2100 - Business, Science, and Global Society
3 credits

Explores the interface of business and science, particularly the application of principles of life science to addressing contemporary challenges of global society. Examines scientific bases of issues related to growing and evolving communities, as well as how business can play a role in enacting positive change.

Semester(s) Traditionally Offered: Summer

BUS 2250 - Introductory Internship
1-9 credits

Introductory-level experience in a career-related position approved by the Cooperative Education Office. One credit for every 75 hours of internship experience, with a maximum of 9 credits. A maximum of 12 credits of BUS 2250 and BUS 4250 combined can be counted toward the minimum degree requirements for the Huntsman School of Business.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

BUS 3100 - Survey of Management Information Systems (DSS)
DSS Depth Social Sciences
3 credits
Survey of business uses of information technology, emphasizing vocabulary, concepts, career emphases, and systems components. Includes general systems theory and business functional information subsystems (e.g., accounting, management, finance, and marketing).

Prerequisite/Restriction: Cumulative GPA of 25 or higher; OSS 1400 or equivalent

Semester(s) Traditionally Offered: Fall, Spring, Summer

BUS 3110 - Management Fundamentals (DSS)
DSS Depth Social Sciences
3 credits

Study of the role of management, leadership theory, defining goals, organizing work, and managing performance.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher

BUS 3250 - Discussion With Business Leaders
1 credit

Introduces current business trends, issues, and problems. This is accomplished through readings and discussions, as well as by required attendance at Dean’s Convocation, Partner’s in Business, and other appropriate business seminars.

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

BUS 3330 - Essentials of Database Systems
3 credits

Includes essential theory of database systems in areas such as E/R design, relational design, the SQL language, and distributed databases.

Prerequisite/Restriction: MIS 2100, completion of at least 40 credits, and cumulative GPA of 2.5 or higher

BUS 3400 - Finance Fundamentals (QI)
QI Quantitative Intensive
3 credits

Study of basic financial management principles, methods, and policies for business.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher; ACCT 2010; MATH 1050 or higher mathematics class or AP Calculus AB score of 3 or higher; choose one statistics course from STAT 1040, STAT 1045, STAT 2000, STAT 2300, STAT 3000, or PSY 3010

BUS 3500 - Marketing Principles
3 credits

Study of basic marketing principles, functions, concepts, and terminology.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher

BUS 3510 - Business Programming
3 credits

Includes basics of business systems development using programming languages supporting the Windows environment.

Prerequisite/Restriction: MIS 2100, completion of at least 40 credits, and cumulative GPA of 2.5 or higher

BUS 3610 - Introduction to Entrepreneurship
3 credits

Introduction to entrepreneurship and the initial developmental processes of new ventures. Helps students become familiar with entrepreneurship, its role in the economy, and its viability as a career path. Focuses on identifying and analyzing potential business opportunities.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher and completion of at least 40 credits

BUS 3620 - Developing Entrepreneurial Competencies
3 credits

Focuses on the development of persuasion, delegation, organizational, leadership, and other practical competencies for individuals who launch businesses and/or play a significant role in their growth.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher and completion of at least 40 credits

BUS 3700 - Operations Management Fundamentals
3 credits
Study of basic concepts and tools relating to managing the operations of a business.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher; MATH 1100 or MATH 1210; STAT 2000 or STAT 2300 or STAT 3000

BUS 3710 - Interpersonal and Team Skills
3 credits

Focuses on the role of teams and interpersonal relationships in emerging organizations. Designed to help individuals and teams learn the skills needed for organizational effectiveness. Uses examples and exercises relevant to emerging organizations.

BUS 3820 - International Ventures
3 credits

Explores international culture and content of entrepreneurship, the impact of globalization on emerging businesses, and the pressures and complexities of operating in global markets, including the processes of managing multicultural resources.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher and completion of at least 40 credits

BUS 4010 - Selected Topics in Finance
3 credits

Selected topics in finance pursued in depth. Topics may vary.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher; BUS 3400

BUS 4020 - Selected Topics in Marketing
3 credits

Selected topics in marketing pursued in depth. Topics may vary.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher; BUS 3500

BUS 4030 - Selected Topics in Management
3 credits

Selected topics in management pursued in depth. Topics may vary.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher and completion of at least 40 credits

Repeatable for credit.

BUS 4040 - Selected Topics in Human Resources
3 credits

Selected topics in human resources pursued in depth. Topics may vary.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher and completion of at least 40 credits

BUS 4050 - Selected Topics in Information Systems
3 credits

Selected topics in information systems pursued in depth. Topics may vary.

Prerequisite/Restriction: BUS 3330, completion of at least 40 credits, and cumulative GPA of 2.5 or higher

BUS 4250 - Advanced Internship
1-9 credits

Advanced or middle-level internship experience in a career-related position approved by the Cooperative Education Office. One credit for every 75 hours of internship experience, with a maximum of 9 credits.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

BUS 4260 - A & T Advanced Internship
1-12 credits

Prerequisite/Restriction: Must have 40 earned credits and 2.67 GPA or instructor permission

Repeatable for credit

BUS 4530 - Fundamentals of Marketing Research
3 credits

Examines the marketing research process. Develops skills in research using secondary data, primary qualitative data, and primary quantitative data. Helps students make sound business decisions based on
analysis of research data.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

BUS 4580 - New Venture Finance
3 credits

Focuses on developing practical experience with generating feasible financial projections, financial modeling, scenario analysis, and entrepreneurial funding (venture capital, angel investing, debt financing, bootstrapping, etc.).

Prerequisite/Restriction: BUS 3400; ACCT 2010, ACCT 2020; cumulative GPA of 2.5 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Spring

BUS 4620 - Advanced Business Planning
3 credits

Theoretical and practical aspects of starting or buying a business. Includes development of a business plan, conducting due diligence for buying a business, valuation, and related topics.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

BUS 4710 - Entrepreneurship Project
3 credits

Students plan and complete advanced entrepreneurship projects that may include developing their own business, a significant consulting project with a start-up or growth business, or other approved project.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher and completion of at least 40 credits

BUS 4880 - Business Strategy (CI)
CI Communications Intensive
3 credits

Capstone course dealing with the processes of operating a business venture. Emphasizes market entry, finance, operations, managing growth, business ethics, and social responsibility. Addresses entrepreneurial issues and global strategies.

Prerequisite/Restriction: Cumulative GPA of 2.5 or higher; BUS 3110, BUS 3400, BUS 3500, BUS 3700

BUS 5100 - Systems Analysis and Design and Project Management
3 credits

Requires students to build an information system using state-of-the-art analysis and design principles, as well as project management essentials. The project must be completed for an external organization using state-of-the-art software.

Prerequisite/Restriction: BUS 3330, BUS 3510, completion of at least 40 credits, and cumulative GPA of 2.5 or higher

Semester(s) Traditionally Offered: Fall, Spring, Summer

BUS 6310 - MBA Career Development
0.5 credit

Provides background in theory and practice of career development, including student assessment, organizational entry, and career planning and mentoring.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

Business (USU Eastern)

BUSN 0010 - Business Writing
1-90 contact hours

Focuses on business English essentials including, sentence structure, grammar, punctuation, parts of speech, and proofreading.

Campus: USU Eastern only

BUSN 0020 - Business Writing Techniques
1-90 contact hours

Reinforces essential English skills, while developing and applying effective written and business communication skills. This course will focus on the ability to produce clear and concise business documents in a mail able format. Students will utilize correct sentence structure, paragraph structure, word usage grammar, and punctuation while composing business correspondence.
Campus: USU Eastern only

BUSN 0030 - 10-Key Calculations
1-60 contact hours

Prepares students on the 10-key calculator using the touch method to perform basic business math calculations. These calculations include addition subtraction, multiplication, division, percentages, fractions, and combining operations. Attention will be given to speed and accuracy.

Campus: USU Eastern only

BUSN 0100 - Communication Skills I
24 contact hours

Help develop skills and techniques in Human Technology that will increase; personal effectiveness, communication skills, with self, employees and employers. The course will also increase workplace attitudes; make change work for you and not against you and improve listening and speaking skills.

Campus: USU Eastern only

BUSN 0105 - Communication Skills II - Lab
12 contact hours

This is a powerful self-paced training series on the power of positive thinking and helps us identify the areas of our work lives where we may be falling into negative patterns that can affect our success and our communication in the workplace.

Campus: USU Eastern only

BUSN 0110 - Workplace Communications I
16 contact hours

This course looks at skills necessary to communicate effectively in professional work environments. We will cover both formal and informal communication styles and techniques; we identify what it means to be a professional in today’s workplace.

Campus: USU Eastern only

BUSN 0115 - Workplace Communications II - Lab
8 contact hours

This is a self-paced training series that looks at many different aspects of work communication from phone conversations with customers to inter-office communications, both written and face to face.

Campus: USU Eastern only

BUSN 0120 - Business Leadership I
16 contact hours

Develop skills necessary to gain the competitive edge through career development, self-improvement, and volunteer programs.

Campus: USU Eastern only

BUSN 0125 - Business Leadership II - Lab
8 contact hours

This is a self-paced training that looks at business ethics needed to become an effective leader in the workplace.

Campus: USU Eastern only

BUSN 0130 - Job Seeking Techniques I
16 contact hours

This class focuses on skills needed to prepare students to apply for jobs and skills to keep a job after you have been hired. We look at trends in the work market and look at techniques for applying for work.

Campus: USU Eastern only

BUSN 0135 - Job Seeking Techniques II - Lab
8 contact hours

This is a self-paced training that will take a student through the steps of creating a resume, cover letter, and steps to prepare for an interview.

Campus: USU Eastern only

BUSN 0140 - Customer Service I
16 contact hours

This course is an introduction to acquiring the skills and attitudes necessary to build strong customer relationships and provide outstanding customer service. Dynamic training designed to provide the tools needed to impact your work.
Campus: USU Eastern only

BUSN 0145 - Customer Service II - Lab
8 contact hours

This is a self-paced training that looks at ways to help customers have a quality customer service experience when they interact with you in the service industry.

Campus: USU Eastern only

BUSN 0150 - Employment Relations I
16 contact hours

An introduction to essential human relations skills needed to maintain gainful and satisfying employment. Includes familiarization with problematic areas found in the workforce, including solving problems, understanding relationship and diversity & increasing personal ethics.

Campus: USU Eastern only

BUSN 0155 - Employment Relations II - Lab
8 contact hours

This is a self-paced training that focuses on conflict resolution between co-workers and customers and how to resolve conflicts that arise in the workplace.

Campus: USU Eastern only

BUSN 0161 - Real World Communications I
45 contact hours

This class will look at communications from a sociological standpoint. We will look and how changes in our lives and society can affect how we communicate. We will take a close look at concepts such as potential, attitudes, and habits. We will also look at how to motivate self and others.

Campus: USU Eastern only

BUSN 0162 - Real World Communications II
45 contact hours

This class will focus on techniques and mindsets that will better prepare an individual’s for real life settings after High School or College. We will look as conflict resolutions skills and workplace relations skills.

Campus: USU Eastern only

BUSN 0170 - Work and Education Preparation I
16 contact hours

This course is set up to help a person by looking both at work and school options to help further their career. Topics that will be covered are test preparation skills and financial preparation for college and work.

Campus: USU Eastern only

BUSN 0175 - Work and Education Preparation II - Lab
8 contact hours

This is a self-paced online support to the teacher lead portion of this class.

Campus: USU Eastern only

BUSN 0300 - Introduction to Entrepreneurship
1-90 contact hours

Introduction to Entrepreneurship uses the entrepreneurial approach to help students develop not only their entrepreneurial skills but also their management skills. Students learn about entrepreneurship and the fundamentals of entrepreneurship strategy. The business plan is covered.

Pass/Fail only

Campus: USU Eastern only

Effective Term
Spring

BUSN 0310 - FastTrac Growth Venture
1-90 contact hours

Course helps existing entrepreneurs improve their business. Sustainable growth cannot be left to chance. Discover how to plan for purposeful, profitable growth, and improved business performance. Hindsight is 20/20, so take what you’ve learned in your business and look to the future. Create a framework to improve the performance of your business.

Pass/Fail only

Campus: USU Eastern only

Effective Term
Spring
BUSN 0320 - Nxlevel Business Basics  
1-90 contact hours  

This course addresses the questions every prospective business owner must answer in order to launch a successful and sustainable new venture. Participants will learn how to identify feasible start-up opportunities, and bring them to fruition by creating a start-up business plan based on shrewd market research and proven start-up management techniques.

Pass/Fail only  
Campus: USU Eastern only  
Effective Term  
Spring  

BUSN 0340 - Ice House Introduction to Entrepreneurship Thought  
1-90 contact hours  

The Ice House Entrepreneurship Program is a powerful new learning program designed to inspire and engage participants in the fundamental aspects of an entrepreneurial mindset and the unlimited opportunities it can provide.

Pass/Fail only  
Campus: USU Eastern only  
Effective Term  
Spring  

BUSN 0798 - Special Problems  
1-360 contact hours  

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only  

BUSN 0799 - Special Problems  
1-360 contact hours  

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only  

BUSN 1010 - Business Principles (BSS)  
BSS Breadth Social Sciences  
3 credits  

For all students wanting a greater understanding of business. It is an examination of the role of business and commerce through history and how it shapes modern society. Students will study both classical and current theories of management, human relations and motivation, ethics and social responsibility. Emphasis will also be placed on factors needed for organizations to become and remain competitive in the global marketplace.

Campus: USU Eastern only  
Semester(s) Traditionally Offered: Fall, Spring  

BUSN 1021 - Personal Finance  
3 credits  

Designed for all students. Introduction to personal financial planning throughout all stages of life. Emphasis is placed on planning for, acquiring, protecting and investing wealth to meet personal financial objectives.

Campus: USU Eastern only  
Semester(s) Traditionally Offered: Fall, Spring  

BUSN 1050 - Business Mathematics (MA)  
MA Mathematics  
3 credits  

Required for students working towards a Certificate of Completion or an Associate of Applied Science in Business Administration. Examines common business practices and their associated math procedures. Designed to provide a solid preparation and foundation for students who are going on to course work or careers in accounting, management, marketing, finance, and small business or for individuals who wish to become better informed consumers. Topics include: discounts, markups/markdowns, payroll, promissory notes, time value of money, consumer and business credit, interpretation of financial statements, inventory, depreciation, and an introduction to business statistics.

Prerequisite/Restriction: MATH 0950 or higher, ACT Math score of 17 or higher or equivalent SAT Math score, or score of 40 or satisfactory score on the Math Placement Exam  

Campus: USU Eastern only  

BUSN 1091 - Business Presentations  
3 credits
Designed to help students develop skills in the art of expressing themselves by visually presenting business topics or proposals to individuals or groups. A variety of business presentations are given using microcomputer presentation software.

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Fall, Spring
on demand only

BUSN 1111 - Survey of Accounting
3 credits

Designed for the business student who would like to develop a foundational understanding of accounting procedures in preparation for ACTG 2010 or for the individual who has bookkeeping or business ownership interests and would like a practical overview of basic accounting and bookkeeping procedures. It is also intended for the non-business student or the secretarial major who needs only one semester of basic accounting. Covers the accounting cycle for both service and merchandising businesses and an introduction to payroll accounting and financial statement preparation and analysis.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

BUSN 1310 - Introduction to Business Management
2 credits

Covers an overview of management functions and roles and will specifically examine organizational and strategic planning, organizational design, the staffing process, and control systems. Course is required for students working towards an Associate of Science in Business Administration.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

BUSN 1400 - Introduction to Hospitality Management
3 credits

Recommended elective for students working towards an Associate of Applied Science in Business Administration with an emphasis in Hospitality. Provides a basic understanding of businesses in the hospitality field. Explores management functions and responsibilities from a hospitality perspective. Introduces students to career opportunities in hospitality management.

Campus: USU Eastern only

BUSN 1500 - Business Leadership Club
1 credit

Course is the business department's vehicle for student practical involvement and leadership development. In addition to campus and community service projects, students may join the national business organizations PBL and/or DEX where they can network and participate in state and national leadership building activities.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

BUSN 2010 - Financial Accounting
4 credits

Designed for all students wanting to learn about accounting as the language of business. Course is required for business and accounting majors. Introduces students to basic accounting principles necessary to prepare, understand, and use financial statements and financial information for decision making. Designed to provide the student with useful and productive skills that will help in understanding more about the business world and the role accounting information plays in the U.S. economy.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

BUSN 2020 - Managerial Accounting
4 credits

Designed for all students wanting to learn how accounting information is used in business decisions. Course is a required class for business and accounting majors. Focus is on providing relevant information that is necessary to assist managers in a modern, global environment. Topics will include product costing, activity based costing, cost behavior, budgeting for planning and control, and budgeting for capital expenditures.

Prerequisite/Restriction: BUSN 2010 and MATH 1030
BUSN 2050 - Business Law
4 credits

Introduces the student to the fundamental yet dynamic nature of the legal environment among businesses, government and consumers. These relationships include questions of constitutional law, legal reasoning, ethics and procedures. Torts, crimes, contracts, property (real, personal and intellectual), physical environment, employment, agency, commercial transactions and bankruptcy are but a few issues facing national and international business.

BUSN 2151 - Income Tax Preparation
2 credits

Income Tax Preparation gives students understanding and skill in preparation of the IRS 1040 form and supporting schedules. Students prepare and electronically file these documents as a service to low-income and senior citizen community members using the computer. Students will become aware of important individual decisions in reporting and financial tax planning.

BUSN 2160 - Introduction to Business Finance
3 credits

In this introduction to business finance, students learn about financial analysis, budgeting, sources of financing, and basic securities. Course topics also include the financial sector, the time value of money, and the cost of capital.

Prerequisite/Restriction:
Basic understanding of algebra
BUSN 2010 strongly recommended

BUSN 2200 - Business Communications
3 credits

Course is required for students working towards an Associate of Applied Science in Business Administration. Designed to give students the knowledge and opportunity to write clear, concise, and correct business correspondence. Focuses on the most common forms of business writing: sales letters, memos, proposals, research reports and resumes. The proper format of business writing is presented and stressed and emphasis is also placed on editing and proofreading in order to produce “mistake-free” correspondence.

Prerequisite/Restriction: An introductory English composition course (ENGL 1010) and a word-processing course. Transfer students are required to earn a “B” or better to transfer this course.

BUSN 2201 - Marketing Concepts
3 credits

An overview of the marketing function emphasizing concepts and terminology. Covers the components of the marketing mix, opportunities available in marketing, and the relationship between marketing and the world of business.

BUSN 2202 - International Marketing
3 credits

For the student who desires to investigate the challenges of doing business in an increasingly global environment. Lectures and in-class discussions place special emphasis on the cultural and social diversity of international markets, marketing strategies of global firms, and the challenges of international pricing, distribution, advertising and product development.

Prerequisite/Restriction: BUSN 2201

BUSN 2211 - Introduction to Advertising
2 credits

Introduces students to the basic techniques used in
advertising. Teaches the use of marketing information and research to develop effective advertising campaigns for different media. Other topics include basic design skills, advertising terminology, examples of effective advertising and simple market research.

Prerequisite/Restriction: An introductory course in marketing, such as BUSN 2201, is recommended

Campus: USU Eastern only

BUSN 2241 - Retail Merchandising
2 credits

An overview of the retailing process, the environment within which it operates, and the institutions and functions that are performed by retailers.

Campus: USU Eastern only

BUSN 2251 - Consumer Behavior
3 credits

Designed to apply psychological, sociological, economic and anthropological influences to the purchasing and the consumption of goods and services by the ultimate consumer.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

BUSN 2320 - Small Business Management - CTE (HR)
HR Human Relations
3 credits

Examines the many aspects of establishing and/or managing a small business. In addition to the basic underpinnings of a small business, the course focuses on human resource management, ethics, business communications, financial management and managing the growth and expansion.

BUSN 2321 - Small Business Management
2 credits

Focuses on the unique aspects of establishing and operating a small business. Enables students interested in entrepreneurship to develop the necessary skills and tools for success. Topics will include small business practices, family businesses, franchising and formation of small businesses.
supervision of a faculty member, students will work with small businesses in the area to either provide or assist in the delivery of consulting, training or business counseling services.

Campus: USU Eastern only
Semester(s) Traditionally Offered: On demand only

BUSN 2700 - Business Forum
1 credit

Designed to increase the student’s success during and after the college experience. Focuses on developing a portfolio to include a resume, samples of outstanding college work, and letters of recommendation. Includes a very basic overall review of the major business subjects (accounting, business law, economics, marketing, management, and finance) and their relationship with each other.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

BUSN 2800 - Computerized Accounting
2 credits

Enhances students’ understanding of fundamental accounting principles in General Ledger, Accounts Receivable, Accounts Payable, Inventory, and Payroll using Quickbooks software.

Prerequisite/Restriction: BUSN 1111 or BUSN 2010

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

BUSN 2977 - Cooperative Education
1-3 credits

Provides for supervised on-the-job training in general business functions. Learning objectives, hours worked and credit agreements are approved by instructor.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

BUSN 2999 - Workshop
1-3 credits

Designed to meet the changing needs of the Business or Non-Business student in today’s world. In a workshop or seminar-type format, opportunity is provided to cover a broad range of topics and issues. Emphasis will be placed upon the most current thinking in business practice and technology.

Repeatable for credit
Campus: USU Eastern only

Business Computer Information Systems (USU Eastern)

BCIS 0020 - Computer Technology
1-180 contact hours

A course designed to teach advanced computer skills for the CAD environment, covering topics such as: system administration, computer networking, PC repair, maintenance, and computer upgrades.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCIS 0030 - Robot Programming
1-180 contact hours

To introduce students to robot construction, and programming. Students will learn to develop correct software in a simple programming language environment that will drive their robot through several challenges.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCIS 0040 - Introduction to Programming
1-180 contact hours

An introduction to computer programming/software engineering and applications. The course introduces
students to the fundamentals of computer programming, to simple controls and data structures, to operating system commands, and to the use of text files. Students will learn to design, code, and test their own programs. Students will also apply mathematical skills throughout the course.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCIS 0050 - Introduction to Super Computers
1-180 contact hours

This course is to introduce high school students to the techniques involved in programming and managing Computer Clusters, which consist of many smaller machines working in concert.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCIS 0060 - Introduction to A+ Essentials
1-180 contact hours

This class is designed to explore physical and functional characteristics of computer devices and components and trends in computer architecture. Emphasis will be placed on configuring a microcomputer, troubleshooting, interrupts, device and memory management, virtual memory and paging, file management, and performance analysis. Lab exercises include assembling a computer and troubleshooting problems. Prepares the student for hardware exams, such as the A+ hardware certification.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCIS 0070 - Linux+
1-180 contact hours

Course will introduce students to the basics of the Linux Operating System and the history of the Open Source Community. Basic hardware and software concepts will be taught to make sure the students have the proper knowledge to understand the more complex topics discussed in the Linux material. After successful completion of this course, the students will be prepared to take CompTIA's Linux+ industry exam.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCIS 0080 - Introduction to Game Design and Programming
1-180 contact hours

This course will introduce students to game design and programming. No prior experience in programming and graphic design required.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCIS 0081 - Introduction to Mobile Application Development
1-180 contact hours

This course introduces students to the fundamentals of mobile application development. Students will learn to design, code and test their own mobile applications.

Pass/Fail only
Effective Term
Spring

BCIS 0090 - Networking Technology
1-180 contact hours

This course includes terminology and networking concepts including design, topology, implementation, cabling, connecting network components, signal transmission and network adapter cards. The OSI and 802 networking models within the network environment teach students how networks send data. Architectures will be included as well as administration, support, security, fault tolerant systems, wide area network and troubleshooting network problems. Prepares the student for exams such as Network+ Certification Exam and qualifies as one exam in the Microsoft Certified Systems Administrator (MCSA).

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

BCIS 0110 - Keyboarding Basics
1-30 contact hours

This course is designed for students to learn or increase their keyboarding ability. Students will learn basic keyboarding techniques and will work towards improving accuracy and or keyboarding speed.

Campus: USU Eastern only

BCIS 0111 - Keyboarding I
1-30 contact hours

Provides intensive skill building practice using drills and timed writings, which will help students increase speed and accuracy on a computer keyboard. The course covers an introduction to the computer keyboard and keyboarding techniques. 30 nwpm.

Campus: USU Eastern only

BCIS 0112 - Keyboarding II
1-40 contact hours

This is a continuation of BCIS 0111 and is designed to increase speed and accuracy to a minimum job-market level of 40 nwpm. The course is taught using computers with an emphasis on correct keyboarding techniques. Timings and drills are used to enhance keyboarding skills.

Campus: USU Eastern only

BCIS 0113 - Keyboarding III
1-50 contact hours

This is a continuation of BCIS 0112 and is designed to increase speed and accuracy to a minimum job-market level of 50 nwpm. The course is taught using computers with emphasis on correct keyboarding techniques. Timed writings and drills are used to enhance keyboarding skills.

Campus: USU Eastern only

BCIS 0120 - Computer Basics
1-90 contact hours

This course provides a fundamental understanding of computing including knowledge and use of computer hardware, software, and operating systems. The course will cover basic use and common features of applications (word processing, spreadsheet, and database) including internet use and e-mail.

Campus: USU Eastern only

BCIS 0122 - Computer Fundamentals
1-90 contact hours

This course provides a fundamental understanding of computing including knowledge and use of computer hardware, software, and operating systems. The course will cover basic use and common features of applications (word processing, spreadsheet, and database) including internet use and e-mail.

Campus: USU Eastern only

BCIS 0140 - Records Management
1-30 contact hours

Covers records retention systems and presents a systematic approach to organizing and controlling paper, image, and computer records through their live cycles.

Campus: USU Eastern only

BCIS 0231 - Word Processing Applications I
1-90 contact hours

Focuses on basic word processing features used in creating, editing, saving, and retrieving business documents. Practical business applications involving creating and correctly formatting business documents, completing projects and solving problems will be covered.

Campus: USU Eastern only

BCIS 0232 - Word Processing Applications II
1-90 contact hours

This is a continuation of BCIS 0231 and is designed to provide students with an advanced knowledge of word processing skills.

Campus: USU Eastern only

BCIS 0241 - Spreadsheet Applications I
1-60 contact hours
This course introduces spreadsheet functions and applications. Students will learn how to design, create, manipulate, calculate, and present data. Students will utilize critical-thinking skills and apply spreadsheet techniques in developing information for business applications.

Campus: USU Eastern only

BCIS 0242 - Spreadsheet Applications II
1-60 contact hours

This is a continuation of BCIS 0241 and is designed to provide students with advanced knowledge of formatting techniques, spreadsheet functions, analysis tools, and management techniques.

Campus: USU Eastern only

If you want to compete in today's business world, then it's important to keep up with technology in order to get the most out of the technology you have, to keep abreast of emerging new technology, and to find the information that will help you make the right buying decisions.

Campus: USU Eastern only

BCIS 0410 - iPad Programming
4 contact hours

Participants in this hands-on course will learn about and gain practice developing iOS applications for the full line of Apple mobile devices such as iPad and iPhone. The exercises develop a business-oriented app from the ground up, which eventually incorporates all the major systems and concepts needed for most iOS apps.

Campus: USU Eastern only

This course focuses on electronic presentation software, including designing and creating a presentation, adding visual and audio elements, creating output, and presenting information.

Campus: USU Eastern only

If you want to compete in today's business world, then it's important to keep up with technology in order to get the most out of the technology you have, to keep abreast of emerging new technology, and to find the information that will help you make the right buying decisions.

Campus: USU Eastern only

BCIS 0510 - Web Design
90 contact hours

This course is an introduction to creative design for the internet and technologies that are used for websites. It will enable the students to achieve basic understanding of the principles and practice of professional web design and development. It is intended for everybody who enjoys experimenting with creative design for the internet and who wants to learn how to build their own basic website design.

Campus: USU Eastern only

BCIS 0320 - Electronic Presentations
1-60 contact hours

Introduce business application features of desktop publishing. Students will arrange text and graphics to create attractive, professional-looking documents.

Campus: USU Eastern only

BCIS 0310 - Desktop Publishing
1-90 contact hours

This course introduces creative design for the internet and technologies that are used for websites. It will enable the students to achieve basic understanding of the principles and practice of professional web design and development. It is intended for everybody who enjoys experimenting with creative design for the internet and who wants to learn how to build their own basic website design.

Campus: USU Eastern only

This course focuses on electronic presentation software, including designing and creating a presentation, adding visual and audio elements, creating output, and presenting information.

Campus: USU Eastern only

BCIS 0400 - Emerging Technologies
16 contact hours

Participants in this hands-on course will learn about and gain practice developing iOS applications for the full line of Apple mobile devices such as iPad and iPhone. The exercises develop a business-oriented app from the ground up, which eventually incorporates all the major systems and concepts needed for most iOS apps.

Campus: USU Eastern only

This course is an introduction to creative design for the internet and technologies that are used for websites. It will enable the students to achieve basic understanding of the principles and practice of professional web design and development. It is intended for everybody who enjoys experimenting with creative design for the internet and who wants to learn how to build their own basic website design.

Campus: USU Eastern only

BCIS 0310 - Desktop Publishing
1-90 contact hours

This course introduces creative design for the internet and technologies that are used for websites. It will enable the students to achieve basic understanding of the principles and practice of professional web design and development. It is intended for everybody who enjoys experimenting with creative design for the internet and who wants to learn how to build their own basic website design.

Campus: USU Eastern only

BCIS 0320 - Electronic Presentations
1-60 contact hours

Introduce business application features of desktop publishing. Students will arrange text and graphics to create attractive, professional-looking documents.

Campus: USU Eastern only

BCIS 0310 - Desktop Publishing
1-90 contact hours

This course introduces creative design for the internet and technologies that are used for websites. It will enable the students to achieve basic understanding of the principles and practice of professional web design and development. It is intended for everybody who enjoys experimenting with creative design for the internet and who wants to learn how to build their own basic website design.
their own Web pages. Word processing and file management skills are strongly recommended.

Campus: USU Eastern only
BCIS 0520 - Web Design for Business
90 contact hours

This course is an introduction to Web-based business. Students will discuss marketing concepts, design strategies, and technical issues as they relate to Web-based business. Students will have hands-experience creating business Web pages including shopping carts and other interactive elements.

Campus: USU Eastern only
BCIS 0530 - ASP.NET
45 contact hours

Thousands of businesses have used ASP.NET to build professional, dynamic websites. In this course students will learn the tools needed to build and deploy a dynamic site using ASP.NET. Covering everything from installing and configuring Visual Web Developer or Visual Studio Express for Web and SQL Server Express to creating web form pages. This course is designed to give beginning and intermediate developers hands-on-experience.

Campus: USU Eastern only
BCIS 0540 - Cloud Computing
30 contact hours

Campus: USU Eastern only
BCIS 0600 - Introduction to Computers
30 contact hours

This course is very basic. A student is assumed to have no computer skills. Personal computer basics along with basic introduction to Microsoft Word and Excel are included. Basic instruction on the Internet, E-mail, and building a home page.

Campus: USU Eastern only
BCIS 0610 - Introduction to Word
30 contact hours

This beginning class will teach the student how organize, analyze, and present information using Microsoft Word.

Campus: USU Eastern only
BCIS 0611 - Advanced Word
30 contact hours

This course is a continuation of the Introduction to Word class; the student will learn the more advanced skills of Microsoft Word.

Campus: USU Eastern only
BCIS 0620 - Introduction to Excel
30 contact hours

This beginning course will guide the student throughout the basics of setting up and maintaining workbooks to make daily business or home based tasks faster and automated. Some basic computer skills will be needed before starting this course.

Campus: USU Eastern only
BCIS 0621 - Advanced Excel
30 contact hours

This course is an advanced Course that is a continuation of Introduction to Excel and is designed to provide students with advanced knowledge of formatting techniques, spreadsheet functions, analysis tools, and management techniques.

Campus: USU Eastern only
BCIS 0630 - Introduction to Access
30 contact hours

Teaches the creation of databases and introduces the application of database capabilities for information management. Students will learn how to design, create, manipulate, extract, and present data.

Campus: USU Eastern only
BCIS 0631 - Advanced Access
30 contact hours

This course is a continuation of Introduction to Access and is set up to help a student with advanced skills in database design and creation, data extraction and presentation.
Campus: USU Eastern only

BCIS 0640 - Introduction to PowerPoint
30 contact hours

This course focuses on introducing PowerPoint presentation software, including designing and creating a presentation, adding visual and audio elements, creating output, and presenting information.

Campus: USU Eastern only

BCIS 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor.
Time and membership hours to be arranged.

Campus: USU Eastern only

BCIS 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor.
Time and membership hours to be arranged.

Campus: USU Eastern only

BCIS 0990 - Computer Basics
2 credits

Designed for students with little or no previous computer experience to give them a practical knowledge in using a computer, with emphasis on home use. Concepts covered include keyboard and mouse use, learning the purpose of computer devices, changing computer settings, file management, using the Internet and e-mail, basic word processing, and digital media management.

Campus: Regional Campuses and Distance Education

BCIS 1000 - Introduction to Computer Science
3 credits

Strictly a lecture class with NO hands-on experience. Class is a survey of computers that covers hardware, software, computer history, computer crime, operating systems, programming languages, and computer networks. A research paper will be required.

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 1010 - Computer Literacy
3 credits

Course uses the Microsoft Office program to teach students basic word processing, data processing, spreadsheet, graphics, Internet, Windows, and E-mail skills in a business setting. Following the completion of the course, students will be able to use the Microsoft Office program for personal and business use. Business majors refer to BCIS 2010.

Campus: Regional Campuses and Distance Education

BCIS 1200 - Introduction to Operating Systems
2 credits

This course will provide you with an understanding of multiple operating systems commonly found in the Information Technology field today. You will learn the theory behind operating systems and some basic to advanced components of each operating system. This course walks you through current hardware and how it interacts with operating systems. You will learn basic functions and design of file systems found in Windows, UNIX/Linux, and Macintosh operating systems. You will also learn techniques to protect users from computer viruses, malware, and spyware.

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: Fall, Even Years

BCIS 1300 - Website Design
3 credits

This course focuses on the design and construction of Internet Web pages. Web page development using HTML and Web page editing software is discussed. All students will have hands-on experience creating and publishing their own Web pages. Word processing and file management skills are strongly recommended.

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: Fall, Spring

BCIS 1310 - Digital Image Basics
2 credits

Covers digital camera basics, downloading images,
applying some basic touch-up and enhancements using popular software, options for printing your pictures, creating cards, scrapbooks, calendars, screen projects to display on a computer or on a DVD for television, and converting and compressing digital images into appropriate file formats to store and archive correctly.

Campus: Regional Campuses and Distance Education

BCIS 1340 - Digital Video Production
3 credits

This class covers fundamental theories and practice in computer-based audio and video production, including recording, editing, digitizing audio and video segments utilizing current video-editing programs, and various Internet streaming technologies. Includes lectures, demonstrations, and a project during which each student will set up, shoot, edit and digitize a high-quality video project for computer-based multimedia.

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring, Odd Years

BCIS 1350 - Interactive Web Design
3 credits

Students will learn the fundamentals of bringing motion, sound, and interactivity to the Web by learning modern tools, languages, and standards. Skills will be applied to numerous projects and published on the web.

Prerequisite/Restriction: BCIS 1300 or experience in creating web pages

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Fall, Odd Years

BCIS 1400 - Word Processing I (WordPerfect)
2 credits

Designed to teach basic word processing techniques, using Corel WordPerfect software. Students will create, format, edit, and print documents. Concepts covered include such topics as basic editing functions, use of writing tools, usage of tabs, file management, and tables. This course is taught as a block course.

Prerequisite/Restriction: BCIS 1900 or equivalent

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: On Demand only

BCIS 1401 - Word Processing II (WordPerfect)
2 credits

Designed for students who have completed BCIS 1400. Concepts covered include such topics as columns, merging, sorting, macros and creating outlines. This course is taught as a block course.

Prerequisite/Restriction: BCIS 1400 or equivalent

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: On Demand only

BCIS 1405 - Word Processing
3 credits

This course is designed to teach word processing techniques using Microsoft Word. Students will learn document design and formatting skills as well as advanced word processing skills such as graphic formatting, mail merge, charts and diagrams, tables, and macros.

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Fall

BCIS 1406 - Word Processing II (Microsoft Word)
2 credits

Continuation of BCIS 1405. Concepts covered include such topics as creating charts, macros, styles, sorting, creating master documents, creating fill-in forms and mail merge.

Prerequisite/Restriction: BCIS 1405 or equivalent

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Fall

BCIS 1410 - Spreadsheet I (Excel)
2 credits

Introduction to spreadsheet operations. Several predefined spreadsheet functions will be introduced. Creating charts, graphs, and other graphic elements will be covered. Transfer students are required to earn a “B” or better to transfer this course.

Prerequisite/Restriction: Limited typewriting and math skills (MATH 0990)
Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Fall, Spring

BCIS 1411 - Spreadsheet II (Excel)
2 credits

Continuation of the BCIS 1410 class. Covers databases, database functions, tables, graphics, styles, macros, application development, and basic programming techniques.

Prerequisite/Restriction: BCIS 1410

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring

BCIS 1900 - Elementary Typewriting and Keyboarding
1 credit

Designed for students with little or no previous keyboarding experience. Emphasizes fundamental keyboarding skills as well as technique. Touch keyboarding covering the letter, figure and symbol keys.

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Fall

BCIS 1901 - Intermediate Keyboarding
2 credits

Designed for students who have had previous keyboarding and computer experience. Designed to significantly improve typing speed and accuracy. Covers how to produce several types of reports, memos, letters, outlines and tables required by specific business offices.

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring

BCIS 1905 - Speedwriting for Notetaking
4 credits

Teaches students how to increase their writing speed, using an alphabetic shorthand system and a variety of dictation and transcription exercises. Designed for secretarial majors and for students who want to improve their note taking abilities. Helps students increase their punctuation, spelling and word usage skills.

Prerequisite/Restriction: A word processing class (eg, BCIS 1400 or BCIS 1405 ) or prior experience with a word processing program

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring, Odd Years

BCIS 1910 - Speedwriting for Notetaking
4 credits

Prerequisite/Restriction: BCIS 1300 or instructor permission

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Fall, Spring

BCIS 2010 - Business Computer Applications
Computer and Information Literacy
3 credits

Designed for business majors and uses the Microsoft Office program. Covers basic word processing, data processing, spreadsheet, graphics, Internet, Windows, and E-mail skills in a business setting. Following the completion of the course, students will be able to use the Microsoft Office program for personal and business use. Transfer students are required to make a "B" or better to transfer this credit.

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring, Odd Years

BCIS 2110 - Linux and Web Server Administration
3 credits

This course introduces students to the knowledge and skills needed to manage all Linux distributions. Students will also be introduced to the HTTP protocol, Web servers, and clients generally, and the Apache Web server specifically.

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring, Odd Years

BCIS 2210 - Linux and Web Server Administration
3 credits

This course is a Web Page authoring course designed to give the student the knowledge to design advanced web pages. Graphics, content, layout, and aesthetics will be stressed. Extensive Java scripting, Active X, CSS, XML, and PHP will be used to enhance web page functionality and appearance. Web based forms, data collection and dynamic web pages will also be covered.

Prerequisite/Restriction: BCIS 1300 or instructor permission

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring, Odd Years

BCIS 2330 - Business Data Communications and Networking
3 credits
Places emphasis on business data communications in a LAN and WAN networking environment. Includes network protocols, cable technology, telecommunications standards, security issues, and general telecommunications management issues.

Prerequisite/Restriction: Computer literacy requirement

Campus: Regional Campuses and Distance Education

BCIS 2340 - Introduction to Multimedia Authoring
3 credits

Uses a popular authoring software package to create an interactive multimedia presentation. Gives students a good start in multimedia development. Introduces students to Macromedia's Authorware software program. Since the Authorware program is very complex, only the essential functions of the program will be used as a basis for this course. Students will have the opportunity to develop a basic self-directed design module that will include the major components of the software covered during class time. Utilizing Authorware, this course will provide the designer with the core foundations for the development of computer based instruction.

Prerequisite/Restriction: BCIS 1340

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 2345 - Multimedia Authoring
2 credits

Focuses on multimedia authoring using the capabilities of Macromedia Director. Covers authoring tools, scripting, Lingo, and other basics. Primary emphasis is hands-on experience with beginning levels of Director. Students work through textbook lessons and create their own multimedia projects.

Corequisite: BCIS 2346

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 2346 - Multimedia Authoring Lab
2 credits

Focuses on the production of interactive multimedia projects using the capabilities of Macromedia Director. A hands-on experience that includes design, audience analysis, project management and delivery. Students work in teams during the term on a single instructional project of their choice.

Corequisite: BCIS 2345

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 2420 - Database I (Access)
2 credits

Uses the current version of Microsoft Access for Windows. Introduces data processing techniques including creating, editing and querying a database. Students will also learn how to create custom forms and reports, and how to design custom advanced queries and use World Wide Web and Hyperlink Fields. Transfer students are required to earn a "B" or better to transfer this course.

Prerequisite/Restriction: BCIS 1010, BCIS 2010 or equivalent

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: Fall, Spring

BCIS 2421 - Database II (Access)
2 credits

Uses the current version of Microsoft Access and its Visual Basic Environment. Students will create customized menus and programs that could be used as stand-alone data processing applications. Designed for the serious data processing student or for the student who wants to learn Visual Basic Programming. Visual Basic topics covered are variables, modules, functions, subroutines, IF statements, FOR and WHILE loops, SELECT statements, class registry, and error handling.

Prerequisite/Restriction: Computer literacy requirement and BCIS 2420, or instructor permission

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 2422 - Oracle/InterDev
3 credits

Uses Oracle, from the world's leading database company, to develop database objects that are accessible through
the Internet as part of an E-commerce business. Students learn the basics of developing forms, reports, and integrated database applications. The SQL language will be introduced and used to create tables, insert data into tables, and display data from a search.

Prerequisite/Restriction: BCIS 2420 and some knowledge with programming languages

Campus: Regional Campuses and Distance Education

BCIS 2430 - Desktop Publishing
2 credits

Introduces students to the concepts of desktop publishing using Microsoft Publisher. Concepts covered include such topics as creating business cards, letterheads, flyers, brochures and booklets.

Prerequisite/Restriction: BCIS 1405

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring

BCIS 2441 - Graphics for the Web
3 credits

Designed to teach web site design techniques using Photoshop, Image Ready and other popular web graphic design software. Students will create graphics for web sites which includes icons, graphics, background images, bullets, buttons, fonts and banners.

Prerequisite/Restriction: BCIS 1300 is recommended

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Fall, Odd Years

BCIS 2500 - Web Business
3 credits

This course is an introduction to Web-based business. Students will discuss marketing concepts, design strategies, and technical issues as they relate to Web-based business. Students will have hands-on experience creating business Web pages including shopping carts and other interactive elements.

Prerequisite/Restriction: BCIS 1300 or previous HTML and web design experience
Designed to teach Windows® Network Administration in the areas of Domain Naming Service (DNS), Dynamic Host Control Protocol (DHCP), Remote Access, Network Protocols, Windows Internet Naming Service (WINS), Internet Protocol (IP) routing, Address Translation, and Troubleshooting. Intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification.

Prerequisite/Restriction: BCIS 2611

Campus: Regional Campuses and Distance Education

BCIS 2613 - Implementing Windows® Directory Services Infrastructure
3 credits

Designed to teach Windows® Directory Services Infrastructure. Includes the following areas: Active Directory, Active Directory DNS, Change and Configuration Management, and Active Directory Security. Intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification.

Prerequisite/Restriction: BCIS 2611

Campus: Regional Campuses and Distance Education

BCIS 2614 - Designing Windows® Directory Services Infrastructure
3 credits

Designed to teach the design of Windows® Directory Services Infrastructure. Includes doing extensive analysis of business and technical requirements to design appropriate Directory Service Architectures and Service Locations. Intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification.

Prerequisite/Restriction: BCIS 2611 and BCIS 2613

Campus: Regional Campuses and Distance Education

BCIS 2615 - Designing Security for a Windows® Network
3 credits

Designed to teach the designing of security for a Windows® Network. Includes doing extensive analysis of business, technical, and security requirements to design appropriate security for local and wide area networks that use Windows®. Intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification.

Prerequisite/Restriction: BCIS 2611 and BCIS 2613

Campus: Regional Campuses and Distance Education

Semester(s) Traditionally Offered: On Demand only

BCIS 2630 - Foundations of Novell Networking
3 credits

Covers how to accomplish fundamental network management tasks on a NetWare network. Intended for
students interested in gaining their Certified Novell Administrator (CNA) and Certified Novell Engineer (CNE) certifications. (Course 560)

Prerequisite/Restriction: Basic understanding of personal computers, operating systems and network technology and a working knowledge of the Windows operating system or Windows NT Workstation and experience with DOS suggested.

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 2631 - Introduction to Networking, Net+ 3 credits

This course provides students with an excellent foundation upon which to build their network training. It covers the basics of computer networking, including terms and concepts. Networking technology - how it works, and why it works - is made clear in this course, where concepts like contemporary network services, transmission media, and protocols are explained. Students learn how protocols are used in networking implementations from many vendors, especially those most common in today's LANs and WANs. This course is an introduction to computer networking technologies for students who are new to networking technologies. These students may or may not already be IT professionals, but are not yet networking professionals. This course will provide students with the concepts and skills needed to pass the Network+ certification exam produced by the Computing Technology Industry Association (Comp/TIA).

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: Spring, Even Years

BCIS 2632 - Computer Repair, A+ 3 credits

Designed to help a student prepare for the first of two CompTIA A+ Essentials Examinations. Emphasis will be placed on installing, building, upgrading, repairing, configuring, troubleshooting, optimizing, diagnosing, and performing preventive maintenance of basic personal computer hardware and operating systems. This course will provide opportunities to gain hands-on experience in the 8 domain areas tested by CompTIA.

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 2650 - Information Security Fundamentals 2 credits

Introduction to the various technical and administrative aspects of Information Security and Assurance. Provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. Purpose of this course is to provide the student with an overview of the field of Information Security and Assurance. Students will be exposed to the spectrum of Security activities, methods, methodologies, and procedures. Covers inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre-managerial responses and an overview of the Information Security Planning and Staffing functions.

Prerequisite/Restriction: Experience using personal computers, their operating systems, and network technology suggested.

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 2651 - Computer Security Fundamentals 3 credits

Takes an in depth look at operating system security concepts and techniques. Examines theoretical concepts that make the world of security unique. Adopts a practical hands-on approach when examining operating system security techniques. Along with examining different security strategies, this course will explore the advancement of security implementation, as well as timeless problem solving strategies.

Prerequisite/Restriction: Experience using personal computers, their operating systems, and network technology

Campus: Regional Campuses and Distance Education Semester(s) Traditionally Offered: On Demand only

BCIS 2652 - Advanced Network Security 3 credits
Takes an in depth look at network security concepts and techniques. Examines theoretical concepts that make the world of security unique. Adopts a practical, hands-on approach when examining networking security techniques. Along with examining different network strategies, this course will explore the advancement of network implementation as well as timeless problem solving strategies.

Prerequisite/Restriction: Experience using personal computers, their operating systems, and network technology suggested

Campus: Regional Campuses and Distance Education

BCIS 2653 - Network Intrusion Detection and Control
2 credits

Takes an in depth look at network defense concepts and techniques. Examines theoretical concepts that make the world of networking unique. Adopts a practical hands-on approach when examining network defense techniques. Along with examining different network defense strategies, this course will explore the advancement of network implementation, as well as timeless problem solving strategies.

Prerequisite/Restriction: Experience using personal computers, their operating systems, and network technology suggested

Campus: Regional Campuses and Distance Education

BCIS 2654 - Disaster Recovery
3 credits

Provides a thorough, step-by-step process for learning the fundamentals of disaster recovery planning. Disaster recovery planning is the process of assessing risks that an organization faces, developing, documenting, implementing, testing, and maintaining procedures that help the organization quickly return to normal operations and minimize losses after a disaster. Enables individuals to become disaster recovery planning team leaders and members.

Prerequisite/Restriction: Experience using personal computers, their operating systems, and network technology suggested

Campus: Regional Campuses and Distance Education

BCIS 2655 - Computer Forensics
2 credits

Presents methods to properly conduct a computer forensics investigation, beginning with a discussion of ethics.

Prerequisite/Restriction: Experience using personal computers, their operating systems, and network technology suggested

Campus: Regional Campuses and Distance Education

BCIS 2920 - Legal/Medical Practicum
2 credits

Designed for students who have had previous keyboarding and computer experience. Primarily designed for secretarial majors who want to become more familiar with the specialized forms and terminology used in medical and legal offices. Covers some of the advanced features of WordPerfect (e.g., mail merge and macros) to automate the completion of the forms.

Prerequisite/Restriction: BCIS 1901 or permission of the instructor, BCIS 1400 or BCIS 1405

Campus: Regional Campuses and Distance Education

Semester(s) Traditionally Offered: Spring

BCIS 2930 - Office Procedures and Human Relations (HR)
HR Human Relations
3 credits

Provides instruction and application of skills and knowledge needed in an office setting. Skills in human relations will be stressed through a series of group and individual activities.

Prerequisite/Restriction: BCIS 1405, BCIS 1406, BCIS 2420 or BCIS 1010 or BCIS 2010

Campus: Regional Campuses and Distance Education

Semester(s) Traditionally Offered: Spring

BCIS 2977 - Cooperative Education
1-3 credits
Provides supervised on-the-job training in BCIS areas. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objective, hours to be worked, and credit agreements.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: Regional Campuses and Distance Education

BCIS 2988 - Special Problems
1-3 credits

Individual work approved by the instructor. Time and credit to be arranged.

Repeatable for credit
Campus: Regional Campuses and Distance Education

BCIS 2999 - Workshop
1-3 credits

Designed to meet the changing needs of the student in Business Computer Information Systems.

Repeatable for credit
Campus: Regional Campuses and Distance Education

Business Education

BUSN 3150 - Methods for Business Education
3 credits

Introduction to basic practices of classroom teaching and program planning. Through participation in discussions, activities, and assignments, students refine their abilities to develop programs, diagnose the learner, prepare the instruction, and guide student learning.

Prerequisite/Restriction: BUSN 3710

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

BUSN 3300 - Clinical Experience I in Business Education
1 credit

In-school clinical observation experience. Students involved in observing management and assisting in teaching. Designed to provide familiarity with the business education classroom.

Prerequisite/Restriction: Admission into Teacher Education

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00
Effective Term
Fall 2016

BUSN 3710 - Orientation to Business Education
2 credits

This course includes a study of the requirements for teachers in Business Education at Utah State University, foundations of business and technology education, and an overview of the historical development of business education. Students will examine business education career opportunities and the changing technology industry.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

BUSN 4150 - Methods of Business and Marketing
3 credits

The primary purpose of this course is to teach preservice teachers the basic principles of planning, managing, teaching, and evaluating students in business courses such as: accounting, business communications, management, business entrepreneurship, business law, finance, marketing, and workplace skills.

Prerequisite/Restriction: BUSN 3710 and students should be admitted into the Secondary Teacher Education Program (STEP) prior to enrollment in this course

Effective Term
Fall 2016

BUSN 4210 - Cognition and Evaluation of Student Learning in Career and Technical Education
3 credits

Overview of the various methods used to measure and evaluate student achievement, within the cognitive, affective, and psychomotor domains with emphasis on performance based and authentic assessment specific to the Career and Technical Education classroom.
Prerequisite/Restriction: Admission to Secondary Teacher Education Program

Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2016

BUSN 4300 - Clinical Experience II Business Education
1 credit

Continued in-school observation of business education teaching. Requires student participation in teaching, management, and program development in business education.

Prerequisite/Restriction: Students should be admitted into the Secondary Teacher Education Program (STEP) prior to enrollment in this course

Pass/Fail only
Semester(s) Traditionally Offered: Fall
Course Fee: $50.00
Effective Term
Fall 2016

BUSN 5500 - Business Education Secondary Curriculum Seminar
2 credits

Cooperative examination of considerations and processes for teaching secondary students. Reflection on the practice of teaching. Preparation for entry into the teaching profession.

Pass/Fail only
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

BUSN 5630 - Business Education Student Teaching
10 credits

Students teach business and technology courses in secondary and middle school settings under the guidance of clinical and Utah State University supervisors.

Pass/Fail only
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

Business Health Information Systems (USU Eastern)

BHIS 1010 - Medical Coding Theory I
3 credits

Provides students with the building blocks of basic medical coding. Such understanding will facilitate the learning of medical coding principles encountered during more advanced career preparation. Covers medical coding compliance and documentation issues and provides a foundational understanding of the guidelines and procedures for ICD-9-CM, CPT and HCPCS coding. Quizzes and exams simulate national certification exams and are important in both learning how to code quickly and accurately and in preparing for national certification.

Prerequisite/Restriction: NURS 1008 and BIOL 1500 or instructor permission

Corequisite: BHIS 1015

Campus: USU Eastern only

BHIS 1015 - Medical Coding Applications I
1 credit

The applications experience allows the medical coding student the opportunity to integrate theoretical knowledge with practical medical coding situations and scenarios. The student is expected to demonstrate increased knowledge, develop high proficiency levels and apply medical coding skills. With the support of experienced, certified medical coders, the student will practice coding provider-based scenarios in the areas of specialty covered in Medical Coding Theory 1.

Prerequisite/Restriction: BIOL 1500 and NURS 1008 or instructor permission

Corequisite: BHIS 1010

Campus: USU Eastern only

BHIS 1020 - Medical Coding Theory II
3 credits

Continuation of Medical Coding Theory I. At the completion of the course, the student will be eligible to take the Certified Professional Coder (CPC) national certification exam from the American Academy of Professional Coders (AAPC).
Prerequisite/Restriction: BHIS 1010 and BHIS 1015

Corequisite: BHIS 1025

Campus: USU Eastern only

BHIS 1025 - Medical Coding Applications II
1 credit

The applications experience allows the medical coding student the opportunity to continue to grow by integrating theoretical knowledge with practical medical coding situations and scenarios. The student is expected to continue to demonstrate increased knowledge in medical coding and continue to develop higher proficiency levels. With the help of experienced, certified medical coders, the student will focus on skill refinement while working with large numbers of provider-based scenarios.

Prerequisite/Restriction: BHIS 1010 and BHIS 1015

Corequisite: BHIS 1020

Campus: USU Eastern only

BHIS 2010 - Advanced E/M Coding
3 credits

Offers the opportunity to achieve coding mastery and is the first part of the more advanced career preparation in medical coding. The course will emphasize Evaluation and Management (E/M) coding, which is so critical to much of the coding industry. In addition to instruction on appropriate documentation, the formatting of chart notes, and E/M coding guidelines and procedures, students will work repeatedly with actual medical charts, refining their skills and honing their knowledge in this area of specialty.

Prerequisite/Restriction: BHIS 1010 and BHIS 1015 and BHIS 1020 and BHIS 1025 or instructor permission

Corequisite: BHIS 2010

Campus: USU Eastern only

BHIS 2020 - Advanced Topics in Medical Coding
3 credits

Offers the opportunity to achieve added coding mastery. Will emphasize selected areas of specialty in medical coding (e.g. Diagnostic Radiology, Orthopedic Surgery, Hierarchical Condition Coding-HCC, Emergency Department, etc.) The specialty areas will be determined at the beginning of each course based upon market demand and industry need. Both theoretical and practical issues will be discussed. Students will work with authentic medical charts.

Prerequisite/Restriction: BHIS 1010 and BHIS 1015 and BHIS 1020 and BHIS 2010 and BHIS 2015 or instructor permission

Corequisite: BHIS 2025

Campus: USU Eastern only

BHIS 2025 - Virtual Medical Coding for Advanced Topics
1 credit

Virtual Medical Coding II transitions the medical coding student into a remote-site medical coding setting. It provides the opportunity to further refine knowledge and skills in those areas emphasized as part of Advanced Topics in Medical Coding. The student will code authentic medical charts while working with a seasoned, certified medical coder in a simulated, work-replicated virtual environment.

Prerequisite/Restriction: BHIS 1010 and BHIS 1015 and BHIS 1020 and BHIS 2010 and BHIS 2015
BHIS 2030 - Advanced ICD-9-CM Coding II
1 credit

Provides an in depth review of ICD-9-CM coding guidelines and procedures with an emphasis on the diseases and conditions covered in the reference manual. A deeper understanding of the anatomy and pathophysiology involved will enhance the proficiency in ICD-9-CM coding and the ability to differentiate diagnosis/condition codes and coding levels associated with specific diseases and various aspects of the disease process. The first half of ICD-9-CM for Physicians—Volumes 1 & 2 will be covered in the course.

Prerequisite/Restriction: BHIS 1010 and BHIS 1015 and BHIS 1020 and BHIS 1025 or instructor permission

Campus: USU Eastern only

BHIS 2035 - Advanced ICD-9-CM Coding II
1 credit

Continuation of Advanced ICD-9-CM Coding I. The second half of the reference manual ICD-9-CM for Physicians—Volumes 1 & 2 will be covered. Students will continue their review of ICD-9-CM coding guidelines and procedures and the anatomy and pathophysiology involved for the concluding chapters of the ICD-9-CM manual. Will refine coding skills as they learn to differentiate ICD-9-CM diagnosis and/or condition codes and coding levels.

Prerequisite/Restriction: BHIS 2030

Campus: USU Eastern only

BHIS 2040 - Medical Coding Health Care Specialties
1 credit

Provides an opportunity for students to achieve mastery in a medical coding area of specialty. Students may choose from a variety of specialty specific categories, such as Cardiology, Orthopedic Surgery, Family Practice, Hematology and Oncology, etc. Both theoretical and practical issues are presented and discussed. A review of ICD-9-CM coding guidelines and E/M coding procedures as they relate to the topic covered will be provided. Authentic medical charts will be coded and discussed. The course is designed to prepare students for national certification in the area of specialty studied.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Campus: USU Eastern only

BHIS 2988 - Special Problems
1-3 credits

Individual or group work project relevant to the medical coding knowledge base arranged between a medical coding faculty member and the student or group of students. The student(s) establishes learning objectives and goals, and a credit agreement with the faculty/coordinator at the beginning of the semester. The student then meets periodically with the faculty/coordinator to review progress.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Campus: USU Eastern only

BHIS 2999 - Workshop
1-3 credits

A course designed to meet the changing needs of the student and work professional in medical coding.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Campus: USU Eastern only

Caine College of the Arts

CCA 1150 - Arts Project
0.5 credits

Elective course available to all students who wish to extend the exploration of the fine and cultural arts beyond the classroom. Students attend a minimum number of cultural programs and submit written evaluation reports. Class includes lecture, lab and/or field trips.

Campus: USU Eastern only
CCA 1250 - Interdisciplinary Workshop
1-5 credits
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

CCA 2250 - Introductory Internship/Co-op
1-5 credits
Introductory-level educational work experience in an internship or cooperative education position approved by the college.
Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

CCA 3050 - The Arts in Cultural Context
3 credits
Interdisciplinary study of a work, figure, or theme in the arts. Topics vary.
Semester(s) Traditionally Offered: Fall, Spring

CCA 3060 - Quantitative Methods for the Arts (QI)
QI Quantitative Intensive
3 credits
From budgeting to sales analysis and from performance evaluation to the economic impact of cultural activities, students will grapple with the theoretical knowledge and practical skills required of successful arts practitioners and prepared arts advocates.
Prerequisite/Restriction: Completion of Gen Ed Quantitative Literacy requirement
Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring

CCA 3330 - Art Symposium (DHA)
DHA Depth Humanities and Creative Arts
2 credits
Students attend a number of cultural events offered at USU and in the community, as well as write critiques of the events. Note: CCA 3330 may be applied to the depth requirements, but not to the breadth requirements. Two credits of CCA 3330 are needed to fulfill the DHA requirement.
Prerequisite/Restriction: Approval from the Study Abroad Office
Semester(s) Traditionally Offered: Fall, Spring, Summer

CCA 4250 - Advanced Internship/Co-op
1-15 credits
Internship or cooperative education position of a more professional level, with increased complexity, approved by the college.
Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

CCA 4910 - Study Abroad
1-20 credits
A semester study abroad experience through a student exchange program.
Prerequisite/Restriction: Approval from the Study Abroad Office
Semester(s) Traditionally Offered: Fall, Spring, Summer

CCA 5250 - Interdisciplinary Workshop
1-5 credits
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

CCA 6250 - Graduate Internship/Co-op
1-15 credits
Internship or cooperative education position approved by the department and/or the college.
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

CCA 6910 - Study Abroad
1-12 credits
A semester study abroad experience through a student exchange program.
Prerequisite/Restriction: Approval from the Study Abroad Office

Semester(s) Traditionally Offered: Fall, Spring, Summer

Chemistry

CHEM 1010 - Introduction to Chemistry (BPS)
BPS Breadth Physical Sciences
3 credits

For nonscience majors. Includes basic chemical concepts and a survey of the various branches of chemistry. Heavy emphasis on everyday applications to problems involving environmental pollution, radioactivity, energy sources, and human health.

Semester(s) Traditionally Offered: Fall, Spring

CHEM 1015 - Introduction to Chemistry Laboratory
1 credit

Offered to students concurrently enrolled in CHEM 1010. Offers hands-on experience obtaining data in support of topics taught in CHEM 1010. Such concepts are laboratory safety, density, use of various laboratory equipment, mole reactions, titrations, acid and base measurements, ester formation, saponification reaction and gain a familiarity with the metric system. Students should gain an appreciation of the skills needed to get accurate data and learn chemical manipulations necessary for their chosen field. The lab is optional.

Corequisite: CHEM 1010

Campus: USU Eastern only

CHEM 1110 - General Chemistry I (BPS)
BPS Breadth Physical Sciences
4 credits

For non-science majors. This course is designed for students whose major does not require the more mathematically intensive CHEM 1210 or CHEM 1220 courses. First of a two-semester sequence. Progression is made from the basic tenets of general chemistry through an introduction to organic chemistry, with topics being presented in order of practical importance and sophistication.

Prerequisite/Restriction: MATH 1050 (prerequisite/corequisite), a C or better in MATH 1010, an Accuplacer score of 60 or better or Math ACT of 24 or equivalent SAT Math score, or satisfactory completion (C or better) of the MATH 0995

Semester(s) Traditionally Offered: Fall, Spring

Effective Term
Spring

CHEM 1115 - General Chemistry I Laboratory
1 credit

Experiments are chosen to illustrate and clarify concepts taught in the lecture portion of CHEM 1110. Hands-on experience with the techniques of chemistry such as using crucibles, vernier calipers, funnels, semipermeable membranes to study osmosis and diffusion, an indicator derived from red cabbage to study acid/base properties of solutions and so forth. Upon completion of the laboratory experience, students will have a better idea of laboratory manipulations needed to acquire the data they use in the nursing profession.

Corequisite: CHEM 1110

Campus: USU Eastern only

CHEM 1120 - General Chemistry II (BPS)
BPS Breadth Physical Sciences
4 credits

Continuation of CHEM 1110; the second half of a two-semester sequence. Additional coverage of organic chemistry is presented along with an introduction to biochemistry.

Prerequisite/Restriction: CHEM 1110

Semester(s) Traditionally Offered: Spring

CHEM 1125 - General Chemistry II Laboratory
1 credit

Laboratory course designed for non-science majors who are enrolled in CHEM 1120. Laboratory experiments involve basic aspects of general chemistry, organic chemistry and biochemistry.

Prerequisite/Restriction: CHEM 1110 and CHEM 1120 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $75.00
CHEM 1210 - Principles of Chemistry I
4 credits

First of a two-semester sequence, covering fundamentals of chemistry. Designed for science and engineering students.

Prerequisite/Restriction: Math ACT score of at least 25 or equivalent SAT Math score, AP Calculus AB score of 3 or higher, MATH 1050 or higher, or corequisite of MATH 1050; high school chemistry recommended

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00

CHEM 1215 - Chemical Principles Laboratory I
1 credit

Laboratory course designed to be taken concurrently with CHEM 1210. The laboratory class offers hands-on experience related to the topics taught in the lecture sequence.

Prerequisite/Restriction: CHEM 1210 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00

CHEM 1220 - Principles of Chemistry II (BPS)
BPS Breadth Physical Sciences
4 credits

Continuation of CHEM 1210; the second half of a two-semester sequence, covering the fundamentals of chemistry. Designed for science and engineering students.

Prerequisite/Restriction: CHEM 1210

Semester(s) Traditionally Offered: Fall, Spring, Summer

CHEM 1225 - Chemical Principles Laboratory II
1 credit

Continuation of CHEM 1215. Normally taken concurrently with CHEM 1220. The laboratory class offers hands-on experience related to topics taught in the lecture sequence.

Prerequisite/Restriction: CHEM 1215

CHEM 1990 - Introduction to the Chemistry and Biochemistry Professions
1 credit

Seminar-format course designed to expose students to exciting areas of chemistry and biochemistry. Includes seminars on topical issues presented by faculty and invited guests. Discussion of career options.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring

CHEM 2300 - Principles of Organic Chemistry
3 credits

Shape, bonding, nomenclature, stereochemistry, physical properties, and reactivity of organic molecules is covered for a range of molecules, beginning with simple alkanes and finishing with some of the more complex abiotic and biotic organic molecules known today.

Prerequisite/Restriction: CHEM 1210

Semester(s) Traditionally Offered: Fall

CHEM 2310 - Organic Chemistry I
4 credits

First of a two semester sequence covering the physical properties, nomenclature, stereochemistry, mechanisms, chemical reactivity, and spectroscopy of organic compounds, including the biological roles and importance of organic compounds. The CHEM 2310/ CHEM 2320 sequence constitutes a more in-depth examination of the topics covered in CHEM 2300. Students should consult with their advisor to determine which Organic Chemistry course is required for their major.

Prerequisite/Restriction: CHEM 1220

Semester(s) Traditionally Offered: Fall

CHEM 2315 - Organic Chemistry Laboratory I
1 credit

Laboratory course designed to accompany CHEM 2310. The laboratory class offers hands-on experience related
to the topics taught in the lecture sequence.

Prerequisite/Restriction: CHEM 1210 and CHEM 1215

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

CHEM 2320 - Organic Chemistry II
4 credits

Continuation of CHEM 2310. The second half of a two semester sequence covering the physical properties, nomenclature, stereochemistry, mechanisms, chemical reactivity, and spectroscopy of organic compounds, including the biological roles and importance of organic compounds. Upon completion, students will be prepared to understand the chemical aspects of biochemistry as they relate to how organic biomolecules react and interact in biological systems.

Prerequisite/Restriction: CHEM 2310 or CHEM 2300 and instructor permission

Semester(s) Traditionally Offered: Spring

CHEM 2325 - Organic Chemistry Laboratory II
1 credit

Continuation of CHEM 2315. Normally taken concurrently with CHEM 2320. The laboratory class offers hands-on experience related to topics taught in the lecture sequence.

Prerequisite/Restriction: CHEM 2315

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

CHEM 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in chemistry lab assistant and similar positions. Students meet with the instructor / coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, credit agreements.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

CHEM 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

CHEM 3000 - Quantitative Analysis (QI)
QI Quantitative Intensive
3 credits

Basic theory and laboratory practice in analytical chemistry, including introduction to multiple equilibria and chemical separation methods.

Prerequisite/Restriction: CHEM 1215, CHEM 1225, MATH 1050 or higher or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall

CHEM 3005 - Quantitative Analysis Laboratory
1 credit

One three-hour laboratory per week. Must be taken concurrently with CHEM 3000.

Prerequisite/Restriction: CHEM 1215, CHEM 1225, MATH 1050 or higher or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

CHEM 3060 - Physical Chemistry (QI)
QI Quantitative Intensive
3 credits


Prerequisite/Restriction: CHEM 1220, MATH 2210, PHYS 2220

Semester(s) Traditionally Offered: Fall

CHEM 3070 - Physical Chemistry (QI)
QI Quantitative Intensive

Prerequisite/Restriction: CHEM 3060

Semester(s) Traditionally Offered: Spring

CHEM 3080 - Physical Chemistry Laboratory I (CI)
CI Communications Intensive
1 credit

Experimental work to accompany CHEM 3060.

Prerequisite/Restriction: CHEM 3060

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

CHEM 3090 - Physical Chemistry Laboratory II (CI)
CI Communications Intensive
1 credit

Continuation of CHEM 3080. Experimental work to accompany CHEM 3070.

Corequisite: CHEM 3070.

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

CHEM 3510 - Intermediate Inorganic Chemistry
2 credits

Survey of basic structure, bonding, and reactivity across the periodic table.

Prerequisite/Restriction: CHEM 1220, CHEM 2310, and CHEM 2315

Semester(s) Traditionally Offered: Spring

CHEM 3520 - Inorganic Chemistry Laboratory
1 credit

Covers basic aspects of inorganic synthesis and compound characterization.

Corequisite: CHEM 3510.

CHEM 3550 - Environmental Chemistry (DSC)
DSC Depth Life and Physical Sciences
3 credits

Survey of issues and chemical nature of environmental problems, including air, soil, and water pollution.

Prerequisite/Restriction: CHEM 1010 or CHEM 1120 or CHEM 1220

Semester(s) Traditionally Offered: Spring

CHEM 3700 - Introductory Biochemistry
3 credits

Brief survey of the chemistry of biologically important compounds and their role in microbial, animal, and plant metabolism.

Prerequisite/Restriction: CHEM 2300 or CHEM 2310

Semester(s) Traditionally Offered: Spring

CHEM 3710 - Introductory Biochemistry Laboratory
1 credit

Laboratory course designed to accompany CHEM 3700.

Corequisite: CHEM 3700.

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

CHEM 3750 - Chemistry Special Topics
1-3 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

CHEM 4250 - Cooperative Experience
1-2 credits

Planned work outside the University. Specific experience must receive prior approval for credit to be earned. Consult advisor or department head for details.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
CHEM 4800 - Research Problems (CI)
CI Communications Intensive
1-3 credits

Directed undergraduate research.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
 Semester(s) Traditionally Offered: Fall, Spring, Summer

CHEM 4890 - Undergraduate Biochemistry Seminar (CI)
CI Communications Intensive
2 credits

Presentation of scientific seminars, critiquing of and participation in departmental seminars, scientific literature searching, accessing and using scientific databases, career preparation and development. To be taken during senior year of biochemistry major.

Semester(s) Traditionally Offered: Fall, Spring

CHEM 4990 - Undergraduate Seminar (CI)
CI Communications Intensive
2 credits

Writing and speaking skills necessary for presenting scientific information.

Repeatable for credit.
 Semester(s) Traditionally Offered: Fall, Spring

CHEM 5070 - Biophysical Chemistry
3 credits

Biological applications and theories of physical chemistry. Equilibrium, thermodynamics, chemical kinetics, transport properties, and spectroscopy.

Prerequisite/Restriction: CHEM 1220, MATH 1220, CHEM 5700, and either PHYS 2120 or PHYS 2220

Semester(s) Traditionally Offered: Fall

CHEM 5100 - Computational Chemistry
3 credits

Provides students with an understanding of modern computational chemical methods. Students will learn how to incorporate these methods into their own research projects, and to assess the validity of such data that appears in the scientific literature.

Prerequisite/Restriction: CHEM 3070 or instructor permission

Semester(s) Traditionally Offered: Fall, Taught Alternate Odd Years

CHEM 5520 - Advanced Inorganic Chemistry
2 credits

Advanced treatment of the structure/bonding/reactivity relationships across the periodic table.

Prerequisite/Restriction: CHEM 3070 and CHEM 3510

Semester(s) Traditionally Offered: Fall

CHEM 5530 - Advanced Synthesis Laboratory
2 credits

Laboratory course in advanced synthetic techniques, including vacuum lines, inert atmosphere, Schlenk manipulations, liquid ammonia solvent, and tube furnace reactions.

Prerequisite/Restriction: CHEM 2325, CHEM 3070, CHEM 3520

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

CHEM 5640 - Instrumental Analysis
3 credits


Prerequisite/Restriction: CHEM 3005, CHEM 3080

Semester(s) Traditionally Offered: Spring

CHEM 5650 - Instrumental Analysis Laboratory
2 credits

Laboratory course to accompany CHEM 5640. Two three-hour labs per week.

Prerequisite/Restriction: CHEM 3005, CHEM 3080
CHEM 5670 - Intermediate Environmental Chemistry
3 credits
Survey of chemical processes and pollutants in the environment. Sampling and analysis of pollutants to determine chemical fate.
Prerequisite/Restriction: CHEM 3000 and CHEM 3005; CHEM 3070 recommended

CHEM 5680 - Environmental Chemistry Laboratory
2 credits
Laboratory course to accompany CHEM 5670. Field sampling and laboratory analysis of air, water, and soil samples. Method building and hypothesis testing.
Prerequisite/Restriction: CHEM 3000, CHEM 3005
Corequisite: CHEM 5670.

CHEM 5700 - General Biochemistry I
3 credits
General biochemistry for science majors, including proteins, enzymes, catalysis, bioenergetics, and catabolic metabolism.
Prerequisite/Restriction: CHEM 2320

CHEM 5710 - General Biochemistry II
3 credits
Continuation of CHEM 5700. General biochemistry for science majors, including anabolic metabolism, DNA, RNA, and protein synthesis.
Prerequisite/Restriction: CHEM 5700

CHEM 5720 - Introductory Biochemistry Laboratory (CI)
CI Communications Intensive
3 credits
This course is designed to provide hands-on experience with techniques and concepts and approaches common to biochemistry research. This will be accomplished through a lecture and laboratory experience that will involve directed reading, design and performance of experiments, data analysis, and completion of laboratory reports.
Prerequisite/Restriction: ENGL 2010 and CHEM 5710 (may be taken concurrently)

CHEM 5790 - Protein Structure/Function and Purification
3 credits
Protein biosynthesis, modification, folding, structure, and stability, protein purification and protein analysis will be discussed. Students will develop an original research proposal through oral and written presentations. For graduate (6000-level) credit, additional reading and writing assignments are required.
Prerequisite/Restriction: Microbiology or Biochemistry or equivalent
Cross-listed as: CHEM 6790, BENG 5790/BENG 6790, BIOL 5790/BIOL 6790

CHEM 6010 - Quantum Chemistry
3 credits
Quantum mechanics applied to chemical problems. Theory of atoms and molecules.
Prerequisite/Restriction: CHEM 3070, MATH 2250

CHEM 6020 - Molecular Spectroscopy
3 credits
Continuation of CHEM 5700. General biochemistry for science majors, including anabolic metabolism, DNA, RNA, and protein synthesis.
Prerequisite/Restriction: CHEM 3070
Spectroscopy of atoms and molecules.

Prerequisite/Restriction: CHEM 6010

Semester(s) Traditionally Offered: Spring

CHEM 6250 - Curricular Practical Training
1-6 credits

Work experience tied to academics, in the graduate student's major field of study, either chemistry or biochemistry, for which the student is paid.

Prerequisite/Restriction: Permission of department head prior to enrollment

Repeatable for credit
Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring, Summer

CHEM 6300 - Advanced Modern Organic Chemistry
3 credits

Covers topics in molecular structure, reaction mechanisms of organic molecules, and physical organic chemistry.

Prerequisite/Restriction: CHEM 2320, CHEM 3070

Semester(s) Traditionally Offered: Every Third Semester

CHEM 6500 - Reactivity and Mechanisms in Inorganic Chemistry
3 credits

Inorganic reactions and mechanisms relevant to areas of main group, transition metals, and bioinorganic and organometallic chemistry.

Prerequisite/Restriction: CHEM 5520

Semester(s) Traditionally Offered: Spring

CHEM 6510 - Chemical Applications of Group Theory
1 credit

Introduction to symmetry point groups and theorems of group theory for application to structure, bonding, and spectroscopy. Some familiarity with linear algebra is recommended.

Prerequisite/Restriction: CHEM 3070

CHEM 6600 - Modern Chemical Analysis
3 credits

Methodology and statistical treatment of chemical data, experimental design, quality control, and chemical separations.

Prerequisite/Restriction: CHEM 5640, graduate standing, or instructor permission

Semester(s) Traditionally Offered: Spring

Page: 1 <- Back 10 ... 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 ... Forward 10 -> 64

Chemistry

CHEM 6700 - Advanced Biochemistry I
1-3 credits

Advanced-level biochemistry course intended for biochemistry MS and PhD students. Covers proteins, enzyme mechanism, nucleic acid structure and function, and catabolic metabolism at a level appropriate for students preparing for the qualifying examination. This course (which is co-instructed with CHEM 5700, with additional projects for CHEM 6700) cannot be taken for credit by students who have previously taken CHEM 5700 for credit.

Semester(s) Traditionally Offered: Fall

CHEM 6710 - Advanced Biochemistry II
3 credits

Advanced-level biochemistry course intended for biochemistry MS and PhD students. Covers anabolic metabolism and bioinformation processes at a level appropriate for students preparing for the qualifying examination. This course (which is co-instructed with CHEM 5710, with additional projects for CHEM 6710) cannot be taken for credit by students who have previously taken CHEM 5710 for credit.

Semester(s) Traditionally Offered: Spring

CHEM 6720 - Principles of Enzymology I
1 credits
Enzyme kinetics, principles of enzymatic rate acceleration, methods to study enzymatic mechanisms and identify reaction intermediates. Prerequisite: CHEM 5700 or permission of instructor.

Prerequisite/Restriction: CHEM 5700 or instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

CHEM 6730 - Principles of Enzymology II
2 credits

Enzymatic mechanisms and strategies for carbon-carbon and carbon-hydrogen bond cleaving and forming reactions, phosphoryl group transfer, stereochemical analysis and outcomes of enzymatic reactions, mechanistic roles of organic and metallic coenzymes.

Prerequisite/Restriction: CHEM 6720 or Corequisite

Semester(s) Traditionally Offered: Spring, Taught Alternate Years, Odd Years

CHEM 6740 - Cellular Communication by Small Molecules and Proteins
1-3 credits

Using post-translational modifications, small molecules, and protein motifs in cellular communication. Variances in the communication systems related to disease state and/or cell stress and therapeutic strategies to manipulate the communication systems.

Prerequisite/Restriction: CHEM 5700 or CHEM 6700 or instructor permission

Cross-listed as: BIOL 6740.

Semester(s) Traditionally Offered: Spring

CHEM 6750 - Principles of Structural Biology
1 credit

General principles of protein and nucleic acid structure. Approaches to understanding biological function through structural analysis.

Prerequisite/Restriction: CHEM 5700 or instructor permission

Semester(s) Traditionally Offered: Fall

Effective Term

Fall 2016

CHEM 6760 - Principles of Bioenergetics
1-3 credits

Global biological energy cycles including carbon, nitrogen, and sulfur cycles; respiration; electron transfer; and energy transduction.

Prerequisite/Restriction: CHEM 5700 or CHEM 6700 or instructor permission

Semester(s) Traditionally Offered: Spring

CHEM 6770 - Biochemical Methods
2 credits

Chemistry 6770 is a graduate-level course covering the theory and application of biochemical and biophysical methods.

Prerequisite/Restriction: CHEM 5700 or CHEM 6700 or instructor permission

Semester(s) Traditionally Offered: Fall

Effective Term

Fall 2016

CHEM 6790 - Protein Structure/Function and Purification
3 credits

Protein biosynthesis, modification, folding, structure, and stability, protein purification and protein analysis will be discussed. Students will develop an original research proposal through oral and written presentations. For graduate (6000-level) credit, additional reading and writing assignments are required.

Prerequisite/Restriction: Microbiology or Biochemistry or equivalent

Cross-listed as: CHEM 5790, BENG 5790/BENG 6790, BIOL 5790/BENG 6790

Semester(s) Traditionally Offered: Spring, Odd Years

CHEM 6910 - Special Problems in Chemistry and Biochemistry
1-4 credits

Selected problems in chemistry and biochemistry.

Prerequisite/Restriction: Written permission from department head

Semester(s) Traditionally Offered: Fall, Spring, Summer

CHEM 6970 - Thesis Research
1-10 credits

Research for MS degree.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CHEM 6990 - Continuing Graduate Advisement
1-9 credits

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CHEM 7020 - Statistical Mechanics
3 credits

Statistical mechanics with applications to research problems of current interest.

Prerequisite/Restriction: CHEM 6010

CHEM 7030 - Special Topics in Physical Chemistry (Topic)
3 credits

Covers special areas of current interest and activity in physical chemistry.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

CHEM 7030 - Reactions and Synthesis in Modern Organic Chemistry
3 credits

Reactions of modern organic chemistry and their application to organic synthesis.

Prerequisite/Restriction: CHEM 6300

Semester(s) Traditionally Offered: Every Third Semester

CHEM 7300 - Reactions and Synthesis in Modern Organic Chemistry
3 credits

Modern methods of predicting and determining molecular structure of organic compounds using advanced computational and spectroscopic tools.

Prerequisite/Restriction: CHEM 6300

Semester(s) Traditionally Offered: Every Third Semester

CHEM 7310 - Molecular Structure/Spectroscopy of Organic Compounds
3 credits

Modern methods of predicting and determining molecular structure of organic compounds using advanced computational and spectroscopic tools.

Prerequisite/Restriction: CHEM 6300

Semester(s) Traditionally Offered: Every Third Semester

CHEM 7330 - Special Topics in Organic Chemistry (Topic)
3 credits

Covers special areas of current interest and activity in organic chemistry.

Prerequisite/Restriction: CHEM 6300

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

CHEM 7500 - Coordination Chemistry
3 credits

Theory and spectroscopy of transition metal coordination complexes.

Prerequisite/Restriction: CHEM 3070, CHEM 6500, CHEM 6510

Semester(s) Traditionally Offered: Spring

CHEM 7510 - Bioinorganic Chemistry
1-3 credits

Advanced systematic study of metallobiochemical structure and function.

Prerequisite/Restriction: CHEM 6500

Semester(s) Traditionally Offered: Fall

CHEM 7530 - Special Topics in Inorganic Chemistry (Topic)
3 credits

Topics of current interest in inorganic chemistry.

Prerequisite/Restriction: CHEM 6500

Semester(s) Traditionally Offered: Every Third Semester
CHEM 7600 - Analytical Spectroscopy
3 credits

Practical description of spectroscopy-based analysis, emphasizing instrumentation and methods.

Prerequisite/Restriction: CHEM 5640, graduate standing, or instructor permission

Semester(s) Traditionally Offered: Spring

CHEM 7610 - Chemical Separations
3 credits

Survey of theory and practice of modern chemical separations, including extractions, chromatography, distillation, and phase separations.

Prerequisite/Restriction: CHEM 5640, graduate standing, or instructor permission

Semester(s) Traditionally Offered: Fall

CHEM 7620 - Electrochemistry
3 credits

Survey of electrochemistry with emphasis on electrochemical analysis.

Prerequisite/Restriction: CHEM 5640, graduate standing, or instructor permission

Semester(s) Traditionally Offered: Fall

CHEM 7640 - Special Topics in Analytical Chemistry (Topic)
1-3 credits

Topics may include electronics from the scientist's perspective, laser-based spectroscopy, mass spectrometry, and chemometrics.

Prerequisite/Restriction: CHEM 5640, graduate standing, or instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

CHEM 7770 - Special Topics in Biochemistry (Topic)
1-3 credits

Topics of current interest in biochemistry.

Repeatable for credit.

CHEM 7800 - Seminar
1 credit

Graduate seminar.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

CHEM 7970 - PhD Dissertation Research
1-12 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CHEM 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Chinese

CHIN 1010 - Chinese First Year I
5 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing with exposure to cultures and customs. This course is only for students with no previous background in the Chinese language.

Semester(s) Traditionally Offered: Fall

Course Fee: $24.00

CHIN 1020 - Chinese First Year II
5 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing with exposure to cultures and customs. Native speaker instructor.

Prerequisite/Restriction: CHIN 1010 or equivalent
CHIN 1080 - Intensive Chinese Reading and Writing
3 credits

This course is designed to fine tune and strengthen reading and writing skills for students studying Chinese. Students at varying levels of experience can benefit from this intensive review.

Prerequisite/Restriction: CHIN 1010

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring 2015

CHIN 1800 - Chinese I Study Abroad
1-5 credits

Intensive study in a Chinese-speaking country, advancing proficiency in the four language skills and multicultural knowledge at the beginning level.

Repeatable for credit.
Semester(s) Traditionally Offered: Summer

CHIN 2010 - Chinese Second Year I
5 credits

Second-year overview of speaking, listening, reading, and writing with exposure to cultures and customs. Native speaker instructor.

Prerequisite/Restriction: CHIN 1020 or equivalent

Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

CHIN 2020 - Chinese Second Year II
5 credits

Second-year overview of speaking, listening, reading, and writing with exposure to cultures and customs. Native speaker instructor.

Prerequisite/Restriction: CHIN 2010 or equivalent

Semester(s) Traditionally Offered: Spring
Course Fee: $24.00

CHIN 2800 - Chinese II Study Abroad
1-5 credits

Intensive study in a Chinese-speaking country, advancing proficiency in the four language skills and multicultural knowledge at the second-year level.

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

CHIN 3010 - Chinese Third Year I
4 credits

First segment of the third-year overview of speaking, listening, reading, and writing, with additional exposure to cultures and customs. Readings include excerpts from televised drama.

Prerequisite/Restriction: CHIN 2020 or equivalent

Semester(s) Traditionally Offered: Summer

CHIN 3020 - Chinese Third Year II
4 credits

Second segment of the third-year overview of speaking, listening, reading, and writing, with additional exposure to cultures and customs. Readings include short essays, Chinese proverbs and folktale, and other literary selections.

Prerequisite/Restriction: CHIN 3010 or equivalent

Semester(s) Traditionally Offered: Spring
Course Fee: $24.00

CHIN 3050 - Chinese Conversation
3 credits

Development of advanced verbal communication skills. Designed to increase vocabulary and to teach students how to express and justify facts, opinions and emotions in Chinese. Designed for non-native speaking students.

Prerequisite/Restriction: CHIN 2020 or instructor permission

Semester(s) Traditionally Offered: Odd Years

CHIN 3080 - Chinese Outreach Practicum
1-3 credits
This course provides students of Chinese at the intermediate and advanced levels with the opportunity to apply Chinese language skills in a Chinese community setting. Students will perform service that requires their language skills.

Prerequisite/Restriction: Instructor permission

Repeatable for credit up to a maximum of 3 credits

CHIN 3090 - Introduction to Modern Chinese Literature and Film
3 credits

Students will read selected texts by famous modern and contemporary Chinese authors, including short stories, poems, plays and selections from novels. The primary texts are Chinese, accompanied by films adapted from these texts or reflecting related themes.

Semester(s) Traditionally Offered: Spring

CHIN 3100 - Readings in Contemporary Chinese Culture (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Introduction to contemporary Chinese culture through readings from newspapers and other source materials.

Prerequisite/Restriction: CHIN 3010 or instructor permission

Semester(s) Traditionally Offered: Fall

CHIN 3510 - Chinese Business Language
3 credits

Designed to develop students’ business Chinese language skills in speaking, listening, reading, and writing, as well as cultural competence. Classwork focuses on Chinese business terms, business conversation, and basic business practices, as well as the Chinese cultural environment.

Prerequisite/Restriction: CHIN 2020 or equivalent

Semester(s) Traditionally Offered: Fall

CHIN 3540 - Translating Into and From Chinese (CI)
Communications Intensive

This course introduces students to translation concepts and strategies. Students will be exposed to different translation tools and will become acquainted with the cultural knowledge and ethical principles relevant to both oral and written translation.

Prerequisite/Restriction: CHIN 3010 or instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Spring

Effective Term
Spring 2016

CHIN 3800 - Chinese III Study Abroad
1-4 credits

Intensive study in a Chinese-speaking country, advancing proficiency in the four language skills and multicultural knowledge at the third-year level.

Repeatable for credit

Semester(s) Traditionally Offered: Summer

CHIN 3880 - Individual Readings in Chinese
1-4 credits

Individual study of selected readings in Chinese. Designed to broaden student’s reading comprehension beyond the level addressed in CHIN 3020.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

CHIN 4100 - Teaching Chinese as a Foreign Language
3 credits

Methods course for prospective Chinese language teachers. Explores effective teaching techniques for the language classroom, focusing on meaningful individual and group projects.

Prerequisite/Restriction: CHIN 3010 or equivalent or instructor permission

Semester(s) Traditionally Offered: Spring

CHIN 4800 - Chinese IV Study Abroad
1-4 credits
Intensive study in a Chinese-speaking country, advancing proficiency in the four language skills and multicultural knowledge at the fourth-year level.

Repeatable for credit.
Semester(s) Traditionally Offered: Summer

CHIN 4920 - Chinese Language Tutoring
1 credit

Allows students to develop tutoring skills by assisting professors in lower-division courses or fulfilling instructional duties for a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated to a maximum of 3 credits.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

Civil and Environmental Engineering

CEE 1880 - Civil and Environmental Engineering Orientation and Computer Applications
1 credit

Orients students to programs of the Department of Civil and Environmental Engineering, professional and academic advising, student services, professional societies, and engineering careers. Laboratory activities emphasize problem solving using computer applications, such as spreadsheets and the HP48 Scientific Calculator.

Semester(s) Traditionally Offered: Fall, Spring

CEE 2240 - Engineering Surveying
3 credits

Experience with a wide variety of common surveying equipment, including use and operation of levels, theodolites, total station equipment, and GPS. Prior to graduation, computer applications and field exercises prepare students for civil engineering employment early in their careers.

Prerequisite/Restriction: ACT Math score of 27 or higher or equivalent SAT Math score or AP Calculus AB score of 3 or higher or credit for MATH 1050 and MATH 1060
Enrollment is limited to students having majors within the College of Engineering

Semester(s) Traditionally Offered: Fall, Summer
Course Fee: $80.00

CEE 2620 - Environmental Engineering Microbiology
2 credits

Foundations of environmental microbiology with emphasis on environmental engineering applications. Topics include: metabolism, classification, methods for growing and enumerating microorganisms, biogeochemical cycling of nutrients, pathogens in environmental media, indicator organisms, treatment of water and wastewater, and applications of microbial ecology to treating hazardous pollutants.

Prerequisite/Restriction: BIOL 1010 and CHEM 1220

Semester(s) Traditionally Offered: Spring
Course Fee: $30.00
Effective Term
Spring

CEE 2870 - Introduction to Computer Programming for Civil and Environmental Engineers
2 credits

An introductory class for teaching the principles of computer programming to civil and environmental engineering students at the undergraduate level. The programming language will be Visual Basic for Applications (VBA) with Microsoft’s Excel spreadsheet.

Prerequisite/Restriction: MATH 1050 or MATH 1060 or MATH 1210 or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00

CEE 2890 - Environmental Engineering Sophomore Seminar
1 credit

Introduces students to the field of environmental engineering, emphasizing design, ethics, and leadership in the environmental engineering profession. Emphasizes creative thinking, organizational skills, teamwork, professional ethics, and social responsibility.

Prerequisite/Restriction: Sophomore standing in environmental engineering
Semester(s) Traditionally Offered: Spring

CEE 3020 - Structural Analysis
3 credits

Classification of structural types and development of loads. Analysis of trusses, beams, frames, cables, and arches (determinate and indeterminate). Calculation of deflections using superposition, geometric and energy methods. Utilization of approximate methods to analyze large structures.

Prerequisite/Restriction: ENGR 2140 and student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

CEE 3080 - Design of Reinforced Concrete Structures
3 credits

Design of reinforced concrete structural elements, simple and continuous reinforced beams, columns, joints, and one-way slabs. Includes concrete materials laboratory.

Prerequisite/Restriction: CEE 3020 (may be taken concurrently) and student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

CEE 3160 - Civil Engineering Materials
3 credits

This course introduces the concepts, techniques, and devices used to measure engineering properties of various civil engineering materials. There is an emphasis on load-deformation characteristics and failure modes of both natural and fabricated materials. The required weekly laboratory includes experiments focusing on data collection, data analysis, interpretation and presentation of results.

Prerequisite/Restriction: ENGR 2140 (can also be corequisite) and admission to the professional program

Semester(s) Traditionally Offered: Fall

CEE 3210 - Introduction to Transportation Engineering
3 credits

Introduction to basic concepts of roadway geometric design, and intersection and highway capacity analysis. Other topics include: traffic flow characteristics, traffic studies, signal design, and transportation project evaluation.

Prerequisite/Restriction: Student must be in the Professional Engineering Program.

Semester(s) Traditionally Offered: Spring

CEE 3430 - Engineering Hydrology
3 credits

Provides a basic understanding of engineering hydrology through the hydrologic cycle, watershed characteristics, atmospheric water, rainfall-runoff processes, infiltration and evaporation, stream flow analysis, groundwater flow, and related designs.

Prerequisite/Restriction: CEE 3500 and student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

CEE 3500 - Civil and Environmental Engineering Fluid Mechanics
3 credits

Explores fluid properties, hydrostatics, fluid dynamics similitude, energy and momentum principles, closed conduit flow, open channel flow, and flow measurement.

Prerequisite/Restriction: MATH 1220; MATH 2210 or MATH 2250; ENGR 2010, ENGR 2030 and student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall, Spring

CEE 3510 - Civil and Environmental Engineering Hydraulics
3 credits

Steady flow in open channel and closed circuits, nonuniform flow in open channels, combined energy losses in pipelines, and distribution in pipe networks. Includes laboratory and computer exercises in data collection, pipe networks, and unsteady and nonuniform flow.

Prerequisite/Restriction: CEE 3500 and student must be in the Professional Engineering Program
Semester(s) Traditionally Offered: Fall, Spring

CEE 3610 - Environmental Management
3 credits

Introduction to environmental health, emphasizing relationships among environmental quality, public health, environmental and occupational health regulations, human health risk assessment, institutions, and engineered systems in environmental health management.

Prerequisite/Restriction: CHEM 1210; Breadth Life Science class; MATH 1210 and student must be in the Professional Engineering Program

Cross-listed as: PUBH 3610

Semester(s) Traditionally Offered: Fall

CEE 3640 - Drinking Water Engineering
3 credits

Engineering analysis and design of processes for treatment of drinking water. Major topics include regulations; water quality evaluation; physical, chemical, and biological treatment systems; design of facilities for production and conveyance of drinking water; and management of residuals from water treatment facilities.

Prerequisite/Restriction: CEE 3610 /PUBH 3610 and student must be in the Professional Engineering Program or have instructor consent

Semester(s) Traditionally Offered: Spring

Effective Term

Spring

CEE 3650 - Wastewater Engineering
3 credits

Engineering analysis and process design for municipal and industrial wastewater. Major topics include water quality evaluation; physical, chemical, and biological treatment; design and analysis of wastewater collection systems; design of municipal and industrial wastewater reclamation facilities; and management of wastewater treatment residuals.

Prerequisite/Restriction: CEE 3610/PUBH 3610 and student must be in the Professional Engineering Program (or with instructor consent)

Semester(s) Traditionally Offered: Spring

Effective Term

Spring

CEE 3670 - Transport Phenomena in Bio-Environmental Systems
3 credits

Core course in both biological and environmental engineering. Students develop a detailed understanding of the principles, concepts, modes, and methods of calculating heat and mass transfer. Emphasis given to contaminant and nutrient flux, along with their state transformations, in order for the biological or environmental engineer to evaluate options for production, clean-up, and control of bio-environmental systems.

Prerequisite/Restriction: Minimum grade of C- in BENG 2400 or MAE 2300 and CEE 3500 or MAE 3420 and student must be in the Professional Engineering Program

Cross-listed as: BENG 3670

Semester(s) Traditionally Offered: Spring

CEE 3780 - Solid and Hazardous Waste Management
3 credits

Introduction to integrated management of municipal and industrial solid waste; household, commercial, and industrial hazardous waste; and resource recovery, recycling, and sustainability principles. Three lectures augmented by computer modeling and field trip experiences related to modern solid and hazardous waste management principles.

Prerequisite/Restriction: Student must be in the Professional Engineering Program.

Semester(s) Traditionally Offered: Fall

CEE 3880 - Civil and Environmental Design I
1 credit

First of three-semester sequence. Team organization and teamwork, preparing proposals, project planning, scheduling, and management, engineering for government or privately, contracts, ethics and
Students self-organize into teams, identify need, submit design project proposals.

Prerequisite/Restriction: ENGR 3080 and student must be in the Professional Engineering Program or graduate standing

Semester(s) Traditionally Offered: Spring

CEE 3890 - Environmental Engineering Design I
1 credit

Introduction to senior environmental engineering students' integrated design experience. Design project identified and proposal for its completion during the senior year is produced, under mentoring of course instructor. Emphasizes project identification, project scoping, manpower and materials budgeting, project scheduling, and completion of design proposal.

Prerequisite/Restriction: CEE 3610/PUBH 3610 and student must be in the Professional Engineering Program

Corequisite: CEE 3640, CEE 3670/BENG 3670.

Semester(s) Traditionally Offered: Spring

CEE 4200 - Engineering Economics
2 credits

Applications of the mathematics of finance to engineering decision making. Should be taken during the junior year of the engineering curriculum.

Prerequisite/Restriction: Student must be in the Professional Engineering Program.

Semester(s) Traditionally Offered: Fall

CEE 4300 - Engineering Soil Mechanics
4 credits

Physical and mechanical properties of soils. Topics include: classification, permeability, soil stresses and settlement analysis, soil strength, slope stability, lateral earth pressures, introduction to foundations, numerical solutions, and computer applications.

Prerequisite/Restriction: ENGR 2140 and CEE 3500 (may be taken concurrently) and student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

CEE 4790 - Environmental Engineering Design II (CI)
CI Communications Intensive
2 credits

Provides senior environmental engineering students with integrated design experience in two-semester sequence. Design projects proposed in CEE 3890 completed under mentoring of course instructor. Emphasizes team work, scheduling, design calculations, and completion of design report.

Prerequisite/Restriction: CEE 3890 and concurrent enrollment in environmental engineering technical elective course during fall semester Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall

CEE 4870 - Civil and Environmental Design II (CI)
CI Communications Intensive
2 credits

Second semester of three-semester design sequence. Teams work on projects they proposed in Engineering Design I. Emphasizes teamwork, project management, scheduling, design calculations, communication, presentations, progress toward completing project report.

Prerequisite/Restriction: CEE 3880; senior design technical elective should be taken concurrently Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall

CEE 4880 - Civil and Environmental Design III (CI)
CI Communications Intensive
2 credits

Completion of three-semester sequence. Teams complete professionally-reviewed design projects proposed in Engineering Design I, and begun in Design II, and submit professional reports. Emphasizes teamwork, project management, scheduling, design calculations, evaluation criteria, presentations peer-review, response to technical review.

Prerequisite/Restriction: CEE 4870 and student must be in the Professional Engineering Program
CEE 4890 - Environmental Engineering Design III (CI)
CI Communications Intensive
2 credits

Provides senior environmental engineering students with integrated design experience in two-semester sequence. Completion of design projects begun in CEE 4790, with presentation, report, and defense.

Prerequisite/Restriction: CEE 4790 and student must be in the Professional Engineering Program

CEE 4930 - Independent Study
1-3 credits

Laboratory design or research project on problem selected by student. Requires review of literature, preparation of proposal describing project, completion of design or research project, and preparation of report.

Prerequisite/Restriction: Student must be in the Professional Engineering Program.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

CEE 4930 - Independent Study
1-3 credits

Laboratory design or research project on problem selected by student. Requires review of literature, preparation of proposal describing project, completion of design or research project, and preparation of report.

Prerequisite/Restriction: Student must be in the Professional Engineering Program.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CEE 5000 - Irrigation and Drainage of Agricultural Lands
3 credits

Soil-water-plant relationships; evapotranspiration and water requirements; effective water use; irrigation scheduling; infiltration; irrigation systems planning, drainage systems and their design and the impact of irrigation on water quality

Prerequisite/Restriction: CEE 3430, CEE 3500 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6000.

Semester(s) Traditionally Offered: Fall

CEE 5001 - Field Irrigation Systems Design and Evaluation
3 credits

Evaluation, design and management of surface, sprinkle, and drip irrigation systems including system automation and maintenance.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6001

Semester(s) Traditionally Offered: Fall

CEE 5003 - Remote Sensing of Land Surfaces
4 credits

Basic principles of radiation and remote sensing. Techniques for ground-based measurements of reflected and emitted radiation, as well as ancillary data collection to support airborne and satellite remote sensing studies in agriculture, geography, and hydrology.

Prerequisite/Restriction: MATH 1100 or MATH 1210; and PHYS 2110 or PHYS 2210 and student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6003 and PSC 5003/PSC 6003

Semester(s) Traditionally Offered: Spring

CEE 5005 - Irrigation Conveyance and Control Systems
3 credits

Design, evaluation, and operation of irrigation distribution systems. Measurement and monitoring of flows and water levels, and canal and pipeline automation. Simulation of system hydraulics.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6005.

Semester(s) Traditionally Offered: Fall

CEE 5007 - Field Evaluation of Agricultural Irrigation Systems
2 credits

Field measurements in pressurized and surface irrigation systems for performance evaluation and determination
of water application uniformity and efficiency.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6007.

Semester(s) Traditionally Offered: Summer

CEE 5008 - Management of Irrigation Systems
3 credits
Organizing, administering, and financing irrigation and drainage projects. Operation and maintenance of irrigation distribution systems. Simulation of command area water demands.

Prerequisite/Restriction: CEE 3430 and CEE 3500 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6008

Semester(s) Traditionally Offered: Spring

CEE 5009 - Groundwater Systems Engineering I
3 credits
Groundwater exploration; well drilling and testing; pumping plant design, operation, and testing; aquifer evaluations; siting of multiple well systems. Development of pumping strategies for water supply and environmental control systems. Introduction to conjunctive use.

Prerequisite/Restriction: CEE 5000/CEE 6000 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6009.

Semester(s) Traditionally Offered: Fall

CEE 5010 - Matrix Analysis/Finite Element
3 credits
Analysis of structures using matrix methods. Application of software based on the stiffness method to practical analysis problems. Introduction of Finite Element method based on stiffness approach and mathematical derivation of simple finite elements, along with application to practical problems.

Prerequisite/Restriction: MAE 3040 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: MAE 5060.

Semester(s) Traditionally Offered: Fall

CEE 5020 - Finite Element Methods in Solid Mechanics I
3 credits
Introduction to finite element methods and their application to the analysis and design of mechanical engineering systems.

Prerequisite/Restriction: MAE 3040 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: MAE 5020.

Semester(s) Traditionally Offered: Fall

CEE 5050 - Design of Wood and Masonry Structures
3 credits
Design of beams, columns, joints, walls, and diaphragms in both wood and masonry materials. Current design codes will be utilized.

Prerequisite/Restriction: CEE 3080 and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring

CEE 5060 - Mechanics of Composite Materials I
3 credits
Stress-strain relations for nonisotropic composites, such as fiber-reinforced plastic laminates, properties and their uses, strength and life determination, and methods for design using composite materials.

Prerequisite/Restriction: MAE 3040 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: MAE 5060.

Semester(s) Traditionally Offered: Fall
CEE 5070 - Structural Steel Design
3 credits

Structural steel design using load and resistance factor design (LRFD) method. Focuses on design of structural beams, columns, and connections utilizing steel design codes.

Prerequisite/Restriction: CEE 3020, CEE 3080 and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

CEE 5080 - Numerical Methods in Elasticity
3 credits


Prerequisite/Restriction: CEE 3020 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6080.

Semester(s) Traditionally Offered: Fall

CEE 5100 - Infrastructure Evaluation and Renewal
3 credits

Evaluation of existing structural systems and techniques to improve their performance. Focuses on structures which are seismically deficient.

Prerequisite/Restriction: CEE 3080, CEE 5070 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6190.

Semester(s) Traditionally Offered: Spring

CEE 5110 - Steel Bridge Design Project
3 credits

Civil Engineering undergraduate technical elective involving design of a steel bridge. Course topics include: geotechnical, structures, and materials analysis and design. Written reports and presentations required.

Prerequisite/Restriction: CEE 3210 and student must be in the Professional Engineering Program or have Graduate Standing

Hours arranged.

Semester(s) Traditionally Offered: Spring

CEE 5120 - Concrete Canoe Design Project
3 credits

Civil Engineering undergraduate technical elective involving design of a concrete canoe. Course topics include: hydraulic, structures, and materials analysis and design. Written reports and presentations required. Hours arranged.

Prerequisite/Restriction: ENGL 3080 and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring

CEE 5190 - Geographic Information Systems for Civil Engineers
3 credits

Introduction to GIS concepts addressing data structures, spatial entities, and queries. Topics include location referencing methods, data collection techniques, current applications, and institutional and organizational issues.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6190.

Semester(s) Traditionally Offered: Spring

CEE 5220 - Traffic Engineering
3 credits

Topics covered include characteristics, measurements, and analysis of volume, speed, density, and travel time; capacity and level of service analysis; signalization and traffic control devices.

Prerequisite/Restriction: CEE 3210 and student must be in the Professional Engineering Program or have Graduate Standing
Cross-listed as: CEE 6220.

Semester(s) Traditionally Offered: Spring
CEE 5220 - Geometric Design of Highways
3 credits

Principles of highway location and planning, with full consideration of economic, environmental, and other impacts. Capacity analysis of intersections and highways, passing-lane design, and risk-cost based horizontal and vertical alignment design. Introduction to design software through coursework and term projects.

Prerequisite/Restriction: CEE 3210 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6220.

CEE 5230 - Geometric Design of Highways
3 credits

Principles of highway location and planning, with full consideration of economic, environmental, and other impacts. Capacity analysis of intersections and highways, passing-lane design, and risk-cost based horizontal and vertical alignment design. Introduction to design software through coursework and term projects.

Prerequisite/Restriction: CEE 3210 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6230.

CEE 5240 - Urban and Regional Transportation Planning
3 credits

Examination of travel demand forecasting, data collection, and survey data analysis techniques. Focuses on transportation-land use interactions and impact of market-based policies on travel demand. Theories and applications of traditional and advanced trip distribution, mode choice, and route assignment models.

Prerequisite/Restriction: CEE 3210 and admitted to the Professional Program or have graduate standing

Cross-listed as: CEE 6240.

CEE 5250 - Environmental Engineering Cooperative Practice
2 credits

Applied environmental employment with primary focus of work experience related to one of the environmental engineering specialty areas.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing. Must have permission of instructor.

Cross-listed as: CEE 6250.

CEE 5250 - Environmental Engineering Cooperative Practice
3 credits

Explores fundamentals of groundwater hydrology by focusing on theory related to aquifer systems and flow analysis, regional groundwater balance, well hydraulics, aquifer testing, capture zone analysis, unsaturated flow, saltwater intrusion, and basics of flow modeling.

Prerequisite/Restriction: CEE 3430 or a similar hydrology course and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6250.

CEE 5350 - Foundation Analysis and Design
3 credits

Applications of theories studied in soil mechanics. Design considerations for various foundation types, including shallow foundations, driven piles, drilled shafts, walls, soil anchorages, and mechanically-stabilized earth support systems. Field investigation techniques and computer applications.

Prerequisite/Restriction: CEE 4300 and student must be in the Professional Engineering Program and have Graduate Standing

Cross-listed as: CEE 6350.

CEE 5380 - Earthquake Engineering
3 credits

Covers wide variety of earthquake engineering topics, including seismology and earthquake source characterization, strong ground motion, seismic hazard analysis, wave propagation, soil dynamics, ground response, local site effects, liquefaction, seismic slope stability, soil improvement, vibrational analyses, and structural seismic design.

Prerequisite/Restriction: CEE 4300 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6380.

CEE 5430 - Groundwater Engineering
3 credits

Explores fundamentals of groundwater hydrology by focusing on theory related to aquifer systems and flow analysis, regional groundwater balance, well hydraulics, aquifer testing, capture zone analysis, unsaturated flow, saltwater intrusion, and basics of flow modeling.

Prerequisite/Restriction: CEE 3430 or a similar hydrology course and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6430.
Semester(s) Traditionally Offered: Fall

CEE 5450 - Hydrologic Modeling
3 credits

Conceptual and numerical flow models and groundwater yield concepts (mining, sage, sustained). Simulation of management strategies to achieve such yields, including aquifer groundwater flow, watershed runoff from precipitation, and river flow in rivers. Hydrologic model classification, boundary conditions, and calibration.  
Prerequisite/Restriction: CEE 3430 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6470.

Semester(s) Traditionally Offered: Spring

CEE 5500 - Open Channel Hydraulics with an Emphasis on Gradually Varied Flow
3 credits

Theory and applications of steady uniform and gradually varied flow under both subcritical and supercritical flow conditions. Solutions to multiple-network canal systems by solving systems of combined ordinary differential and algebraic equations. Method for defining natural channel systems and solving steady-state flows in them.  
Prerequisite/Restriction: CEE 3500, CEE 3510, and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6500.

Semester(s) Traditionally Offered: Fall

CEE 5540 - Hydraulic Structures Design
3 credits

Design of a variety of hydraulic structures is explored, both in the classroom and laboratory. Integrates student-developed, original computer programs; commercially available software; field trips; and hands-on laboratory design projects to further students' understanding of hydraulic structures.  
Prerequisite/Restriction: CEE 3500 and CEE 3510 Student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6540.
pump, and valve selection; transient and cavitation analysis; and pipeline operation and filling.

Prerequisite/Restriction: CEE 3500 and CEE 3510 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: CEE 6550

Semester(s) Traditionally Offered: Spring

CEE 5600 - Environmental Chemistry of Inorganic Contaminants
2 credits

Inorganics of environmental concern discussed in terms of processes affecting their behavior in soil and water systems. Explores remediation of environmental systems contaminated with inorganic pollutants.

Cross-listed as: CEE 6600

Semester(s) Traditionally Offered: Spring, even years

CEE 5610 - Environmental Quality Analysis
3 credits

Familiarizes students with various methods used for analysis of chemical parameters in environmental samples (water, soil, and air). Provides students with skills enabling them to make proper selection/evaluation of analytical procedure and evaluate data generated.

Prerequisite/Restriction: CHEM 1210 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: BENG 5660, BENG 6660, CEE 6610

Semester(s) Traditionally Offered: Fall

CEE 5620 - Aquatic Chemistry
3 credits

Provides students with understanding of principles of aquatic chemistry, emphasizing chemical equilibria, acid-base reactions, complex formation, oxidation-reduction reactions, complex formation, and dissolution chemistry.

Prerequisite/Restriction: CHEM 1210 or equivalent and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: PUBH 5670

Semester(s) Traditionally Offered: Spring

CEE 5635 - Environmental Engineering in Developing Nations
3 credits

The course is designed for engineers and non-engineers and covers appropriate safe water, sanitation, air pollution technologies, and public health principles, for developing nations. Social and educational approaches, and project management principles required for successful project implementation, are stressed.

Prerequisite/Restriction: Student must be in the Professional Engineering Program and have Graduate Standing.

Corequisite: CEE 6635

Semester(s) Traditionally Offered: Spring

CEE 5670 - Hazardous Chemicals Handling and Safety
2 credits

Provides students with necessary skills and knowledge for working safely in areas associated with hazardous chemicals. Topics covered include: regulations, exposure routes, toxicology, chemical and physical hazards, personal protective equipment, sampling, monitoring, decontamination, and emergency response procedures.

Prerequisite/Restriction: CHEM 1210 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: PUBH 5670

Semester(s) Traditionally Offered: Spring

CEE 5680 - Soil-Based Waste Management
2 credits

Engineering management of wastes present in the vadose zone, including extraction, containment, and biological, chemical, and physical destruction technologies for sustainable agriculture and environmental quality. Aspects include engineering characterization, problem definition, treatment, and monitoring. Analysis and design emphasized through
problems, examinations, and report writing.

Prerequisite/Restriction: Student must be in the Professional Engineering Program and have Graduate Standing.

Cross-listed as: CEE 6680 and BENG 5680/BENG 6680.

Semester(s) Traditionally Offered: Spring

CEE 5690 - Natural Systems Engineering
3 credits

Explores integrated nature of river basin planning and management through introduction of most commonly employed assessment modeling frameworks and tools for modeling physical, chemical, and ecological processes at the study site to watershed scales. Topics include: water resources system modeling; physical, chemical, and ecological processes modeling; impact assessment methods; and risk assessment.

Prerequisite/Restriction: CEE 3610/PUBH 3610, CEE 3500, CEE 3510, CEE 3640, and student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6690.

CEE 5710 - Pollution Prevention and Industrial Ecology
2 credits

Explores pollution prevention and waste minimization concepts, focusing on implementation of these concepts in design of production processes and products. Discussion of pollution prevention/waste minimization concepts, energy and materials conservation, Life Cycle Analysis, materials and process audits, industrial process design for waste minimization and energy conservation, packaging, and ISO 14000.

Prerequisite/Restriction: Student must be in the Professional Engineering Program and have Graduate Standing.

Cross-listed as: CEE 6710.

CEE 5720 - Natural Systems Modeling
3 credits

Provides hands-on approach to utilizing several of the most commonly applied modeling tools employed to estimate physical, chemical, and biological impacts of existing and proposed water resource systems. Focuses on utility and limitations of specific modeling approaches, while also stressing integrative multidisciplinary nature of impact assessment frameworks.

Prerequisite/Restriction: CEE 5690/CEE 6690 and student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6720.

CEE 5730 - Environmental Chemistry of Organic Contaminants
3 credits

Provides students with understanding of methods used in analysis of environmental samples for organic contaminants. Examines various properties and processes determining the fate of organic contaminants in the environment. Taught first half of fall semester.

Prerequisite/Restriction: Grades of C- or better in CHEM 1210 and CHEM 1215 and student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6730/PUBH 6730 and PUBH 5730.

Semester(s) Traditionally Offered: Fall

CEE 5750 - Air Quality Measurements
2 credits

Laboratory-based course designed to familiarize participants with federally-approved reference measurement techniques for ambient and source air pollutants. Also provides understanding of temporal and spatial pollutant behavior.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing.

Semester(s) Traditionally Offered: Spring

CEE 5760 - Hydraulic Structures Field Course
1 credit

Week-long course, with one day of in-class lectures and four days of field trips. Introduces students to field applications of hydraulic structures design. Field trips
may involve backpacking to remote areas.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have graduate standing.

Semester(s) Traditionally Offered: Fall, Summer
Effective Term: Spring

CEE 5790 - Accident and Emergency Management
3 credits

Introduction to fundamentals of accident, hazard, and emergency management. Topics include legislation; chemical safety fundamentals; fire, explosion, and spill fundamentals; contaminant air transport fundamentals; hazard and risk assessment; dispersion applications; and hazard and risk management applications.

Prerequisite/Restriction: CHEM 1220 and student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: PUBH 5790.

Semester(s) Traditionally Offered: Spring

CEE 5810 - Biochemical Engineering
3 credits

Fundamentals of bioreactor design and bioengineering to produce biological commodities. Emphasizes mathematical models of microbial and enzymatic processes in environmental and industrial biotechnology.

Prerequisite/Restriction: BENG 3200 and BENG 3670/CEE 3670; or BENG 3670/CEE 3670, CEE 3610/PUBH 3610, and CEE 3640 Student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6810 and BENG 5810/BENG 6810.

Semester(s) Traditionally Offered: Fall

CEE 5830 - Management and Utilization of Biological Solids and Wastewater
3 credits

Focuses on production, management, and disposal of biosolids and wastewater generated in food processing and wastewater treatment. Emphasizes beneficial use of biosolids and wastewater for agricultural production, forest enhancement, and land reclamation.

Prerequisite/Restriction: BENG 3670/CEE 3670 and student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6830 and BENG 5830/BENG 6830.

Semester(s) Traditionally Offered: Spring

CEE 5860 - Air Quality Management
3 credits

Introduction to air quality management. Explores the legislation, sources, behaviors, and effects of regulated and nonregulated air pollution, control techniques, and air dispersion modeling.

Prerequisite/Restriction: CEE 3610, CEE 3500, BENG 2400, and student must be in the Professional Engineering Program or have Graduate Standing.

Semester(s) Traditionally Offered: Fall

CEE 5870 - Hazardous Waste Incineration
2 credits

Provides introduction to hazardous waste incineration principles. Topics include: thermodynamics, stoichiometry, thermochemistry, chemical kinetics, energy recovery, pollution control systems, and incinerator design principles.

Prerequisite/Restriction: CEE 3780 and student must be in the Professional Engineering Program and have Graduate Standing.

Semester(s) Traditionally Offered: Spring

CEE 5880 - Remediation Engineering
3 credits

Physical, chemical, and biological principles associated with remediation of hazardous waste contaminated soil, water, sediments, and air. Topics include: source removal and source control, product recovery, chemical treatment methods, biological remediation concepts, in situ processes, ex situ processes, and integrated process design.
Prerequisite/Restriction: CEE 3780, CEE 3610/PUBH 3610, and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

CEE 5900 - Cooperative Practice
3 credits

A planned work experience in industry. Detailed program must have prior approval. Written report required.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CEE 6000 - Irrigation and Drainage of Agricultural Lands
3 credits

Soil-water-plant relationships; evapotranspiration and water requirements; effective water use; irrigation scheduling; infiltration; irrigation systems planning, drainage systems and their design and the impact of irrigation on water quality.

Prerequisite/Restriction: CEE 3430, CEE 3500

Cross-listed as: CEE 5000.

Semester(s) Traditionally Offered: Fall

CEE 6001 - Field Irrigation Systems Design and Evaluation
3 credits

Evaluation, design and management of surface, sprinkle, and drip irrigation systems including system automation and maintenance.

Cross-listed as: CEE 5001

Semester(s) Traditionally Offered: Fall

CEE 6003 - Remote Sensing of Land Surfaces
4 credits

Basic principles of radiation and remote sensing. Techniques for ground-based measurements of reflected and emitted radiation, as well as ancillary data collection to support airborne and satellite remote sensing studies in agriculture, geography, and hydrology.

Prerequisite/Restriction: MATH 1100 or MATH 1210; and PHYS 2110 or PHYS 2210

Cross-listed as: CEE 5003 and PSC 6003/PSC 5003

Semester(s) Traditionally Offered: Spring

CEE 6005 - Irrigation Conveyance and Control Systems
3 credits

Design, evaluation, and operation of irrigation distribution systems. Measurement and monitoring of flows and water levels, and canal and pipeline automation. Simulation of system hydraulics.

Cross-listed as: CEE 5005.

Semester(s) Traditionally Offered: Fall

CEE 6007 - Field Evaluation of Agricultural Irrigation Systems
2 credits

Field measurements in pressurized and surface irrigation systems for performance evaluation and determination of water application uniformity and efficiency.

Cross-listed as: CEE 5007.

Semester(s) Traditionally Offered: Summer

CEE 6008 - Management of Irrigation Systems
3 credits

Organizing, administering, and financing irrigation and drainage projects. Operation and maintenance of irrigation distribution systems. Simulation of command area water demands.

Prerequisite/Restriction: CEE 3430 and CEE 3500

Cross-listed as: CEE 5008

Semester(s) Traditionally Offered: Spring

CEE 6009 - Groundwater Systems Engineering I
3 credits

Groundwater exploration; well drilling and testing; pumping plant design, operation, and testing; aquifer
evaluations; siting of multiple well systems. Development of pumping strategies for water supply and environmental control systems. Introduction to conjunctive use.

Prerequisite/Restriction: CEE 6000/CEE 5000

Cross-listed as: CEE 5009.

Semester(s) Traditionally Offered: Fall

CEE 6010 - Finite Element Methods in Solid Mechanics II
3 credits

Advanced theory and applications of finite element methods to both static and dynamic solid mechanics problems.

Prerequisite/Restriction: CEE 5010

Semester(s) Traditionally Offered: Spring

CEE 6020 - Structural Stability
3 credits


Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

CEE 6030 - Structural Optimization
3 credits

Introduction to optimization techniques for linear and nonlinear, univariable, and multivariable functions with or without constraints. Computer applications, and applications to structural design.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring

CEE 6040 - Structural Reliability
3 credits


Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

CEE 6050 - Experimental Methods in Structural Engineering
3 credits

Experimental techniques used in research and design in structural engineering and mechanics. Structural models. Theory and practical applications. Development of principles used to design research projects.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring

CEE 6070 - Mechanics of Composite Materials II
3 credits

Second course in composite materials. Stress-strain states of laminated composite structures, including interlaminar stresses, failure criteria, and hygrothermal stresses.

Prerequisite/Restriction: MAE 5060

Cross-listed as: MAE 6070

Semester(s) Traditionally Offered: Fall

CEE 6080 - Numerical Methods in Elasticity
3 credits


Prerequisite/Restriction: CEE 3020

Cross-listed as: CEE 5080.

Semester(s) Traditionally Offered: Fall

CEE 6090 - Theory of Plates and Shells
3 credits
Introduction to plate and shell theories. Development of bending and buckling of plates and shells through classical theory.

Prerequisite/Restriction: MAE 3040

Cross-listed as: MAE 6090.

Semester(s) Traditionally Offered: Fall

CEE 6110 - Hydroinformatics
3 credits

Introduces hydroinformatics concepts and procedures including automated data collection, relational databases, data management software, metadata and semantics, data storage formats and standards, data transformations, web based data distribution, and automation of data manipulation tasks supporting hydrologic modeling and analysis.

Prerequisite/Restriction: Graduate student standing or instructor permission

Semester(s) Traditionally Offered: Fall

CEE 6120 - Bridge Engineering
3 credits

Provides students with a basic understanding of the facets of bridge design pertinent to a structural engineer. Focuses on analysis and design of a slab and prestressed concrete girder bridge.

Semester(s) Traditionally Offered: Fall

CEE 6130 - Structural Dynamics and Seismic Design
3 credits


Cross-listed as: MAE 6130.

Semester(s) Traditionally Offered: Spring

CEE 6140 - Advanced Reinforced Concrete
3 credits

Develops improved understanding of the behavior of reinforced concrete members. After students understand general behavior, codes are placed in proper perspective. Then students can design in situations not explicitly considered in current codes.

Semester(s) Traditionally Offered: Fall

CEE 6180 - Dynamics and Vibrations
3 credits


Prerequisite/Restriction: MAE 5300 or CEE 6130/MAE 6130

Cross-listed as: MAE 6180.

Semester(s) Traditionally Offered: Spring

CEE 6190 - Geographic Information Systems for Civil Engineers
3 credits

Introduction to GIS concepts addressing data structures, spatial entities, and queries. Topics include location referencing methods, data collection techniques, current applications, and institutional and organizational issues.

Cross-listed as: CEE 5190.

Semester(s) Traditionally Offered: Spring

CEE 6200 - Pavement Design
3 credits

Analysis and design of flexible and rigid pavements for highways and runways, including the design of overlays. Equal emphasis on current practice and advanced concepts of pavement management.

CEE 6210 - Transportation Systems Analysis
3 credits

Introduces systems approach to analysis of transportation services and infrastructure. Focuses on basic and advanced concepts, including operations research techniques, simulation, and artificial intelligence. Topics include facility sizing and location,
financial and economic analysis of investment projects, and privatization.

Prerequisite/Restriction: CEE 3030 or equivalent

Semester(s) Traditionally Offered: Fall

CEE 6220 - Traffic Engineering
3 credits

Topics covered include characteristics, measurements, and analysis of volume, speed, density, and travel time; capacity and level of service analysis; signalization and traffic control devices.

Prerequisite/Restriction: CEE 3210

Cross-listed as: CEE 5220.

Semester(s) Traditionally Offered: Spring

CEE 6230 - Geometric Design of Highways
3 credits

Principles of highway location and planning, with full consideration of economic, environmental, and other impacts. Capacity analysis of intersections and highways, passing-lane design, and risk-cost based horizontal and vertical alignment design. Introduction to design software through coursework and term projects.

Prerequisite/Restriction: CEE 3210

Cross-listed as: CEE 5230.

Semester(s) Traditionally Offered: Spring

CEE 6240 - Urban and Regional Transportation Planning
3 credits

Examination of travel demand forecasting, data collection, and survey data analysis techniques. Focuses on transportation-land use interactions and impact of market-based policies on travel demand. Theories and applications of traditional and advanced trip distribution, mode choice, and route assignment models.

Prerequisite/Restriction: CEE 3210 and admitted to the Professional Program

Cross-listed as: CEE 5240.

CEE 6250 - Transportation Safety
3 credits

Statistical analysis of transportation data, including safety and risk assessment. Regression and multivariate analysis, such as discriminant analysis, canonical correlation, and factor analysis. In-depth study of selected methodologies for analyzing transportation safety and designing counter measures.

Prerequisite/Restriction: CEE 3210 or equivalent

Semester(s) Traditionally Offered: Fall

CEE 6260 - Public Transportation
3 credits

Principles of planning, design, and operation of transit systems in urban and rural areas. Determination of optimal route alignments, schedules, and station/stop spacings. Exploration of innovations in financing and pricing, including cost-cutting techniques.

Semester(s) Traditionally Offered: Spring

CEE 6270 - Traffic Operations Analysis
3 credits

Traffic flow fundamentals, macroscopic and microscopic models of traffic flow, shock wave analysis, car following principles, queuing systems, and simulation.

Semester(s) Traditionally Offered: Spring

CEE 6290 - Transportation Network Analysis
3 credits

Analytical approaches and algorithms to the formulation and solution of the equilibrium assignment problem for transportation networks. Emphasis on user equilibrium, comparison with system optimal stochastic user equilibrium, origin-destination matrix estimation, and network design problems.

Semester(s) Traditionally Offered: Spring

CEE 6300 - Earth Structures
3 credits
Design and construction of earth and rock fill dams, embankments, excavations, and retaining structures.

Prerequisite/Restriction: CEE 4300, CEE 5350/CEE 6350

Semester(s) Traditionally Offered: Spring

CEE 6310 - Environmental Geotechniques
3 credits

Geotechnical aspects of environmental systems, with concentration on waste containment facilities.

Prerequisite/Restriction: CEE 4300

Semester(s) Traditionally Offered: Fall

CEE 6320 - Deep Foundations
3 credits

Analysis, design, and construction of deep foundations with emphasis on driver piles and drilled shafts.

Prerequisite/Restriction: CEE 4300, CEE 5350/CEE 6350

Semester(s) Traditionally Offered: Spring

CEE 6330 - Ground Reinforcement, Improvement and Treatment
3 credits

Theory, design, and construction methods for ground reinforcement, improvement, and treatment applications.

Prerequisite/Restriction: CEE 4300, CEE 5350/CEE 6350

Semester(s) Traditionally Offered: Fall

CEE 6340 - Laboratory and Field Methods in Geotechnical Engineering
3 credits

Subsurface investigation, field testing and instrumentation, and laboratory testing.

Prerequisite/Restriction: CEE 4300, CEE 5350/CEE 6350

Semester(s) Traditionally Offered: Fall

CEE 6350 - Foundation Analysis and Design
3 credits

Applications of theories studied in soil mechanics. Design considerations for various foundation types, including shallow foundations, driven piles, drilled shafts, walls, soil anchorages, and mechanically-stabilized earth support systems. Field investigation techniques and computer applications.

Prerequisite/Restriction: CEE 4300

Cross-listed as: CEE 5350.

Semester(s) Traditionally Offered: Fall

CEE 6360 - Geotechnical Principles
3 credits

Theoretical soil behavior. Hydraulic conductivity, compression, and shearing properties.

Prerequisite/Restriction: CEE 4300, CEE 5350/CEE 6350

Semester(s) Traditionally Offered: Fall

CEE 6370 - Buried Structures
3 credits

Analysis of structural performance of buried structures (pipes, tanks, silos, etc.) using principles of mechanics of materials and finite element methods.

Prerequisite/Restriction: CEE 4300, CEE 5350/CEE 6350

Semester(s) Traditionally Offered: Spring

CEE 6380 - Earthquake Engineering
3 credits

Covers wide variety of earthquake engineering topics, including seismology and earthquake source characterization, strong ground motion, seismic hazard analysis, wave propagation, soil dynamics, ground response, local site effects, liquefaction, seismic slope stability, soil improvement, vibrational analyses, and structural seismic design.

Prerequisite/Restriction: CEE 4300

Cross-listed as: CEE 5380.

Semester(s) Traditionally Offered: Spring
CEE 6400 - Physical Hydrology
3 credits


Prerequisite/Restriction: CEE 3430

Semester(s) Traditionally Offered: Fall

CEE 6410 - Water Resource Systems Analysis
3 credits

Systems formulation of decision problems. Solution by simulation and optimization, constrained and unconstrained optimization algorithms, case studies and applications to water supply, and quality and ecosystems management.

Semester(s) Traditionally Offered: Spring

CEE 6430 - Groundwater Engineering
3 credits

Explores fundamentals of groundwater hydrology by focusing on theory related to aquifer systems and flow analysis, regional groundwater balance, well hydraulics, aquifer testing, capture zone analysis, unsaturated flow, saltwater intrusion, and basics of flow modeling.

Prerequisite/Restriction: CEE 3430 or a similar hydrology course

Cross-listed as: CEE 5430.

Semester(s) Traditionally Offered: Fall

CEE 6440 - Geographic Information Systems in Water Resources
3 credits

Principles and operation of geographic information systems. Spatial hydrologic modeling done by developing a digital representation of the environment in the GIS, then adding functions simulating hydrologic processes. Includes term project on use of GIS in water resources.

Semester(s) Traditionally Offered: Fall

CEE 6450 - Hydrologic Modeling
3 credits

Conceptual and numerical flow models and groundwater yield concepts (mining, sedge, sustained). Simulation of management strategies to achieve such yields, including aquifer groundwater flow, watershed runoff from precipitation, and river flow in rivers. Hydrologic model classification, boundary conditions, and calibration.

Prerequisite/Restriction: CEE 3430

Cross-listed as: CEE 5450

Semester(s) Traditionally Offered: Spring

CEE 6460 - Water Resources Engineering
3 credits

Engineering design course covering a wide range of topics, including: surface and groundwater hydrology, statistical analysis, water law, hydroelectric power, water supply, irrigation, flood control, wastewater, drainage, dams and reservoirs, pipelines, open channels, and planning.

Prerequisite/Restriction: CEE 3430, CEE 3500, and CEE 4200

Cross-listed as: CEE 5460.

Semester(s) Traditionally Offered: Fall

CEE 6470 - Sedimentation Engineering
3 credits

Explores river response, sediment transport, sediment and watershed yield, flow resistance, scour and erosion, and floodplain management.

Prerequisite/Restriction: CEE 3500

Cross-listed as: CEE 5470.

Semester(s) Traditionally Offered: Spring

CEE 6480 - Groundwater Contamination: Modeling, Monitoring and Management
3 credits

In-depth exploration of physical, chemical, and biological processes related to fate and transport of contaminants.
in the subsurface, mathematical modeling, remediation technologies, and mitigation of contaminated sites using risk-based decision-making.

Prerequisite/Restriction: CEE 5430/CEE 6430 or equivalent

Semester(s) Traditionally Offered: Fall

CEE 6490 - Integrated River Basin/Watershed Planning and Management
3 credits

Reviews fundamental building blocks of water resource institutions, emphasizing creation of institutions which are sensitive to a particular culture, economic, and political environment. Addresses institutional mission and regulatory roles, public participation, property and water rights, and elements of production.

Semester(s) Traditionally Offered: Spring

CEE 6500 - Open Channel Hydraulics with an Emphasis on Gradually Varied Flow
3 credits

Theory and applications of steady uniform and gradually varied flow under both subcritical and supercritical flow conditions. Solutions to multiple-network canal systems by solving systems of combined ordinary differential and algebraic equations. Method for defining natural channel systems and solving steady-state flows in them.

Prerequisite/Restriction: CEE 3500, CEE 3510

Cross-listed as: CEE 5500.

Semester(s) Traditionally Offered: Fall

CEE 6510 - Numerical Methods for Civil Engineers
3 credits

Engineering applications of approximation and interpolation, solution methods for ordinary differential equations, numerical solution of partial differential equations, nonparametric and parametric probability and regression estimation, and Monte Carlo and uncertainty analysis.

Semester(s) Traditionally Offered: Fall

CEE 6530 - Unsteady Flows in Open Channels and Numerical Solutions of St. Venant Equations
3 credits

Derivation and physical meaning of the St. Venant equations, types of water waves, solutions to unsteady free surface flows based on the characteristics, and direct and iterative implicit methods of solution. Emphasizes solving unsteady flow problems in channel systems.

Prerequisite/Restriction: CEE 6500

Semester(s) Traditionally Offered: Spring

CEE 6540 - Hydraulic Structures Design
3 credits

Explores design of a variety of hydraulic structures, both in the classroom and laboratory. Integrates student-developed, original computer programs; commercially available software; field trips; and hands-on laboratory design projects to further students’ understanding of hydraulic structures.

Prerequisite/Restriction: CEE 3500 and CEE 3510

Cross-listed as: CEE 5540.

Semester(s) Traditionally Offered: Fall

CEE 6550 - Hydraulics of Closed Conduits
3 credits

Includes design and operation of piping systems; economics; feasibility and impact of pipelines; pipe, pump, and valve selection; transient and cavitation analysis; and pipeline operation and filling.

Prerequisite/Restriction: CEE 3500 and CEE 3510

Cross-listed as: CEE 5550.

Semester(s) Traditionally Offered: Spring

CEE 6580 - Intermediate Fluid Mechanics
3 credits

Survey of mathematical methods used in fluid mechanics, including: potential flow solutions (complex variables), laminar flow and turbulent flow solutions, boundary layer theory, and introduction to dispersion in fluid.
Semester(s) Traditionally Offered: Fall

CEE 6590 - Evaluation of Hydrologic Modeling Systems
3 credits

Focuses on different techniques for evaluating the performance, diagnosing the model structure, and assessing the uncertainty of hydrologic modeling systems. Examines mathematical and systems theory methods for examining the interrelation between model inputs and outputs.

Prerequisite/Restriction: CEE 6400

Semester(s) Traditionally Offered: Spring

CEE 6600 - Environmental Chemistry of Inorganic Contaminants
2 credits

Inorganics of environmental concern discussed in terms of processes affecting their behavior in soil and water systems. Explores remediation of environmental systems contaminated with inorganic pollutants.

Cross-listed as: CEE 5600

Semester(s) Traditionally Offered: Spring, even years

CEE 6610 - Environmental Quality Analysis
3 credits

Familiarizes students with various methods used for analysis of chemical parameters in environmental samples (water, soil, and air). Provides students with skills enabling them to make proper selection/evaluation of analytical procedure and evaluate data generated.

Prerequisite/Restriction: CHEM 1210

Cross-listed as: BENG 5660, BENG 6660 , CEE 5610

Semester(s) Traditionally Offered: Fall

CEE 6620 - Field Sampling and Analysis of Environmental Systems
3 credits

Explores applied field sampling, as well as field and laboratory techniques used in the monitoring of environmental media. Includes theory and practice of field site monitoring and measurement of physical, chemical, and biological processes in the environment.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

CEE 6630 - Process Dynamics in Environmental Engineering Systems
3 credits

Fundamental principles used in analysis and simulation of environmental systems. Emphasizes small particle dynamics, reaction kinetics, mass transfer, reactor analysis and design, transport phenomena, and development and solution of mathematical models to describe natural and engineered environmental systems including both analytical and numerical methods.

Prerequisite/Restriction: CEE 3500, CEE 3510

Semester(s) Traditionally Offered: Spring

CEE 6635 - Environmental Engineering in Developing Nations
3 credits

The course is designed for engineers and non-engineers and covers appropriate safe water, sanitation, air pollution technologies, and public health principles, for developing nations. Social and educational approaches, and project management principles required for successful project implementation, are stressed.

Prerequisite/Restriction: Acceptance into an Engineering graduate program or instructor permission

Cross-listed as: CEE 5635

Semester(s) Traditionally Offered: Spring

CEE 6640 - Physical and Chemical Environmental Process Engineering
3 credits

Principles of physical and chemical environmental engineering processes, including sedimentation, filtration, gas transfer, aeration, absorption, ion exchange, membrane processes, coagulation, flocculation, precipitation, oxidation, reduction, and disinfection. Process modeling and analysis applications in treatment of water, wastewater, industrial wastes, vapor treatment,
and soil remediation.

Prerequisite/Restriction: CEE 5610/CEE 6610 and CEE 6630

Corequisite: CEE 6650 and CEE 6670.

Semester(s) Traditionally Offered: Spring

CEE 6650 - Biological Processes in Environmental Engineering
3 credits

Theory and design of biological processes used in environmental engineering. Stoichiometric, energetic, kinetic and molecular biological analysis of processes for treatment of contaminated water, soil and air; modeling and design of aerobic and anaerobic suspended growth and fixed-film processes for treatment of municipal and industrial waste streams; nutrient removal; bioenergy production, and bioremediation.

Prerequisite/Restriction: CEE 6630

Corequisite: CEE 6640 and CEE 6670

Semester(s) Traditionally Offered: Spring

CEE 6660 - Environmental and Hydrologic Data Analysis and Experimentation
3 credits

Data analysis and experimental design for environmental science and engineering. Graphical data analysis, parametric and nonparametric statistics, frequency distributions, hypothesis testing, propagation of variance, censored data, correlation and causation, parameter estimation, factorial experimental design and response surfaces, environmental monitoring and uncertainty, nonparametric estimation, time series, and kernel density estimation.

Semester(s) Traditionally Offered: Fall

CEE 6670 - Environmental Process Laboratory
2 credits

Laboratory testing to demonstrate physical, chemical, and biological principles utilized in environmental engineering processes.

Corequisite: CEE 6640, CEE 6650.

CEE 6680 - Soil-Based Waste Management
2 credits

Engineering management of wastes present in the vadose zone, including extraction, containment, and biological, chemical, and physical destruction technologies for sustainable agriculture and environmental quality. Aspects include engineering characterization, problem definition, treatment, and monitoring. Analysis and design emphasized through problems, examinations, and report writing.

Prerequisite/Restriction: Admission to Professional Engineering Program

Cross-listed as: CEE 5680 and BENG 6680/BENG 5680.

Semester(s) Traditionally Offered: Spring

CEE 6690 - Natural Systems Engineering
3 credits

Explores integrated nature of river basin planning and management through introduction of most commonly employed assessment modeling frameworks and tools for modeling physical, chemical, and ecological processes at the study site to watershed scales. Topics include: water resources system modeling; physical, chemical, and ecological processes modeling; impact assessment methods; and risk assessment.

Prerequisite/Restriction: CEE 3610/PUBH 3610, CEE 3500, CEE 3510, CEE 3640; or instructor permission

Cross-listed as: CEE 5690.

CEE 6710 - Environmental Engineering Microbial Ecology
2 credits

Principles of microbial ecology applied to engineered and natural systems.

Prerequisite/Restriction: BIOL 3300, CEE 3610/PUBH 3610

Semester(s) Traditionally Offered: Fall
CEE 6720 - Natural Systems Modeling
3 credits

Provides hands-on approach to utilizing several of the most commonly applied modeling tools employed to estimate physical, chemical, and biological impacts of existing and proposed water resource systems. Focuses on utility and limitations of specific modeling approaches, while also stressing integrative multidisciplinary nature of impact assessment frameworks.

Prerequisite/Restriction: CEE 6690/CEE 5690 or instructor permission

Cross-listed as: CEE 5720.

CEE 6730 - Environmental Chemistry of Organic Contaminants
3 credits

Provides students with understanding of methods used in analysis of environmental samples for organic contaminants. Examines various properties and processes determining the fate of organic contaminants in the environment. Taught first half of fall semester.

Prerequisite/Restriction: Grades of C- or better in CHEM 1210 and CHEM 1215

Cross-listed as: CEE 5730/PUBH 5730 and PUBH 6730

Semester(s) Traditionally Offered: Fall

CEE 6740 - Surface Water Quality Modeling
3 credits

Development and application of mathematical models for conventional pollutants in surface water systems. Covers the fundamentals of completely mixed systems; topics associated with various surface water quality environments (e.g., streams, rivers, lakes, etc.); and dissolved oxygen, BOD, nitrogen, phosphorus, sediment, and temperature behavior in surface water systems.

Prerequisite/Restriction: MATH 1220, CHEM 1210 or CHEM 1110, PHYS 2210 or PHYS 2010, and graduate status

Semester(s) Traditionally Offered: Fall

Effective Term

Fall

CEE 6800 - Division of Environmental Engineering Seminar
1 credit

Environmental engineering graduate seminar for faculty, student, and guest lecturer research presentations.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

Effective Term

Fall 2016

CEE 6810 - Biochemical Engineering
3 credits

Fundamentals of bioreactor design and bioengineering to produce biological commodities. Emphasizes mathematical models of microbial and enzymatic processes in environmental and industrial biotechnology.

Prerequisite/Restriction: BENG 3200 and BENG 3670/CEE 3670; or BENG 3670/CEE 3670, CEE 3610/PUBH 3610, and CEE 3640

Cross-listed as: CEE 5810 and BENG 6810/BENG 5810.

Semester(s) Traditionally Offered: Fall

CEE 6830 - Management and Utilization of Biological Solids and Wastewater
3 credits

Focuses on production, management, and disposal of biosolids and wastewater generated in food processing and wastewater treatment. Emphasizes beneficial use of biosolids and wastewater for agricultural production, forest enhancement, and land reclamation.

Prerequisite/Restriction: BENG 3670/CEE 3670

Cross-listed as: CEE 5830 and BENG 6830/BENG 5830.

Semester(s) Traditionally Offered: Fall

CEE 6840 - Application of Technology Transfer for Teachers
2 credits

Focuses on application of modern instructional strategies to the transfer of technology and science to the public education setting. Part of a series of six courses.
CEE 6850 - Atmospheric and Air Pollution Chemistry
3 credits

Provides students with training in the fundamentals of natural and anthropogenically impacted atmospheric chemistry, primarily focusing on tropospheric meteorology, kinetics, and photochemistry, including gas-phase, aqueous-phase, and aerosol-forming reactions.

Prerequisite/Restriction: CEE 5680/CEE 6680 or upper-level chemistry or instructor permission

Semester(s) Traditionally Offered: Spring

CEE 6900 - Directed Reading
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CEE 6930 - Special Problems
1-4 credits

Independent or group study of engineering problems not covered in regular course offerings.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CEE 6950 - Practical Training
3 credits

Intended for graduate students who are interested in practical training before graduation.

CEE 6970 - Thesis Research
1-6 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CEE 6990 - Continuing Graduate Advisement
1-9 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CEE 7000 - Groundwater Systems Engineering II
4 credits

System analysis techniques applied to aquifer and stream/aquifer management. Development of economically, quantitatively, and environmentally optimal strategies for alternative water policies. Modeling techniques for managing aquifer systems under volumetric, economic, and environmental management goals.

Prerequisite/Restriction: CEE 5470/CEE 6470 or CEE 6500

Semester(s) Traditionally Offered: Spring

CEE 7050 - Plasticity
3 credits

Analysis of stresses, deformation, and collapse in devices constructed of plastic material.

Prerequisite/Restriction: MAE 6040 or CEE 6080/CEE 5080 or instructor permission

Cross-listed as: MAE 7050.

Semester(s) Traditionally Offered: Spring

CEE 7080 - Advanced Plate and Shell Theory
3 credits
Analysis of plate and shell structures by classical and numerical methods. Emphasis on numerical solutions.

Prerequisite/Restriction: Instructor permission

Cross-listed as: MAE 7080.

Semester(s) Traditionally Offered: Fall

CEE 7110 - Constitutive Modeling and Structural Response of Engineering Materials
3 credits


Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

CEE 7120 - Advanced Topics in Civil Engineering
3 credits

Discussion of current research topics conducted by civil and other engineering faculty and staff at USU and elsewhere. Offered on either arranged or regular basis. Topics and times can be arranged with instructor and advisor.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer

CEE 7150 - Effective Engineering Instruction
1 credit

Seminar-style course designed to give PhD candidates insight and guidance for becoming effective engineering instructors.

Semester(s) Traditionally Offered: Fall

CEE 7160 - Successful Faculty Strategies
1 credit

Seminar-style course designed to give PhD candidates insight and guidance into the expectations and approaches for becoming successful university faculty members.

Semester(s) Traditionally Offered: Spring

CEE 7170 - Research Methods in Engineering
1 credit

Seminar-style course designed to give PhD candidates insight and guidance into research methods in engineering.

Semester(s) Traditionally Offered: Fall

CEE 7270 - Travel Demand and Supply Analysis
3 credits


Semester(s) Traditionally Offered: Fall

CEE 7300 - Theoretical Soil Mechanics
3 credits

Advanced studies of stress distribution in soil masses, shear strength, consolidation, constitutive modeling, and finite applications.

Prerequisite/Restriction: CEE 6360

Semester(s) Traditionally Offered: Spring

CEE 7310 - Fundamentals of Soil Behavior
3 credits

The influence of clay mineralogy, clay chemistry, and soil origin on the engineering properties of soil.

Prerequisite/Restriction: CEE 6360

Semester(s) Traditionally Offered: Fall

CEE 7320 - Advanced Soil Dynamics
3 credits

Advanced studies in the response of soil structures and foundations to dynamic loads.
Prerequisite/Restriction: CEE 6360

Semester(s) Traditionally Offered: Fall

CEE 7430 - Stochastic Hydrology
3 credits

Stochastic description of hydrologic variability in time, space, and space-time. Markov processes, time series synthesis and forecasting, spectral analysis, spatial interpolation and random field simulation, data imputation, and parameter estimation for physical models. Lattice and Markov chain Monte Carlo methods, simulated annealing, and Gibbs processes. Applications to rainfall, streamflow, groundwater quality and quantity, and subsurface characterization.

Semester(s) Traditionally Offered: Spring

CEE 7460 - Advanced Topics in Hydrology
3 credits

Topics of prominent current interest for advanced MS and PhD students. Can be repeated for credit with consent of instructor.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

CEE 7520 - Mathematical Methods for Civil and Environmental Engineers
3 credits

Applications of advanced mathematical methods to analyze civil and environmental engineering problems, including analysis of dynamical systems, solutions to nonlinear and stochastic differential equations, Fourier analysis, and neural networks.

Semester(s) Traditionally Offered: Spring

CEE 7580 - Advanced Finite Element Analysis in Fluid Mechanics
3 credits

Application of the finite element method of analysis to problems in fluid mechanics. Use of higher order element to two- and three-dimensional flows.

Prerequisite/Restriction: CEE 3510 or MAE 3420, CEE 5020/MAE 5020

Cross-listed as: MAE 7580.

Semester(s) Traditionally Offered: Spring

CEE 7970 - Dissertation Research
1-10 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CEE 7990 - Continuing Graduate Advisement
1-9 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Classics

CLAS 1100 - The Latin and Greek Element in English
3 credits

Survey of classical word roots in English, with a view to enhancing students' comprehension of English vocabulary and its Indo-European heritage.

Semester(s) Traditionally Offered: Fall, Spring

CLAS 1120 - The Latin and Greek Element in English
3 credits

Survey of classical word roots in English, with a view to enhancing students' comprehension of English vocabulary and its Indo-European heritage.

Cross-listed as: HIST 1120

Semester(s) Traditionally Offered: Fall, Spring

Effective Term

Summer

CLAS 3160 - Classical Drama and Society
3 credits

Review and analysis of the nature and function of ancient Greek and Roman drama in its theatrical, historical, and social context. Focuses on the major dramatists of classical antiquity.
Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Cross-listed as: HIST 3160.

Semester(s) Traditionally Offered: Fall, Spring

CLAS 3170 - Descent and Return: Ancient Views of Hades and the Afterlife
3

This course will focus on classical views of Hades and the afterlife, paying special attention to the gods and heroes, such as Persephone, Odysseus, Orpheus, and Aeneas, who were able to make the journey down into Hades while alive and then return back to the upper world. We will also discuss the historical background to the works and related religious and literary themes.

Cross-listed as: HIST 3170/RELS 3170

Effective Term
Spring 2017

CLAS 3210 - Classical Mythology
3 credits

Introduces major myths of the Classical world. Explores how these myths serve as keys to understanding the documents and arts of Classical civilization.

Cross-listed as: ARTH 3210, HIST 3210 and RELS 3210

Semester(s) Traditionally Offered: Fall, Spring

College of Humanities and Social Sciences

CHSS 1100 - Practice and Philosophies of Civic Responsibility
2 credits

Designed to help students come to a personal understanding of community issues, service and leadership through learning based on volunteer service experience, readings, group discussion and interaction, and critical reflection.

Campus: USU Eastern only

CHSS 1250 - Interdisciplinary Workshop
1-5 credits

Check with major department for limitations on number of credits that can be counted for graduation.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

CHSS 2250 - Introductory Internship/Co-op
1-5 credits

Introductory-level educational work experience in an internship or cooperative education position approved by the department and/or the College of Humanities and Social Sciences. Check with major department for limitations on number of credits that can be counted for graduation.

Repeatable for credit
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CHSS 3050 - The Humanities and Social Sciences in Cultural Context
3 credits

Interdisciplinary study of a work, figure or theme in the humanities and/or social sciences. Topics vary.

Semester(s) Traditionally Offered: Fall, Spring

CHSS 3250 - College to Career Transitions for Humanities and Social Sciences Majors
2 credits

Enhance the transition for students majoring in humanities and social sciences to life after graduation through exposure to topics including identifying marketable skill sets, career exploration, personal branding, resume' and interview preparation, understanding job market expectations, and networking.

Semester(s) Traditionally Offered: Fall, Spring

CHSS 4250 - Advanced Internship/Co-op
1-15 credits

Internship or cooperative education position of a more professional level, with increased complexity, approved by the college.
CHSS 4900 - Rhetoric Associates Seminar
2 credits

Training course for students to learn how to effectively peer tutor fellow students in writing. Overview of theory, grammar, and interpersonal communication skills.

CHSS 4910 - Study Abroad
1-20 credits

A semester study abroad experience through a student exchange program.

CMST 1020 - Public Speaking (BHU)
BHU Breadth Humanities
3 credits

Speaking in formal public communication situations. Development of skills in speech preparation, audience adaptation, and delivery. Two lectures and one one-hour lab per week.

CMST 1330 - Introduction to Global Communication (BSS)
BSS
3 credits

This course introduces students to the complexities and trends associated with global communication. Attention will be paid to cross-national perspectives on communication, as well as the impact transnational organizations and cross-cultural attitudes have on public discourse.

CMST 2110 - Interpersonal Communication (BHU/HR)
BHU/HR Breadth Humanities and Human Relations
3 credits

Examination of theories, methods, and competencies relevant to studying, establishing, and maintaining interpersonal relationships in family, intercultural, professional, and other contexts. Classroom experiences with topics such as perception, language, nonverbal behavior, conflict resolution, and listening.

CMST 2120 - Small Group Communication (HR)
HR Human Relations
3 credits

Introduction to communication in group processes such as decision-making, leadership, power, conflict, deviance
and the development of group structures, functions, norms and roles.

Semester(s) Traditionally Offered: Alternate Years

CMST 2250 - Introductory Internship/Co-op
1-6 credits

Introductory level educational work experience in an internship or cooperative education position approved by the department and advisor. Internship project and number of credits must be approved by advisor.

Semester(s) Traditionally Offered: Fall, Spring, Summer

CMST 2270 - Argumentation and Debate
3 credits

Techniques of analysis, investigation, evidence, reasoning, brief making, refutation, and construction and delivery of the argumentative speech and academic debate.

Semester(s) Traditionally Offered: Fall

CMST 3000 - Speech Communication Teaching Practicum
1 credit

Intensive speech teaching workshop. Supervised on-campus teaching experience. Must be completed prior to student teaching experience. Repeatable to a maximum of 2 credits.

Repeatable for credit.

CMST 3050 - Technical and Professional Communication (DSS)
DSS Depth Social Sciences
3 credits

Skill development in oral technical reporting, interviewing, and interpersonal communication to meet the unique communication requirements of business, industry, and the professions.

CMST 3140 - Communication in Family Contexts
3 credits

This course facilitates understanding of the major theories and concepts in the study of communication phenomena in family relationships. Emphasis is placed on critical analysis of communication research into the family context.

Prerequisite/Restriction: CMST 2110 or instructor permission

CMST 3160 - Gender Research in Communication Studies
3 credits

This course will explore how the construction of gender influences interpersonal communication. Research related to gender in the field of communication studies will be explored. Students will come to understand how gender is connected to power, social identities, and institutions.

Semester(s) Traditionally Offered: Fall and Spring

Effective Term

Spring

CMST 3250 - Organizational Communication (CI)
CI Communications Intensive
3

Study of internal communication requirements of organizations. Analysis of communication problems associated with conflict, diversity, interpersonal influence, communication technology, and information flow. Development of effective communication practices.

Prerequisite/Restriction: CMST 2110 or instructor permission

Effective Term

Spring 2017

CMST 3270 - Culture and Public Discourse
3 credits

This course will examine the influence that culture plays in the creation of public discourse within the United States and around the world. We will also examine the impacts that this discourse can have on our own cultural worldview.

Semester(s) Traditionally Offered: Spring

CMST 3300 - Clinical Experience I
1 credit

First clinical practicum in middle and secondary schools.
Arranged by special methods instructor. Required at Level I. Prerequisites are set by the Secondary Education Department.

Prerequisite/Restriction: Admission to Teacher Education

Corequisite: CMST 5370

Course Fee: $50.00

CMST 3330 - Intercultural Communication (DSS)
DSS Depth Social Sciences
3 credits

Study of how communication shapes culture and how culture, in turn, affects communication. Development of active intercultural communication in professional and personal contexts.

Semester(s) Traditionally Offered: Fall, Spring

CMST 3400 - Persuasion (CI)
CI Communications Intensive
3 credits

Survey of theory and research investigating the process of social influence. Topics include: compliance-gaining strategies, enactment and detection of deception, verbal and nonverbal influence, attitude change, conformity, communicator characteristics, credibility, emotional appeals, and ethics.

CMST 3460 - Communication Criticism (CI)
3 credits

Introduction to analysis of public communication from a variety of critical perspectives. With an approach including theory and practice, teaches students how to critically analyze discursive messages.

Prerequisite/Restriction: CMST 1020 or instructor permission

Effective Term
Summer

CMST 3470 - Qualitative Research in Communications Studies
3 credits

This course is designed to give students an introduction to qualitative research methods used in the communication studies discipline. Grounded in ethnographic methods, students will develop skills tied to observation, participant observation, interviewing, and interpretation/analysis of data as they relate to communication studies.

Semester(s) Traditionally Offered: Taught Alternate Years
Effective Term
Summer

CMST 3500 - Communication and Leadership
3 credits

Study of the role of communication in successful leadership at individual and organizational levels. Focuses specifically on contemporary theories of leadership, social responsibility, and ethics. Development of effective communication practices.

CMST 3540 - Quantitative Communication Studies Research Methods (QI)
3 credits

This course introduces students to quantitative research methods used to investigate human communication. Students will learn how to use statistics to conduct and interpret research designed to answer important questions in the field.

Prerequisite/Restriction: CMST 2110 (or instructor permission) and either STAT 1040 or STAT 1045

Semester(s) Traditionally Offered: Spring
Effective Term
Summer

CMST 3600 - Communication and Conflict
3 credits

Study of contemporary theories on conflict and communication. Analyses of the roles of culture, gender, and personal and/or organizational ethics in conflict and disputes. Discussion and application of negotiation, mediation, and facilitation skills.

Prerequisite/Restriction: CMST 2110 or instructor permission
Effective Term
Spring

CMST 3700 - Introduction to Health Communication (CI)
CI Communications Intensive
3 credits

This course introduces the many ways that communication shapes health and health practices. A variety of communication contexts and channels will be explored.

Prerequisite/Restriction: CMST 2110 or instructor permission

Semester(s) Traditionally Offered: Spring

CMST 4140 - Communication in Family Contexts
3 credits

This course facilitates understanding of the major theories and concepts in the study of communication phenomena in family relationships. Emphasis is placed on critical analysis of communication research into the family context.

Prerequisite/Restriction: CMST 2110 or instructor permission

Semester(s) Traditionally Offered: Fall
Effective Term
Summer

CMST 4200 - Language, Thought, and Action (DSS)
DSS Depth Social Sciences
3 credits

Examines the influence of language on perception, interpretation, and evaluation in a wide variety of communication contexts, from organizational communication to mass media to interpersonal relations.

CMST 4250 - Advanced Internship/Co-op
1-6 credits

Internship or cooperative education at a more professional level, with increased complexity, approved by the department and advisor. Internship project and number of credits must be approved by advisor.

Repeatable for credit (up to 6 credits total).

CMST 4300 - Clinical Experience II
1 credit

Second clinical practicum in middle and secondary schools. Arranged by special methods instructor. Required at Level II. Prerequisites are set by the Secondary Education Department.

Prerequisite/Restriction: Admission to Teacher Education

Corequisite: CMST 5370

CMST 4330 - Advanced Perspectives in Global Communication
3 credits

Exploration of the role of communication in a global setting, including issues of language, culture, power and technology. A variety of theories and perspectives will be explored.

Prerequisite/Restriction: CMST 1330

Cross-listed as: LANG 4330

CMST 4350 - Organizations and Social Change
3 credits

Explores the ways in which organizations effect social change. Focuses specifically on nonprofit organizations, social entrepreneurship, and corporate social responsibility. Analyzes how different organizations address a variety of social issues in local, national, and international contexts.

Semester(s) Traditionally Offered: Spring

CMST 4430 - Negotiation in a Global World
3 credits

This course is designed to increase the students' negotiation skills in a global setting. The course focuses
on developing cultural intelligence, strategic communication, and the ability to function across national, ethnic, and organizational cultures.

Semester(s) Traditionally Offered: Fall, Spring

CMST 4460 - Communication Criticism (CI)
CI Communications Intensive
3 credits

Introduction to analysis of public communication from a variety of critical perspectives. With an approach including theory and practice, teaches students how to critically analyze discursive messages.

CMST 4470 - Qualitative Research in Communications Studies
3 credits

This course is designed to give students an introduction to qualitative research methods used in the communication studies discipline. Grounded in ethnographic methods, students will develop skills tied to observation, participant observation, interviewing, and interpretation/analysis of data as they relate to communication studies.

Semester(s) Traditionally Offered: Taught Alternate Years

CMST 4570 - Quantitative Communication Studies Research Methods (QI)
QI Quantitative Intensive
3 credits

This course introduces students to quantitative research methods used to investigate human communication. Students will learn how to use statistics to conduct and interpret research designed to answer important questions in the field.

Prerequisite/Restriction: CMST 2110 (or instructor permission) and either STAT 1040 or STAT 1045

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2015

CMST 4700 - Health Communication (CI)
3 credits

This course introduces the many ways that communication shapes health and health practices. A variety of communication contexts and channels will be explored.

Prerequisite/Restriction: CMST 2110 or instructor permission

Semester(s) Traditionally Offered: Spring
Effective Term
Summer

CMST 5000 - Studies in Communication Studies
1-5

Study of special topics in interpersonal, small group, organizational, or intercultural communication theory and research.

Prerequisite/Restriction: Prerequisite/Restriction: Instructor permission

Repeatable
Semester(s) Traditionally Offered: Fall and Spring
Effective Term
Spring

CMST 5100 - Theories of Speech Communication (CI)
CI Communications Intensive
3 credits

Social, scientific, and humanistic inquiry into the process of human communication. Multi-theoretical approach, including perspectives and research on interpersonal, persuasive, organizational, intrapersonal, group, and intercultural communication.

Prerequisite/Restriction: Speech Communication major and completed six upper-division credits of speech coursework or instructor permission

Semester(s) Traditionally Offered: Spring

CMST 5250 - Communication, Social Justice and the Environment
3 credits

Study of persuasive tactics and strategies as used by social advocates. Focuses on environmental issues and organizations. Analysis of environmental messages with an emphasis on the development of writing and critical thinking skills.
CMST 5280 - Communication Education Theory
3 credits

Study of contemporary theories and research in communication education. Emphasis on communication competency development, communication apprehension, critical thinking, communication assessment, development of communication ethics, freedom of speech, instructional communication, and history of communication education.

CMST 5300 - Visual Rhetoric
3 credits

Helps students to gain a greater understanding of visual culture, communication, and persuasion. Specific to the communication discipline, students examine how visual elements work as arguments, while gaining knowledge about different approaches to analyzing visual messages. In addition, students enhance their ability to critically think and analyze visual texts, while improving their writing, research, discussion, and speaking skills.

Semester(s) Traditionally Offered: Fall

CMST 5370 - Methods in Teaching Speech Communication
3 credits

Development of materials and strategies for teaching secondary school speech communication.

Semester(s) Traditionally Offered: Alternate Years

CMST 5400 - Advanced Persuasion
3 credits

Provides more complex understanding of the process of persuasion, including an examination of traditional and contemporary theories of social influence. Investigates multiple variables, including context, which affect the sending and receiving of persuasive messages.

Prerequisite/Restriction: CMST 3400

Semester(s) Traditionally Offered: Spring

CMST 5500 - Communication and Leadership
3 credits

Study of the role of communication in successful leadership at individual and organizational levels.

CMST 5800 - Communication Studies Senior Capstone
2 credits

This is a senior capstone course designed for majors in their last year of study. Students will reflect on and synthesize the knowledge they have been gaining in the communication studies major.

Prerequisite/Restriction: CMST Major and completed at least twenty-one upper-division credits of CMST coursework or instructor permission

Semester(s) Traditionally Offered: Fall, Spring

Effective Term

Summer

CMST 5950 - Global Communication Practicum
3 credits

This global communication practicum is designed to tie together the various elements of the global communication major through practical experience in service learning or internship work in a cultural community distinct from the student’s own culture.

Cross-listed as: LANG 5950

Pass/Fail only

Semester(s) Traditionally Offered: Spring

Communicative Disorders and Deaf Education

COMD 2400 - Orientation and Observation
1 credit

Introduces students to the professional responsibilities required of communicative disorders and deaf education specialists in a variety of employment settings. Observation of normal/abnormal communication abilities. Language, hearing, and speech disorders.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 2500 - Language, Speech, and Hearing Development
3 credits

Language, speech, and hearing development throughout life and strategies for facilitating development. Requisites for human communication and language learning. Theoretical models of language acquisition and intracultural/intercultural differences.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $20.00

COMD 2600 - Introduction to Communication Disorders
2 credits

Addresses undergraduate study of types of communication disorders existing across the lifespan. Includes characteristics, etiologies, and brief introduction to assessment and intervention practices. Also explores fields of speech language pathology and audiology.

Semester(s) Traditionally Offered: Fall

COMD 2600 - Introduction to Communication Disorders
2 credits

COMD 2600 - Introduction to Communication Disorders
2 credits

COMD 3010 - American Sign Language I (CI)
CI Communications Intensive
4 credits

Introduction to American Sign Language and Deaf Culture/History. Students learn extensive ASL vocabulary, phrases and grammatical principles that prepare them for the academic use of ASL to teach school subjects. Skills taught far exceed those required for social communication.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $100.00

COMD 3050 - Practicum and Methods in Teaching Children who are Deaf and Hard of Hearing
1-3 credits

Students investigate various aspects of teaching methods through field experiences in the classroom, curriculum and effective teaching assessment, observation and reflections, and guest speakers focusing on areas of mathematics and science in the primary grades.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 3080 - American Sign Language Practice
1 credit

Provides opportunities for practice and continued improvement of receptive and expressive skills in American Sign Language.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 3100 - Fundamentals of Anatomy for Speech and Language
3 credits

Basic study of the structures and functions associated with the subprocesses of speech and hearing, including respiration, phonation, resonation, articulation, neurology, and hearing.

Prerequisite/Restriction: Must be admitted to the COMDDE major

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer

COMD 3120 - Disorders of Articulation and Phonology
3 credits

Introduction to articulation and phonological disorders and related problems. Emphasis directed at evaluation, management, and measures of success. Principles of programming are presented.

Prerequisite/Restriction: Minimum grade of B- in COMD 2500 and COMD 3500

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 3300 - Introduction to Blindness and Visual Impairment
3 credits

Explores learning characteristics and needs of children and youth (preschool through high school) who are blind or visually impaired, as well as educational settings they are in and professionals who serve them.

Semester(s) Traditionally Offered: Fall, Spring, Summer
COMD 3320 - The Human Eye and Visual System  
3 credits
Covers structure and function of the human eye and visual system. Addresses the most common eye conditions causing visual impairment in children and youth, along with their implications and treatment. Explores the role of eye care specialists.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 3330 - Introduction to Low Vision  
3 credits
Introduction to the needs of students having low vision. Methods of adapting materials, activities, and the environment to better meet the learning needs of these students. Includes training in the use of low-vision aids. Explores the role of professionals and their services.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 3340 - The Role of Paraeducators with Individuals Who are Blind or Visually Impaired  
3 credits
Addresses the roles and responsibilities of paraeducators who work in educational settings with children and youth who are blind or visually impaired. Covers the role of the educational team, as well as how the paraeducator functions as part of that team.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 3350 - Introduction to Multiple Disabilities  
3 credits
Presents introductory information about various disabilities, including those associated with sensory losses. Covers neurological issues related to brain development and learning. Addresses communication issues and strategies for working with individuals having multiple disabilities and sensory loss.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 3360 - Introduction to Braille  
3 credits
Introduction to braille literacy, as well as braille codes, software, and technology used to produce braille. Teaches students how to read and write uncontracted braille using a slate and stylus and a braille writer (actual or simulated).

COMD 3400 - Acoustics and Anatomy of the Ear  
3 credits
Principles of physical acoustics as applied to Communicative Disorders. Course includes anatomy, physiology, and metabolism of the human auditory system.

Prerequisite/Restriction: Minimum grade of B- in COMD 2500

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 3500 - Phonetics/Developmental Phonology  
3 credits
Study of the development of the phonological subsystem in English and the acoustic and physiological characteristics of speech sounds.

Prerequisite/Restriction: Must be admitted to the COMDDE major

Semester(s) Traditionally Offered: Fall  
Course Fee: $25.00  
Effective Term: Summer

COMD 3650 - Clinical Processes and Behavior (CI)  
CI Communications Intensive  
2 credits
A consideration of clinical management as an interactive process. Interpersonal sensitivity, technical knowledge and skills, professional infection-control measures, and behavior modification are core considerations.

Prerequisite/Restriction: COMD 2500 and PSY 1010

Semester(s) Traditionally Offered: Spring

COMD 3700 - Basic Audiology  
3 credits
Study of pure tone audiometry, including clinical masking, speech audiometry, and clinical immittance measures. Laboratory exercises may be required.
Prerequisite/Restriction: Minimum grade of B- in COMD 3400 Must be admitted into the COMDDE major

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $15.00
Effective Term
Summer

COMD 3910 - American Sign Language II
4 credits

Provides a more in-depth study of American Sign Language, Deaf folklore and literature, and the grammatical structure of ASL. Focuses on unique number systems, idioms, lexicalized fingerspelling, and ASL poetry. Course taught with a total immersion approach, with ample opportunities for practice with fluent users of ASL in the lab.

Prerequisite/Restriction: Grade of B- or better in COMD 3010

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $100.00

COMD 4100 - Clinical Practicum in Speech-Language Pathology (CI)
CI Communications Intensive
1-2 credits

Supervised diagnostic and treatment practicum with individuals who have communication disorders.

Prerequisite/Restriction: COMD 2500 and COMD 5100 and permission of department

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $35.00

COMD 4250 - Practicum in Deafblindness
1-6 credits

Provides practicum and work experience in serving children and youth having deaf-blindness or blindness. Assignments and projects vary, depending upon the student and the setting.

Prerequisite/Restriction: COMD 4660 or COMD 6660 and COMD 4840 or COMD 6840

Semester(s) Traditionally Offered: Fall, Spring

Page: 1 <- Back 10 .. 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 .. Forward 10 -> 64

Communicative Disorders and Deaf Education

COMD 4300 - Clinical Experience in Teaching American Sign Language
1 credit

First clinical practicum in teaching American Sign Language. Students observe and assist in teaching various classes of American Sign Language. Designed for students who are preparing to teach American Sign Language in secondary schools.

Prerequisite/Restriction: Admission to the Secondary Education STEP program, COMD 3010, COMD 3910, COMD 4910 and COMD 4920

Corequisite: COMD 4800

Semester(s) Traditionally Offered: Fall, Spring

COMD 4400 - Clinical Practicum in Audiology
1-2 credits

Supervised diagnostic and treatment practicum with individuals with hearing loss.

Prerequisite/Restriction: COMD 3400, COMD 3650, COMD 3700, and instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 4450 - Assessment and Treatment of Communicative Disorders in the Pediatric Population
3 credits

Designed to give students an introductory understanding of assessment and treatment procedures when working with the pediatric population having communicative disorders. Addresses multicultural considerations in assessment and treatment of communicative disorders.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Spring
COMD 4600 - Senior Thesis
1-6 credits
Student-initiated research project under faculty supervision.
Prerequisite/Restriction: Satisfactory grade point average, instructor recommendation, and approval of Honors Committee
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 4630 - Teaching Speech to Deaf and Hard of Hearing Children
3 credits
Evaluative and instructional models, processes, and methodologies in the development of speech for children who are deaf and hard of hearing.
Cross-listed as: COMD 6630.
Semester(s) Traditionally Offered: Spring

COMD 4660 - Introduction to Deaf-blindness
3-5 credits
Covers combined vision and hearing loss, as well as its impact on learning, communication, and overall development. Also explores neurological issues and other senses.
Cross-listed as: COMD 6660.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 4750 - Language and Literacy Development and Assessment of Individuals who are Deaf and Hard of Hearing Children: Preschool
3 credits
Evaluation and development of language and literacy (ASL/English) skills in individuals who are deaf and hard of hearing. Discussion of current research regarding the development and assessment of emergent literacy skills (ASL/English) and how to foster a literacy-rich environment in preschool settings. Graduate-level course syllabus will be differentiated.
Prerequisite/Restriction: COMD 3910
Cross-listed as: COMD 6750
Semester(s) Traditionally Offered: Fall

COMD 4760 - Early Intervention for Children who are Deaf and Hard of Hearing
3 credits
Family-centered early intervention for infants and young children who are deaf and hard of hearing. Identification, testing, hearing aids, communication, auditory, language, and emerging literacy programming, parent and family programs, mentoring.
Cross-listed as: COMD 6760.
Semester(s) Traditionally Offered: Fall

COMD 4770 - Audiology and Teachers of Children who are Deaf and Hard of Hearing
3 credits
Focuses on the fields of hearing science and audiology and how information from these disciplines relates to education of deaf and hard of hearing children.
Cross-listed as: COMD 6770.
Semester(s) Traditionally Offered: Fall

COMD 4780 - Socio-Cultural Aspects of Deafness
3 credits
Leads students to understand how society, political institutions, and education have impacted the Deaf culture.
Cross-listed as: COMD 6780.
Semester(s) Traditionally Offered: Fall

COMD 4790 - Psychological Principles and Individuals who are Deaf and Hard of Hearing
3 credits
Psychological theories and research used to describe the deaf and hard of hearing. Exploration of principles that can be used in helping these individuals achieve emotional well-being.
Cross-listed as: COMD 6790 and PSY 4790/PSY 6790.
Semester(s) Traditionally Offered: Spring

COMD 4800 - Methods of Teaching American Sign Language
3 credits

Designed for students who are preparing to teach American Sign Language in secondary schools. Emphasis on lesson planning, strategies and methods of teaching ASL and classroom management.

Prerequisite/Restriction: Admission to Secondary Education STEP program, COMD 3010, COMD 3910, COMD 4910 and COMD 4920

Corequisite: COMD 4300

Semester(s) Traditionally Offered: Fall, Spring

COMD 4840 - Children with Combined Vision, Hearing Loss, and Multiple Disabilities
3-5 credits

Designed to teach students how to implement appropriate intervention strategies for infants and young children (ages 0-3) related to communication, cognition, touch, play, self-care, orientation to the environment, etc., and how to help the family learn to communicate with their child.

Prerequisite/Restriction: COMD 4660 or COMD 6660

Cross-listed as: COMD 6840

Semester(s) Traditionally Offered: Fall, Spring

COMD 4890 - Additional Issues in Deafblindness
4 credits

This course will cover additional topics related to deafblindness including transition, health, mobility, and assessment. Graduate work requires an extra project.

Prerequisite/Restriction: COMD 4660/COMD 6660 and COMD 4840/COMD 6840

Cross-listed as: COMD 6890

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 4910 - American Sign Language III: Linguistics of ASL (CI)
CI Communications Intensive
4 credits

Basic concepts of linguistics of ASL discussed including an in depth analysis of ASL history, grammatical structure and ASL poetry. Application of linguistic principles with fluent ASL users via lab experience.

Prerequisite/Restriction: Grade of B- or better COMD 3910

Cross-listed as: COMD 6910

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $100.00

COMD 4920 - American Sign Language IV: Academic Use of ASL
4 credits

This course explores practical applications of ASL including nonmanual behaviors and signing English concepts with conceptual accuracy. It will prepare students for the rigorous demand of mastering teaching of English through ASL.

Prerequisite/Restriction: Grade of B- or better in COMD 4910

Cross-listed as: COMD 6920

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $100.00

COMD 5000 - Communication Disorders Seminars
0.5-3 credits

Special colloquial offerings in communicative disorders and deaf education.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 5070 - Speech Science
3 credits

Explores contemporary theory, research findings, clinical applications, and measurement and analysis of normal speech and voice production and perception. Speech production subsystems of respiration, phonation,
articulation, and resonation are examined in detail through the collection and analysis of physiologic data. Undergraduate credit only.

Prerequisite/Restriction: A minimum grade of B- in COMD 3100, COMD 3400, and COMD 3500  Must be admitted to the COMDDE major

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer

COMD 5100 - Language Science (CI)
CI Communications Intensive
3 credits

Study of clinical analysis of syntactic and morphological properties of speech. Undergraduate credit only.

Prerequisite/Restriction: Must be admitted to the COMDDE major

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $25.00
Effective Term
Summer

COMD 5200 - Language Assessment and Intervention for Children Birth to Age Five
3 credits

Language assessment and intervention for children from birth to age five, including language sampling and analysis procedures, interpreting formal and informal testing, facilitating language through strategies and corresponding theories, planning clinical management and intervention, and enhancing emergent literacy. Undergraduate credit only.

Prerequisite/Restriction: Minimum grade of B- in COMD 2500 and COMD 5100

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $20.00

COMD 5210 - Cultural and Linguistic Diversity in Communicative Disorders
3 credits

Assessment and remediation of culturally and linguistically diverse clients in communicative disorders. Graduate students taking course as COMD 6210 must complete different and additional assignments than are required for undergraduate students enrolled in COMD 5210.

Cross-listed as: COMD 6210.

Semester(s) Traditionally Offered: Fall

COMD 5250 - Diagnosis and Treatment of Adults in Speech Language Pathology
3 credits

Introduction to the diagnostic and treatment methods used for communication disorders associated with the adult population. Discusses specific disorders, including aphasia, apraxia, dysarthria, laryngectomy, stuttering, dysphagia, voice, and foreign accent/dialect. Explores cognitive and social aspects of communication.

Semester(s) Traditionally Offered: Spring

COMD 5330 - Aural Rehabilitation
3 credits

Ramifications of hearing loss for children and adults. Rehabilitative audiologic techniques and programs to improve communication of both children and adults who have hearing loss. Undergraduate credit only.

Prerequisite/Restriction: A minimum grade of B- in COMD 3100 and COMD 3400  Must be admitted to the COMDDE major

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer

COMD 5600 - Classroom Teaching Using American Sign Language
3 credits

Emphasizes development and presentation of lesson plans for different grade levels. Focuses on developing students' abilities in moving from and linking Language 1 (American Sign Language) and Language 2 (the written form of English).

Prerequisite/Restriction: COMD 3010, COMD 3910, and COMD 4910

Semester(s) Traditionally Offered: Spring
COMD 5610 - Introduction to Education of the Deaf and Hard of Hearing
3 credits
Overview of the history of educating children who are deaf and hard of hearing. Presents an overview of techniques, anatomy of the ear, and different philosophical views for teaching people who are deaf and hard of hearing.

Semester(s) Traditionally Offered: Fall

COMD 5620 - Teaching School Subjects to Students who are Deaf and Hard of Hearing
3 credits
Focuses on effective strategies for teaching students who are deaf and hard of hearing across curricular subject areas. Emphasizes infusion of language and reading into all content areas.

Semester(s) Traditionally Offered: Spring

COMD 5630 - Literacy Methods in Early Childhood Deaf Education
3 credits
Study of early childhood curriculum, methodology, and learning environments specific to deaf and hard-of-hearing children and ASL/literacy development. Examination of current issues and hands-on application of research-based methods pertinent to early childhood Bilingual-Bicultural Deaf education programming.

Prerequisite/Restriction: COMD 4750/COMD 6750, COMD 4910

Semester(s) Traditionally Offered: Spring

COMD 5740 - Teaching Reading to Deaf and Hard of Hearing Children
3 credits
Exploration of resources and methods used to teach reading to deaf and hard of hearing children. Discussion of current research regarding the effectiveness of these methods and ideas for improving reading instruction.

Prerequisite/Restriction: Grade of B- or better in COMD 3910 or instructor permission

Cross-listed as: COMD 6740

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 5680 - Interdisciplinary Training in Assistive Technology I
3 credits
Provides interdisciplinary training in assistive technology, focusing on assistive devices related to powered mobility, seating and positioning, computer access, and augmentative and alternative communication.

Prerequisite/Restriction: Permission of department

Cross-listed as: COMD 6860.

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

COMD 5870 - Interdisciplinary Training in Assistive Technology II
3 credits
Provides advanced training in assistive technology, focusing on assistive devices related to cognitive, hearing, visual, and dual sensory impairments. Funding issues also addressed.

Cross-listed as: COMD 6870.

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

COMD 5880 - Methods and Procedures in Early Intervention
3 credits
Teaches specific methods and procedures necessary for
working in early intervention programs serving families of infants and young children with hearing loss, including assessment procedures, specific home visit delivery procedures, and methods of working with support professionals and team members.

Semester(s) Traditionally Offered: Spring

COMD 5900 - Independent Study
1-6 credits

Selected work individually assigned, handled, and directed. Problems of mutual interest to students and the instructor are investigated and reported.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 5910 - Interpreting I: Vocabulary Development
3 credits

This course provides opportunities for interpreters to expand their ASL and English vocabulary, practice interpreting challenging phrases, and increase their ability to accurately interpret messages in a variety of interpreting settings.

Prerequisite/Restriction: Instructor permission
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 5920 - Interpreting II: Legal Issues and Interpreting
3 credits

A study of laws and court cases and their application to current practices and issues related to the interpreting profession. Code of ethics and professional conduct explored more in depth.

Prerequisite/Restriction: Instructor permission
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 5930 - Interpreting III: Current Issues and Trends
3 credits

A study of special topics, trends, and issues facing interpreters nation-wide, state-wide, and locally. Includes information about professional interpreting organizations, certifications, professional development, and networking with professionals in aligned professions.

Prerequisite/Restriction: Instructor permission
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6020 - Language Assessment and Intervention for School-age Children and Adolescents
3 credits

Language assessment and intervention for school-age children and adolescents, including developmental oral and written language deficits, dynamic language assessment, interpreting formal and informal testing, facilitating language through strategies and corresponding theories, planning clinical management and intervention, and linking curriculum-based instruction.

Prerequisite/Restriction: COMD 5200 or equivalent
Semester(s) Traditionally Offered: Fall

COMD 6030 - Disorders of Fluency-Stuttering
3 credits

Provides understanding of theory, nature, etiologies, and principles of diagnosis and treatment of communication disorders related to stuttering and other disorders of fluency.

Semester(s) Traditionally Offered: Fall

COMD 6040 - Communication Disorders Related to Orofacial Anomalies
3 credits

Nature, etiologies, and principles of diagnosis and treatment of communication disorders related to orofacial anomalies.

Prerequisite/Restriction: Graduate standing
Semester(s) Traditionally Offered: Fall

COMD 6050 - Professional Practice in Speech-Language Pathology
2 credits

Lecture, discussion, and guest presenters on various professional practice topics pertaining to speech-language pathology.
Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Fall

COMD 6060 - Seminar in Speech-Language Pathology
1-3 credits

Covers professional issues and school-based practices in speech-language pathology.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

COMD 6100 - Advanced Clinical Practicum in Speech-Language Pathology
1-4 credits

Supervised diagnostic and treatment practicum with individuals who have communication disorders.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $80.00

COMD 6120 - Adult Language Disorders
3 credits

Study of neuropathologies of language, cognition, and communication associated with aphasia, traumatic brain injury, right hemisphere syndrome and dementia. Addresses underlying pathology, diagnostic methods, and management of these disorders using evidence-based practice.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6130 - Neural Bases of Communication and Motor Speech Disorders
1-4 credits

Considers the neurological substrates of communication and clinical manifestations of motor speech disorders, including dysarthria and apraxia, across the lifespan. Addresses diagnostic methods and management of these disorders using evidence-based practice.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6140 - Dysphagia
1-3 credits

Considers the neurological substrates of normal deglutition and clinical manifestation of dysphagia across the lifespan. Addresses diagnostic methods and management of these disorders using evidence-based practice.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $25.00

COMD 6150 - Phonological Assessments and Intervention
3 credits

Graduate study of theoretical and clinical issues related to the assessment and intervention of articulation and phonological disorders in children.

Semester(s) Traditionally Offered: Spring

COMD 6200 - Internship in Public Schools-Speech-Language Pathology
4-5 credits

Supervised public school practicum in speech-language pathology.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $80.00

COMD 6210 - Cultural and Linguistic Diversity in Communicative Disorders
3 credits

Assessment and remediation of culturally and linguistically diverse clients in communicative disorders. Graduate students taking course as COMD 6210 must complete different and additional assignments than are required for undergraduate students enrolled in COMD 5210.

Cross-listed as: COMD 5210.

Semester(s) Traditionally Offered: Fall

COMD 6220 - Severe Communication Impairments
1-3 credits

Study of assessment and treatment strategies for individuals with severe communication impairments, including those requiring augmentative and alternative communication systems.
COMD 6230 - Introduction to Research in Communicative Disorders
3 credits
Introduction to experimental research designs, including educational research and development, causal-comparative, correlational, and qualitative research. Includes research reviews, research proposals, threats to internal and external validity, and statistical/practical significance.

Prerequisite/Restriction: PSY 3010

COMD 6300 - Externship in Speech-Language Pathology
1-12 credits
Supervised off-campus practicum in speech-language pathology. Prerequisite: Consent of instructor.

Repeatable for credit.

COMD 6320 - Language Learning and Literacy Acquisition in Children with Hearing Loss
3 credits
Addresses unique process of language learning in children with hearing loss. Explores processes and strategies to facilitate literacy acquisition in these children through an auditory-oral approach.

COMD 6340 - Auditory Learning and Spoken Language for Children with Hearing Loss
3 credits
Examines developmental processes underpinning audition and spoken language acquisition. Explores specific techniques, strategies, and teaching behaviors for developing listening and spoken language in young children who are deaf or hard of hearing.

COMD 6350 - Early Elementary and Itinerant Support for Children who are DHH using LSL
3 credits
This course will provide theoretical knowledge and practical strategies to support special educators and Speech Language Pathologists (SLP) in providing Listening Speech and Language (LSL) services to children who are Deaf, Hard of Hearing (DHH) in the general education setting. Emphasis will be placed on developing lesson plans and appropriate goals to optimize language, literacy, math, and general academic achievement.

COMD 6360 - LSL Preschool Curriculum: Language and Cognition
3 credits
This class focuses on theories, current research, and practical strategies for facilitating cognitive development in children with hearing loss. Students learn that cognition is the foundation for language acquisition and critical thinking skill development. Children need to explore and problem solve using everyday activities to learn to think and then apply that knowledge to language, literacy and academic development.

COMD 6430 - Speech Communication and Hearing Loss
3 credits
History of listening and speech programs for the hearing impaired. Hearing aids and FM systems, as well as computer and electronic devices used in supporting the speech of this population. Discussion of cochlear implants, the palatometer, and TranSonic hearing aids.

COMD 6500 - Studies in Blindness and Visual Impairment
3 credits
Survey and discussion of studies of the learning characteristics and needs of children and youth who are blind or visually impaired (preschool through high school), the educational settings they are in, and the professionals who serve them.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6520 - Anatomy, Function, and Disorders of the Eye
3 credits
Covers structure and function of the human eye and visual system. Explores the most common eye conditions causing visual impairment in children and youth, as well as their implications and treatment. Examines the role of eye care specialists. With additional projects and readings, course goes beyond the information provided in undergraduate courses.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6530 - Issues in Low Vision
3 credits
Investigates students having low vision. Explores methods of adapting materials, activities, and the environment to better meet their learning needs. Includes training in the use of low-vision aids, while exploring the role of professionals and their services. Continuation and expansion of the related undergraduate course, COMD 3330.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6540 - Visual Impairments and the Role of Paraeducators
3 credits
Examines the roles and responsibilities of paraeducators who work with children and youth who are blind or visually impaired in educational settings. Explores the role of the educational team and how team members can best include and utilize paraeducators as part of the team. Continuation and expansion of the related undergraduate course, COMD 3340.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6550 - Vision Loss with Multiple Disabilities
3 credits
Presents specific information about the impact of multiple disabilities on individuals having visual sensory losses. Covers neurological issues related to brain development and learning. Addresses communication issues and strategies for working with individuals who have multiple disabilities and sensory loss. Continuation and expansion of the related undergraduate course, COMD 3350.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6560 - Braille
3 credits
Online course open to graduate students. Explores braille literacy. Provides instruction in braille codes, software, and technology used to produce braille.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6580 - Family-Centered Practices for Children who are DHH
2 credits
Explores issues, theories, models, research, and practices related to family and professional relationships in early intervention for children with hearing loss. Emphasizes early intervention needs of children with hearing loss who are acquiring spoken language.

Semester(s) Traditionally Offered: Fall, Spring

COMD 6600 - Practicum in Early Intervention
1-4 credits
Supervised student practice in early intervention programs for children ages 0-3.
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6630 - Teaching Speech to Deaf and Hard of Hearing Children
3 credits
Evaluative and instructional models, processes, and methodologies in the development of speech for children who are deaf and hard of hearing.
Cross-listed as: COMD 4630.

Semester(s) Traditionally Offered: Spring
COMD 6640 - Seminar: Issues in Deaf Education
3 credits

Culminating seminar allowing students to synthesize and apply previously learned material about teaching deaf children in the real classroom. Includes reading and discussion of issues and solutions which teachers might face with students, parents, and administrators. Discussion of identity development of teachers of the deaf sensitive to cultural diversity.

Prerequisite/Restriction: COMD 4750 or COMD 6750 and COMD 4920 and COMD 5600 and COMD 5620

Semester(s) Traditionally Offered: Fall

COMD 6650 - Strategies for Teaching English Language to Children who are Deaf and Hard of Hearing
3 credits

Practical methods for applying theories of teaching the English language in classrooms where deaf and hard of hearing children are educated.

Prerequisite/Restriction: COMD 4750/COMD 6750

Semester(s) Traditionally Offered: Fall

COMD 6660 - Introduction to Deaf-blindness
3-5 credits

Covers combined vision and hearing loss, as well as its impact on learning, communication, and overall development. Also explores neurological issues and other senses.

Cross-listed as: COMD 4660.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6670 - Medical Aspects and Assessment of Young Children with Visual Impairments, 0-3
3-5 credits

Examines impact of vision impairment on the development and learning of infants and toddlers; medical aspects of vision loss; tools, materials, and strategies to use in assessing functional vision and overall development; and working with families and intervention teams.

Semester(s) Traditionally Offered: Fall

COMD 6680 - SKI*HI Training
1-3 credits

Training in implementation of the SKI*HI Model. Early home intervention for infants and young children who are deaf and hard of hearing, and their families.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6690 - Early Intervention Methods and Materials for Young Children with Visual Impairments, 0-3
3-5 credits

Covers intervention strategies and materials; adapting routines and materials in the home; working with support staff; use of other senses; and familiarization with curriculum resources in all developmental domains (e.g., fine and gross matter, communication and language, cognition, etc.).

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

COMD 6700 - Practicum in Education of Children who are Deaf and Hard of Hearing
1-3 credits

Supervised diagnostic and remedial casework in education of the deaf and hard of hearing.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6710 - Mainstreaming Children who are Deaf and Hard of Hearing
3 credits

Rationale and procedures used to successfully mainstream children with hearing loss. Also methods of evaluating programs where children with hearing loss are to be placed.

Semester(s) Traditionally Offered: Fall

COMD 6720 - Serving Preschoolers with Vision Impairments in Center Based Settings
3-4 credits

To provide students with knowledge and skills in working with children with visual impairments in the preschool setting.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6730 - Multiple Disabilities and Syndromes
2 credits

Students will obtain a basic understanding of the problems and characteristics of children who have hearing loss plus one or more disabling conditions. Teaching strategies will also be discussed.

Cross-listed as: COMD 5730.

Semester(s) Traditionally Offered: Spring, Summer

COMD 6740 - Teaching Reading to Deaf and Hard of Hearing Children
3 credits

Exploration of resources and methods used to teach reading to deaf and hard of hearing children. Discussion of current research regarding the effectiveness of these methods and ideas for improving reading instruction.

Prerequisite/Restriction: Grade of B- or better in COMD 3910 or instructor permission

Cross-listed as: COMD 5740

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6750 - Language and Literacy Development and Assessment of Individuals who are Deaf and Hard of Hearing Children: Preschool
3 credits

Evaluation and development of language and literacy (ASL/English) skills in individuals who are deaf and hard of hearing. Discussion of current research regarding the development and assessment of emergent literacy skills (ASL/English) and how to foster a literacy-rich environment in preschool settings. Graduate-level course syllabus will be differentiated.

Prerequisite/Restriction: COMD 3910

Cross-listed as: COMD 4750

Semester(s) Traditionally Offered: Fall

COMD 6760 - Early Intervention for Children who are Deaf and Hard of Hearing
3 credits

Family-centered early intervention for infants and young children who are deaf and hard of hearing. Identification, testing, hearing aids, communication, auditory, language, and emerging literacy programming, parent and family programs, mentoring.

Cross-listed as: COMD 4760.

Semester(s) Traditionally Offered: Fall

COMD 6770 - Audiology and Teachers of Children who are Deaf and Hard of Hearing
1-3 credits

Focuses on the fields of hearing science and audiology and how information from these disciplines relates to education of deaf and hard of hearing children.

Cross-listed as: COMD 4770.

Semester(s) Traditionally Offered: Fall

COMD 6780 - Socio-Cultural Aspects of Deafness
3 credits

Leads students to understand how society, political institutions, and education have impacted the Deaf culture.

Cross-listed as: COMD 4780.

Semester(s) Traditionally Offered: Fall

COMD 6790 - Psychological Principles and Individuals who are Deaf and Hard of Hearing
3 credits

Psychological theories and research used to describe the deaf and hard of hearing. Exploration of principles that can be used in helping these individuals achieve emotional well-being.

Cross-listed as: COMD 4790 and PSY 6790/PSY 4790.

Semester(s) Traditionally Offered: Spring

COMD 6800 - Student Teaching – Day-School Program
6-12 credits

Full-time student teaching in a day-school program for
Repeatable for credit.
Semester(s) Traditionally Offered: Fall
Course Fee: $400.00

COMD 6810 - Voice, Resonance, and Craniofacial Disorders
1-4 credits

Explores contemporary theory related to the anatomy and physiology of laryngeal and orofacial structures, as well as evidence-based practice in the diagnosis and treatment of disorders associated with voice, resonance, and orofacial anomalies.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $30.00

COMD 6820 - Principles of Intervention for Children who are Deaf and Hard of Hearing
3 credits

Application of teaching principles to classrooms for the deaf and hard of hearing. Practicum with children is part of this course.

Prerequisite/Restriction: COMD 6640, COMD 6650, and instructor permission

Semester(s) Traditionally Offered: Spring

COMD 6830 - Student Teaching-Residential
6-12 credits

Full-time student teaching at a residential school for the deaf. Prerequisite: Permission of instructor.

Semester(s) Traditionally Offered: Spring
Course Fee: $500.00

COMD 6840 - Children with Combined Vision, Hearing Loss, and Multiple Disabilities
3-5 credits

Designed to teach students how to implement appropriate intervention strategies for infants and young children (ages 0-3) related to communication, cognition, touch, play, self-care, orientation to the environment, etc., and how to help the family learn to communicate with their child.

Prerequisite/Restriction: COMD 4660 or COMD 6660
Cross-listed as: COMD 4840

Semester(s) Traditionally Offered: Fall, Spring

COMD 6850 - Seminar in Communicative Disorders and Deaf Education
1-3 credits

Research and analysis of selected topics.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6860 - Interdisciplinary Training in Assistive Technology I
3 credits

Provides interdisciplinary training in assistive technology, focusing on assistive devices related to powered mobility, seating and positioning, computer access, and augmentative and alternative communication.

Prerequisite/Restriction: Permission of department
Cross-listed as: COMD 5860.

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

COMD 6870 - Interdisciplinary Training in Assistive Technology II
3 credits

Provides advanced training in assistive technology, focusing on assistive devices related to cognitive, hearing, visual, and dual sensory impairments. Funding issues also addressed.

Cross-listed as: COMD 5870.

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

COMD 6890 - Additional Issues in Deafblindness
4 credits

This course will cover additional topics related to deafblindness including transition, health, mobility, and assessment. Graduate work requires an extra project.
Prerequisite/Restriction: COMD 4660/COMD 6660 and COMD 4840/COMD 6840

Cross-listed as: COMD 4890

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6900 - Independent Study
1-9 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6910 - American Sign Language III: Linguistics of ASL
4 credits

Basic concepts of linguistics of ASL discussed including an in depth analysis of ASL history, grammatical structure and ASL poetry. Application of linguistic principles with fluent ASL users via lab experience.

Prerequisite/Restriction: Grade of B- or better in COMD 3910 or instructor permission

Cross-listed as: COMD 4910

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $100.00

COMD 6920 - American Sign Language IV: Academic Use of ASL
4 credits

This course explores practical applications of ASL including nonmanual behaviors and signing English concepts with conceptual accuracy. It will prepare students for the rigorous demand of mastering teaching of English through ASL.

Prerequisite/Restriction: Grade of B- or better in COMD 4910 or COMD 6910 or instructor permission

Cross-listed as: COMD 4920

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $100.00

COMD 6950 - Practicum in Early Intervention
1-6 credits

Supervised student practicum in parent-infant home-based and preschool programs.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

COMD 6960 - Master's Project
1-4 credits

This experience provides students with an opportunity to design and carry out a creative project which is closely related to his or her area of teaching specialty. May require a written report.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6970 - Thesis
1-7 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 6990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7200 - Introduction to Clinical Practice
1-4 credits

Supervised diagnostic practicum for first-year students in the Audiology Program.

Prerequisite/Restriction: Admission to the Audiology Program

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $15.00

COMD 7250 - Pediatric Audiology Practicum for the Listening and Spoken Language Emphasis
1 credit
Pediatric audiology practicum for students participating in the Listening and Spoken Language (LSL) emphasis. Repeatable for credit Semester(s) Traditionally Offered: Fall, Spring, Summer

Communicative Disorders and Deaf Education

COMD 7300 - Intermediate Clinical Practicum 1-4 credits

Supervised diagnostic practicum for second-year students in the Audiology Program. Prerequisite/Restriction: Admission to the Audiology Program Repeatable Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $15.00

COMD 7310 - Psychoacoustics and Instrumentation 3 credits

Covers psychoacoustic aspects of human audition, with emphasis on application in the clinical setting. Explores basic electronics and audio systems. Prerequisite/Restriction: Admission to the Audiology Program Semester(s) Traditionally Offered: Fall

COMD 7320 - Amplification I 3 credits

Hearing aid types and uses, hearing aid components and characteristics, electroacoustic performance, hearing aid candidacy and hearing aid evaluation, and hearing aid fitting and orientation. Prerequisite/Restriction: Admission to the Audiology Program Semester(s) Traditionally Offered: Fall Course Fee: $20.00

COMD 7330 - Supervision Internship 1-7 credits

Provides extensive supervisory experience for advanced students. Internship is for a period of time to be specified by the department and cooperating agency. Prerequisite/Restriction: Instructor permission Repeatable for credit Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7340 - Pediatric Audiology 2-3 credits

Provides students with understanding of normal auditory development and theoretical, clinical, and practical issues involved in screening, assessment, and management of children with hearing loss. Semester(s) Traditionally Offered: Fall

COMD 7380 - Advanced Audiology 2 credits

Special auditory testing for site of lesion in the conductive, sensory, and neural/central auditory systems with special emphasis on the comprehensive behavioral audiological test battery. Prerequisite/Restriction: Admission to the Audiology Clinical Doctoral Program Semester(s) Traditionally Offered: Fall

COMD 7400 - Advanced Clinical Practicum 1-4 credits

Supervised clinical practicum for third-year students in the Audiology Program. Prerequisite/Restriction: Admission to the Audiology Program Repeatable Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $15.00

COMD 7410 - Noise and Hearing Conservation 2 credits

Principles of noise hazard evaluation, effects of noise on
Applications of advanced hearing aid circuitry. Hearing aid troubleshooting, modifications, and repairs are addressed. Pediatric amplification is also covered.

Prerequisite/Restriction: Admission to the Audiology Graduate Program

Semester(s) Traditionally Offered: Spring

COMD 7430 - Electrophysiology
3 credits

Provides students with extensive working knowledge of early, middle, and late evoked potentials. Assessment of the sensory function of the auditory system with otoacoustic emissions also included.

Prerequisite/Restriction: Admission to the Audiology Clinical Doctorate Program

Semester(s) Traditionally Offered: Fall, Summer

Course Fee: $20.00

COMD 7450 - Counseling for Communicative Disorders I
1

Course provides foundational theoretical background knowledge necessary for effective implementation of evidence-based counseling approaches when providing diagnostic, treatment, and educational services for individuals with communicative disorders and their families.

Semester(s) Traditionally Offered: Summer, Fall Spring Effective Term

COMD 7460 - Adult Aural Rehabilitation
3 credits

Focuses on traditional aural rehabilitation models, amplification, counseling, speech reading, and assistive listening devices. Upon course completion, students should be able to effectively use these elements to assist adults in compensating for hearing impairment.

Prerequisite/Restriction: Admission to the Audiology Program

Semester(s) Traditionally Offered: Spring

COMD 7470 - Counseling for Communicative Disorders II
2

Course provides instructional support for skill acquisition of evidence-based counseling approaches when providing diagnostic, treatment, and educational services for individuals with communicative disorders and their families.

Prerequisite/Restriction: COMD 7450

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term

Fall 2016

COMD 7490 - Medical Aspects of Audiology
3 credits

Study of the etiology, symptomatology, audiological manifestations, and medical treatment of various pathological conditions of the auditory system.

Prerequisite/Restriction: Admission to the Audiology Program

Semester(s) Traditionally Offered: Spring

COMD 7500 - Humanitarian Outreach in Audiology
1-3 credits

Audiological practices in various countries and cultures; epidemiological study of hearing loss around the world and approaches to remediation; philosophical and cultural approaches to hearing health care. Part 1 will be didactic instruction; Part 2 will be clinical practicum providing hearing services to underserved/underrepresented populations, working with professionals in related/allied areas.

Prerequisite/Restriction: Admission into Doctor of Audiology program
Repeatable for credit.
Semester(s) Traditionally Offered: Spring, Summer, Fall
Effective Term
Fall 2016

COMD 7510 - Supervision in Communicative Disorders
2 credits

Principles and practices of supervision in Communicative Disorders and Deaf Education. Emphasizes clinical and educational supervision as these styles relate to individuals who are deaf and hard of hearing or who have communicative disorders.

Semester(s) Traditionally Offered: Summer

COMD 7520 - Introduction to Cochlear Implants
2-3 credits

Provides an introduction to cochlear implant technology, including a history of cochlear implants, the development of cochlear implants, candidacy for cochlear implants, and outcomes for cochlear implant recipients. Audiology students should register for section 1, and nonaudiology students should register for section 2.

Prerequisite/Restriction: Graduate standing in Communicative Disorders and Deaf Education Department

Semester(s) Traditionally Offered: Fall, Summer, Spring

COMD 7530 - Balance Evaluation and Management
3 credits

Explores techniques and technology for vestibular and balance assessment, including electronystagmography, videonystagmography, rotational testing, and posturography.

Prerequisite/Restriction: Admission to the Audiology Program

Semester(s) Traditionally Offered: Spring

COMD 7710 - Evidence-Based Practice in Audiology
3 credits

Discussion of evidence-based practice in hearing and balance disorders, including existing research base, areas in need of further research, and issues related to implementation in practice.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7730 - Advanced Topics in Audiology
3 credits

Discussion of advanced topics and issues in hearing and balance disorders, including assessment and treatment considerations, underlying influences related to treatment adherence, and functional outcomes.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7740 - Research in Audiology
3 credits

Under faculty direction, students read and discuss current research in audiology, examine methods used, and limitations.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7800 - Clinical Externship in Audiology
1-9 credits

Twelve-month full-time clinical practicum experience in one or more off-campus clinical sites.

Prerequisite/Restriction: Admission to the Audiology Program

Repeatable for credit.

COMD 7810 - Research Seminar in Educational Audiology
1-3 credits

Identification of research problem, consideration of research strategies and methods, application of research and statistical concepts in departmental focus, interaction with faculty.

Repeatable for credit.

COMD 7820 - Clinical Research in Audiology
1 credit

Facilitates completion of doctoral students’ clinical research projects in audiology. Further enables students to incorporate evidence-based practice into the
profession of audiology.

Prerequisite/Restriction: Admission to the Audiology Program

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

COMD 7830 - Special Topics in Speech-Language Pathology
3 credits

Discussion of advanced topics and issues in speech and language disorders, including theories of information processing and learning mechanisms underlying speech and language disorders, the nature of various types of speech and language disorders, current research in speech and language disorders, assessment practices, and/or intervention practices.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7840 - Journal Reading Group in Speech-Language Pathology
1 credit

Under faculty direction, students read and discuss published research. Students learn to critique empirical and theoretical papers, as well as current research findings in important areas of speech-language pathology.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7850 - Externship Seminar
1

Internet-based seminar in current clinical related topics for fourth-year students in the Doctorate of Audiology Program.

Repeatable
Semester(s) Traditionally Offered: Fall, Spring

Effective Term
Spring

COMD 7860 - Practice Management in Audiology
2 credits

Audiology business and practice management.

Discussion of business set-up, the business plan, managerial accounting and financial analysis, marketing, pricing, reimbursement, record keeping, and forensics.

Prerequisite/Restriction: Admission to the Audiology Program

Semester(s) Traditionally Offered: Spring

COMD 7870 - Clinical Research Project
1-6 credits

Under the direction of his or her advisory committee, student develops a clinically-related project. This project is a creative work at a doctoral level and worthy of publication or presentation.

Prerequisite/Restriction: Admission to the Audiology Program

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

COMD 7880 - Research Methods in Audiology
2 credits

Discussion of common research methods used in audiological research and design considerations.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7890 - Journal Reading - Audiology
1 credit

Under faculty direction, students read and discuss published research. Students learn to critique empirical and theoretical papers as well as current research findings in important areas of Audiology.

Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7900 - Independent Study
1-2 credits

Advanced students, under direction of a faculty member, will study independently; however, departmental permission is necessary.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
COMD 7910 - Independent Research
1-2 credits

Advanced students, under direction of a faculty member, will do research in an area of interest to themselves.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7970 - Dissertation
1-9 credits

Variable credit for dissertation project in connection with the doctoral program emphasis in educational audiology.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

COMD 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Computer Science

CS 1030 - Foundations of Computer Science (BPS)
BPS Breadth Physical Sciences
3 credits

Investigation of computers and computing in today's society, including the basic scientific and mathematical concepts that underlie computer science, computing, and computer systems.

Semester(s) Traditionally Offered: Fall
Course Fee: $60.00

CS 1035 - Foundations of Computer Science Laboratory
1 credit

This is a Programming Laboratory class. It prepares students who have no programming experience to be able to succeed in CS 1400 and CS 1405

Corequisite: CS 1030

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

CS 1400 - Introduction to Computer Science--CS 1
3 credits

Introduction to science of problem solving, programming, program development, algorithm analysis, and data structures. Students will learn to develop correct software in a current programming language environment. Computer science majors must enroll in CS 1405 concurrently with CS 1400.

Prerequisite/Restriction: Grade of C- or better in MATH 1050, AP Calculus AB score of 3 or higher, or Math ACT score of 25 or higher or equivalent SAT Math score

Corequisite: CS 1405

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $80.00
Effective Term
Summer 2016

CS 1405 - Introduction to Computer Science--CS 1 Lab
1 credit

One-hour lab taught in conjunction with CS 1400. Students learn to develop correct software in a hands-on structured environment. All students taking CS 1400 are required to enroll in CS 1405 concurrently.

Prerequisite/Restriction: Grade of C- or better in MATH 1050, AP Calculus AB score of 3 or higher, or Math ACT score of 25 or higher or equivalent SAT Math score

Corequisite: CS 1400 (Corequisite, but may be taken prior to)

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $25.00
Effective Term
Summer 2016

CS 1410 - Introduction to Computer Science--CS 2 (QI)
QI Quantitative Intensive
3 credits

Introduction to science of problem solving, programming, program development, algorithm analysis, and data structures. Students will learn to develop correct software in a current programming language environment.
Prerequisite/Restriction: Grade of C- or better in CS 1400

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $60.00

CS 1440 - Methods in Computer Science
3

CS 1440 helps students become “good” software developers using the basic programming concepts acquired in CS 1400. This class is not focused on learning a features or constructs of a programming language; rather, it teaches principles and practices that help manage complexity, improve software quality, and leverage existing or new technologies.

Prerequisite/Restriction: CS 140

Semester(s) Traditionally Offered: Fall Spring
Effective Term
Spring 2017

CS 2250 - Cooperative Work Experience
1-9 credits

Provides credit for students working at a participating firm under faculty supervision.

Prerequisite/Restriction: 2.5 GPA; instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 2410 - Introduction to Event Driven Programming and GUI's
3 credits

Students will learn the fundamentals of event-driven software, common graphical user interface (GUI) components, GUI development environments and a new programming language. They will also strengthen their understanding of essential object-oriented concepts, including classes, inheritance and polymorphism.

Prerequisite/Restriction: CS 140
Repeatable
Semester(s) Traditionally Offered: Fall and Spring
Course Fee: $60.00
Effective Term
Fall 2015

CS 2412 - Introduction to Graphical User Interface Development in C#
3 credits

Students will learn the fundamentals of event-driven software, common graphical user interface (GUI) components, GUI development environments, and a second programming language (C#). They will also strengthen their understanding of essential object-oriented concepts, including classes, inheritance and polymorphism.

Prerequisite/Restriction: CS 140

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $60.00

CS 2420 - Algorithms and Data Structures—CS 3 (QI)
QI
3 credits

Objectives of this course: a mastery of data structures, refining programming skills, a mastery of developing strategies for the design and evaluation of algorithms, a familiarity with algorithm analysis, a mastery of recursion, a familiarity of sorting algorithms, a familiarity of graphs, a familiarity of trees, a mastery of binary search trees, a mastery of hash tables, a mastery of priority queues, a mastery of splay trees, a mastery of merging priority queues, a familiarity of disjoint set classes, an exposure to dynamic programming, an exposure to greedy algorithms.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 1410

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $60.00
Effective Term
Spring

CS 2610 - Developing Dynamic, Database-Driven, Web Applications
3 credits

Develop secure, dynamic, database-driven web applications. Learn the fundamentals of building web pages. Add interactive capabilities with client-side and server-side technologies. Learn about information representation, storage, retrieval and transmission in Internet-based environments.
Prerequisite/Restriction: CS 2410 or CS 2412

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $60.00

CS 2612 - Developing Database-Driven Web Applications Using ASP.NET
3 credits

Develop applications to be distributed over the web. Learn information representation, storage, retrieval and transmission in Internet-based environments. Use the tools available in ASP.NET to develop secure, database-driven, dynamic web applications.

Prerequisite/Restriction: CS 2410 or CS 2412

Semester(s) Traditionally Offered: Fall, Spring

CS 3000 - Undergraduate Seminar
1 credit

Serves as a capstone course for the pre-computer science curriculum, as well as an introduction to the advanced standing curriculum. Also includes discussion of computer science as a career and discussion of the advanced standing test.

Prerequisite/Restriction: CS 2420 (can be taken concurrently)

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 3010 - Information Acquisition, Analysis and Presentation (DSC/CI/QI)
DSC/CI/QI Depth Life and Physical Sciences, Communications Intensive, and Quantitative Intensive
3 credits

Introduces students to use of scientific method and computer technology in analysis of multi-faceted problem, and presentation of that analysis. Each semester, built around single topic such as global warming.

Prerequisite/Restriction: Completion of University Studies Quantitative Literacy (QL) requirements

Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 3100 - Operating Systems and Concurrency
3 credits

Design and implementation of operating systems. UNIX will be used as one example, but all categories of operating systems will be discussed. Presentation of the concept of concurrency as it applies to operating system design and application.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall, Spring

CS 3200 - Mobile Application Development
3 credits

Programming and application development for mobile computing devices such as mobile phones, music players, and tablet computers through the model-view-controller model of computing. Makes use of current technology and software development environments. Project required.

Prerequisite/Restriction: CS 2410 and CS 2610 or CS 2412 and CS 2612

Semester(s) Traditionally Offered: Fall, Spring

CS 3430 - Computational Science: Python and Perl Programming (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 credits

Introduces students to algorithm development and programming in computational science for Python and Perl applications on a Linux platform. Examines computer-based representation, storage, retrieval, and transmission of information, along with the algorithms used to perform such operations. Examines specific applications in bioinformatics and biology.

Prerequisite/Restriction: CS 1400, completion of University Studies Breadth Life Sciences (BLS) course, and fulfillment of University Studies Quantitative Literacy (QL) requirement

Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 3450 - Introduction to Software Engineering (CI)
CI Communications Intensive
3 credits

Study of the fundamentals of software engineering principles and practices, including project management, configuration management, requirements definition, system analysis, design, testing, and deployment. Provides students with hands-on experience in a group software development project.

Prerequisite/Restriction: CS 2420; and CS 2610 or CS 2612 Not available to CS majors in the pre-professional program

Semester(s) Traditionally Offered: Fall, Spring

CS 3810 - Computer Systems Organization and Architecture
3 credits

Examines organization and high-level architecture of computer systems. Covers terminology, data representation, Boolean algebra, and combinational sequential logic circuits. Covers processor and memory design for optimal performance, I/O subsystems, networking, and computer security.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 1410

Semester(s) Traditionally Offered: Fall, Spring

CS 4250 - Cooperative Work Experience
1-9 credits

Provides credit for students working at a participating firm under faculty supervision.

Prerequisite/Restriction: 2.0 GPA; instructor permission
Not available to pre-Computer Science majors

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 4320 - Information Storage and Retrieval
3 credits

Introduces theory, design, and implementation of text-based and Web-based information retrieval systems. Students learn components and operation of search engines providing search services. Components include web crawlers, indexers, link-based ranking algorithms, and recommender systems. Project required.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2015

CS 4700 - Programming Languages
3 credits

Theories of programming design and implementation. Introduction to variety of programming languages, showing how they represent trade-offs with respect to these theories.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall, Spring

CS 4720 - Computer Networking
3 credits

Focuses on client/server model, which is the dominant architectural model for today's computer systems. Explores the network underlying this model, specifically examining the topology, protocol(s), user interface(s), and hardware. Emphasizes the general theory and functionalities underlying the client/server model and computer networks in general.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 4890 - Topics in Computer Science
3 credits

Current topics in computer science as determined by advances in the field.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 4950 - Undergraduate Research
1-4 credits

Participation in research projects, under supervision of a
CS 5000 - Theory of Computability
3 credits

Theory of computation, including presentation of computability, decidability, and complexity. Includes formal grammars, finite and pushdown automata, and turing machines.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 5050 - Advanced Algorithms
3 credits

Study of algorithms and their analysis, including: design by induction, algorithms involving sequences and sets, graph algorithms, geometric algorithms, algebraic algorithms, reductions, NP-completeness, and parallel algorithms.

Prerequisite/Restriction: Grade of C- or better in CS 2420 and 2.0 GPA or better Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Spring

CS 5060 - Intensive Programming
3 credits

Teaches high-level programming skills. Includes both data structures and OOD and OOA techniques. Required for all new MS/CS students whose undergraduate degree is not in computer science from an ABET accredited program. May not be used for credit by BS/CS majors or PhD/CS majors.

Prerequisite/Restriction: Enrollment in MS/CS program or instructor permission

Semester(s) Traditionally Offered: Fall

CS 5070 - Computer Science Capstone I
1 credit

Students develop a project that includes the use of a significant portion of the computer science topics presented in the core curriculum. During CS 5070, the documentation, requirements, and testing plan for the project are completed and presented to a faculty review committee.

Prerequisite/Restriction: 2.0 GPA, not available to pre-Computer Science majors

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

CS 5071 - Computer Science Capstone II
3 credits

Students implement and test a project that includes the use of a significant portion of the computer science topics presented in the core curriculum. During CS 5071, the implementation and testing is performed on the project defined in CS 5070.

Prerequisite/Restriction: CS 5070, 2.0 GPA Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall, Spring

CS 5100 - Graphical User Interfaces and Windows Programming
4 credits

Design principles of GUIs and philosophy, structure, and programming in Windows environments.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall, Spring

CS 5110 - MultiAgent Systems
3 credits

MultiAgent systems are composed of multiple interacting computing elements, known as agents. Agents are software systems with two important capabilities: first, autonomous actions; and second, interacting with other agents by engaging in cooperation, coordination, and negotiation.
Prerequisite/Restriction: Grade of C- or better in CS 2420; grade of C- or better in CS 3810 or grade of C- or better in ECE 2700 or ECE 2250 Not available to preprofessional CS majors

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

CS 5200 - Introduction to Distributed Systems
4 credits

Introduction to design and programming concepts and techniques for distributed software systems. Explores core design issues, network communications, system architectures, protocols and protocol design, resource management, concurrency, distributed objects, security, and distributed file systems.

Prerequisite/Restriction: Grade of C- or better in CS 3100 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

CS 5300 - Compiler Construction
4 credits


Prerequisite/Restriction: CS 3810 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall

CS 5400 - Computer Graphics I
4 credits

Introduction to concepts of graphical techniques. Digital and pictorial representation of information.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in all of the following: CS 2420; MATH 1220; MATH 2250 or MATH 2270 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall

CS 5410 - Game Development
4 credits

Explores technical game development. Emphasizes integration of multiple computer science topics within a single application, including: graphics, AI multi-threading, multi-core, networking, synchronization, optimization, and scripting languages. Includes a team project to develop a computer-based game.

Prerequisite/Restriction: CS 2420 and CS 3100

Semester(s) Traditionally Offered: Spring

CS 5450 - Multimedia Systems
4 credits

Introduction to concepts and techniques underlying multimedia-based systems. Deals with both the hardware aspects of multimedia systems (e.g., transfer rates, capacities, resolution, etc.) and the software requirements of such systems. Each student required to develop a multimedia-based system.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Spring

CS 5460 - Computer Security I
3 credits

Introduction of computer security principles, data protection models, and application techniques. Develops basic skills necessary for protecting systems and communication from a variety of computer security threats. Topics include encryption, policies, access control, network security, OS security, and software security.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 and CS 3100 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall

CS 5500 - Parallel Programming
3 credits

Examines basic techniques for designing parallel algorithms, such as balanced trees, pointer jumping, partitioning, pipelining, accelerated cascading, list
ranking, and tree contraction. Consideration of classic parallel algorithms in graphs, merging, sorting, planar geometry, string matching, and randomized techniques.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Spring

CS 5600 - Intelligent Systems
4 credits

Introduction to artificial intelligence topics, including software agent design, informed search, heuristics, inference (logical and probabilistic), knowledge representation, game playing, planning, machine learning, philosophy, and ethics.

Prerequisite/Restriction: 2.5 GPA; grade of C- or better in CS 2420 or instructor permission Not available to pre-Computer Science majors

Cross-listed as: CS 6600.

Semester(s) Traditionally Offered: Fall

CS 5660 - Bioinformatics I
3 credits

Introduction to tools and techniques used in the study of bioinformatics, genomics, and computational biology. Explores usage of these tools and techniques for storage, retrieval (mining), processing, visualization, and analysis of biological information.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

CS 5665 - Introduction to Data Science
3

Introduces the theoretical foundations, algorithms, and methods of deriving valuable insights from data. Students will learn how to manage and analyze data at scale (e.g., big data). Specifically, students will study big data management and processing techniques, data analytics, statistical methods and models, data visualization, and etc. Project required.

Prerequisite/Restriction: Grade of C- or better in CS 2420; or enrollment in computer science graduate program Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

CS 5670 - Bioinformatics II
3 credits

Builds on material presented in CS 5660, presenting more advanced topics in bioinformatics, such as data mining, machine learning, and evolutionary algorithms. Students cannot receive credit for both CS 5670 and CS 6670.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 5660 Not available to pre-Computer Science majors

Semester(s) Traditionally Offered: Spring

CS 5680 - Computer Vision: Foundations and Applications
3

Introduction to theories and techniques of machine intelligence, with emphasis on image processing, pattern recognition, and computer vision.

Prerequisite/Restriction: Grade of C- or better in all of the following: CS 2420; MATH 2270; and STAT 2300 or STAT 3000 or MATH 5710 Not available to pre-Computer Science majors

Cross-listed as: CS 6680

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

CS 5700 - Object-Oriented Software Development
3

Students study object orientation (OO) and how they can use it during design, implementation, and testing to improve software quality. Specifically, the course will focus on the four P's of OO software development, namely: a) core OO principle, b) software design patterns, which embody proven solutions to reoccurring design problems, c) best practices, and d) pitfalls, which are bad practices to be avoided.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 5800</td>
<td>Introduction to Database Systems</td>
<td>3</td>
<td>Comparison of various database systems, normal forms, protection, concurrency, security and integrity, and distributed and object-oriented systems.</td>
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<tr>
<td></td>
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<td></td>
<td>Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 Not available to pre-Computer Science majors</td>
</tr>
<tr>
<td>CS 5830</td>
<td>Data Science Incubator</td>
<td>3</td>
<td>The course is project-based where students from multiple disciplines work in teams to analyze data from real-world projects. Project teams will group technical students from CS with domain experts from outside of CS. As part of the project development, state-of-the-art tools and techniques to analyze (big) data will be applied.</td>
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<td>Prerequisite/Restriction: For CS students: CS 5800, CS 6665, and CS 5665, or instructor permission</td>
</tr>
<tr>
<td>CS 5850</td>
<td>Systems Analysis</td>
<td>3</td>
<td>Theory and practice of analysis, design, and implementation of information systems. Students will construct an information system.</td>
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<tr>
<td></td>
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<td></td>
<td>Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 5800 Not available to pre-Computer Science majors</td>
</tr>
<tr>
<td>CS 5890</td>
<td>Topics in Computer Science</td>
<td>1-4</td>
<td>Current topics in computer science as determined by advances in the field.</td>
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<td>Prerequisite/Restriction: 3.0 GPA and enrollment in Computer Science master's or PhD program</td>
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<tr>
<td>CS 5950</td>
<td>Independent Study</td>
<td>3</td>
<td>Provides for independent study of selected topics.</td>
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<td>Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 and instructor permission Not available to pre-Computer Science majors</td>
</tr>
<tr>
<td>CS 6050</td>
<td>Computational Geometry: Algorithms and Applications</td>
<td>3</td>
<td>Computational geometry is the study of computation involving geometric objects, such as lines, polygons, and circles. It has application in bioinformatics, graphics, robotics, CAD/CAM, etc. This course presents the algorithms, data structures, and techniques of computational geometry.</td>
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<tr>
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<td>Prerequisite/Restriction: Instructor permission</td>
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<tr>
<td>CS 6110</td>
<td>MultiAgent Systems</td>
<td>3</td>
<td>MultiAgent systems are composed of multiple interacting computing elements, known as agents. Agents are software systems with two important capabilities: first, autonomous actions; and second, interacting with other agents by engaging in cooperation, coordination, and negotiation.</td>
</tr>
<tr>
<td></td>
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<td>Prerequisite/Restriction: 3.0 GPA and enrollment in Computer Science master's or PhD program</td>
</tr>
</tbody>
</table>
CS 6200 - Distributed System Design
3 credits

Examines advanced design concepts related to development of distributed software systems. Students learn how to model and evaluate communication protocols and study techniques for time coordination, distributed process synchronization, object replication and migration, and distributed transaction processing. Students also learn about Common Object Request Broker Architecture (CORBA).

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 5200 and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Spring

CS 6210 - Advanced Distributed System Design
3 credits

CS 6210 is the second in a two-course series on the design and implementation of distributed software systems. Its prerequisite, CS 5200, introduces fundamental design issues, common inter-process communication techniques, time and coordination, replication, and concurrency controls. CS 6210 will build on this foundation and cover the following topics: models of computation, global state, time, name and directory services, cloud computing, distributed file systems, MapReduce, distributed mutual exclusion and election, distributed transactions, currency control, and replication.

Prerequisite/Restriction: Grade of B- or better in CS 5200 and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Spring

CS 6220 - Concurrent Systems
3 credits

Explores concurrency in its various forms, emphasizing debugging techniques, development techniques that guarantee correctness, and performance evaluation and tuning.

Prerequisite/Restriction: CS 5200

Semester(s) Traditionally Offered: Fall

CS 6250 - Cooperative Work Experience, Graduate
1-9 credits

Provides credit for students working at a participating firm under faculty supervision.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master’s or PhD program

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 6300 - Supercompilers for Sequential and Parallel Computers
3 credits

Analysis and optimization for sequential and parallel computers, including loop restructuring, concurrency analysis, vector analysis, and optimizations for shared and distributed memory computers.

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 5300 and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Spring

CS 6400 - Computer Graphics II
3 credits


Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 5400 and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Spring
This course is a design practicum wherein student teams complete a human-centered design project. In-class and out-of-class activities teach students how to establish user needs, derive design ideas, create iterative prototypes, test those prototypes with users, and report results.

Prerequisite/Restriction: Enrollment in CS master's or PhD program, or instructor permission

Semester(s) Traditionally Offered: Fall

CS 6460 - Computer Security II
3 credits

Maintaining the integrity and security of computer systems is critical. Course explores aspects of system vulnerabilities and protection, attack categories and methodologies, the development of secure computer systems, etc.

Prerequisite/Restriction: CS 5460 or instructor permission

Semester(s) Traditionally Offered: Spring

CS 6500 - Advances in Parallel Systems
3 credits

Survey of current advances in parallel processing and concurrent systems. Review of current scientific literature to understand current issues, problems, and progress in advanced topics of parallel processing. Students read, summarize, report, and discuss up-to-date scientific papers in the field.

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 5500 and enrollment in Computer Science master's or PhD program

Semester(s) Traditionally Offered: Fall
Computer Science

CS 6650 - Neural Networks
3 credits

Advanced course in theories and techniques of machine intelligence, using neural networks. Emphasizes various neural network paradigms and the types of problems they are best suited to solve.

Prerequisite/Restriction: CS 2420 or instructor permission

Semester(s) Traditionally Offered: Spring

CS 6655 - Evolutionary Computation
3 credits

In-depth analysis of the foundations of optimization techniques founded on evolutionary computation. Includes evolutionary algorithms, genetic algorithms, genetic programming, etc.

Prerequisite/Restriction: CS 2420 or instructor permission

Semester(s) Traditionally Offered: Spring

CS 6665 - Data Mining
3 credits

Covers recent advances in machine learning and intelligent information retrieval. Focuses on how these topics relate to and are applied in data mining.

Prerequisite/Restriction: Enrollment in Computer Science master's or PhD program or instructor permission

Semester(s) Traditionally Offered: Spring

CS 6670 - Advanced Bioinformatics
3 credits

Focuses on the various advanced algorithms and models used in bioinformatics applications. Opportunities and needs for improvement of such algorithms discussed in the context of current and future problems in bioinformatics.

Prerequisite/Restriction: CS 5670

Semester(s) Traditionally Offered: Fall

CS 6675 - Advanced Data Science and Mining
3 credits

Introduce research topics in data science and mining (e.g., social media mining) and addresses relevant theoretical foundations, methods, and tools. The course topics include, but are not limited to: classification, clustering, link analysis, social media, geography and the social web, crowdsourcing platforms, etc. Project required.

Prerequisite/Restriction: Grade of C- or better in CS 5665, or instructor permission

Cross-listed as: CS 7675

Semester(s) Traditionally Offered: Spring Effective Term Fall

CS 6680 - Computer Vision: Foundations and Applications
3 credits

Introduction to theories and techniques of machine intelligence, with emphasis on image processing, pattern recognition, and computer vision.

Prerequisite/Restriction: Enrollment in CS master's or PhD program; or instructor permission

Semester(s) Traditionally Offered: Fall Effective Term Fall 2016

CS 6700 - Object-Oriented Models, Methods, and Tools
3 credits

Study of object-oriented concepts, principles, techniques, development processes, and tools across all areas of software engineering, with special emphasis on current research topics.

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 5700 and enrollment in Computer Science master's or PhD program
Semester(s) Traditionally Offered: Fall
CS 6800 - Advanced Database Systems
3 credits

Covers advanced topics in database systems, including XML, OODBMS, query optimization, query processing, deductive databases, concurrency, theory of relational databases, normalization, and recovery.

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 5800 and enrollment in Computer Science master's or PhD program

Semester(s) Traditionally Offered: Spring
CS 6810 - Wavelets and Wavelet Algorithms
3 credits

This course offers a hands-on, programmatic introduction to the nature and computation of wavelets for the analysis and synthesis of digital image and audio data. The course emphasizes the practical significance of wavelet algorithms in computer vision and audio analysis and encourages provocative questions, discussions, and creative thinking. Despite the mathematical nature of many topics covered in this course, the course focuses on the algorithmic and programmatic aspects of wavelets to solve a variety of practical problems in image and audio analysis.

Prerequisite/Restriction: Enrollment in CS Master's or PhD program; or permission from instructor; or permission from CS undergraduate advisor

Semester(s) Traditionally Offered: Spring
CS 6820 - Speech and Language Processing
3 credits

General introduction to neuro-linguistic programming (NLP), with an emphasis on computationally effective techniques to solve practical problems in spellchecking, text analysis, speech recognition, and natural language communication with autonomous agents.

Prerequisite/Restriction: Enrollment in CS Master's or PhD program; or permission from instructor; or permission from CS undergraduate advisor

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016
CS 6830 - Data Science Incubator
3 credits

The course is project-based where students from multiple disciplines work in teams to analyze data from real-world projects. Project teams will group technical students from CS with domain experts from outside of CS. As part of the project development, state-of-the-art tools and techniques to analyze (big) data will be applied.

Prerequisite/Restriction: For CS students: CS 5800, CS 6665, and CS 5665, or instructor permission | For non-CS students: instructor permission

Effective Term
Spring 2017
CS 6890 - Topics in Computer Science (Topic)
1-4 credits

Current topics in computer science as determined by advances in the field.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master's or PhD program

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
CS 6900 - Seminar
1 credit

Series of one-hour seminars on current research topics presented by computer science faculty.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master's or PhD program

Pass/Fail only.
Semester(s) Traditionally Offered: Fall
CS 6950 - Directed Readings in Computer Science
3 credits

Directed reading on advanced topics in computer science.
Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master's or PhD program

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 6970 - Thesis and Research
1-9 credits

Graduate research in computer science.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master's or PhD program

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 6990 - Continuing Graduate Advisement
1-6 credits

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master's or PhD program

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 7050 - Computational Geometry: Algorithms and Applications
3

Computational geometry is the study of computation involving geometric objects, such as lines, polygons, and circles. It has application in bioinformatics, graphics, robotics, CAD/CAM, etc. This course presents the algorithms, data structures, and techniques of computational geometry.

Prerequisite/Restriction: Instructor permission

Cross-listed as: CS 6050

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

CS 7100 - Advanced MultiAgent Systems
3 credits

Advanced topics in multiAgent systems, including algorithms for finding solutions, social welfare with preferences and utilities, multiAgent learning, and distributed search problems.

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 6100 (or instructor permission) and enrollment in Computer Science master's or PhD program

Semester(s) Traditionally Offered: Spring

Effective Term
Summer

CS 7110 - Advanced MultiAgent Systems
3 credits

Advanced topics in multiAgent systems, including algorithms for finding solutions, social welfare with preferences and utilities, multiAgent learning, and distributed search problems.

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 6110 (or instructor permission) and enrollment in Computer Science Master or PhD program

Semester(s) Traditionally Offered: Spring

Effective Term
Summer

CS 7150 - Computational Complexity
3

Focuses on central concepts in theoretical computer science, including NP-hardness, reductions, approximation algorithms, and fixed parameter algorithms. Samples modern algorithmic topics such as streaming, online, randomized, probabilistic, distributed, and quantum computations. Studies hard computational problems in both combinatorial and geometric settings.

Prerequisite/Restriction: Enrollment is Computer Science MPPhD program; or one of the following: B+ or greater in CS 5050, A- or greater in CS 2420, or instructor permission

Semester(s) Traditionally Offered: Spring

Effective Term
Spring 2016

CS 7350 - Patterns in Computer Software Systems
3 credits
Investigates patterns in computer software systems and how they can be better cataloged, understood, and reused to improve development productivity and quality. Includes readings of current literature, writing research papers, and participation in group discussions.

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 5700 and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Spring

CS 7380 - Software Testing
3 credits

Explores current issues, including testing object-oriented software, test data generation and sufficiency, domain-based testing, functional testing, and code-based testing.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Fall

CS 7460 - Advances in Computer Security Research
3 credits

Covers recent research directions in computer security. Reviews current state of the field, and explores possible research directions for further work.

Prerequisite/Restriction: CS 6460 or instructor permission

Semester(s) Traditionally Offered: Fall

CS 7500 - Fault-Tolerant Systems
3 credits

Advanced study of design and implementation of operating systems for fault-tolerant parallel and distributed systems. Topics chosen will provide students with knowledge of current research issues, practices, and techniques for the design and development of such systems.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Spring

CS 7550 - Interconnection Networks for Parallel Computer Systems
3 credits

Explores the design of large-scale parallel processing systems generally suited for multi-microprocessor implementation. Emphasizes interconnection patterns among the processing elements in parallel processors.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Fall

CS 7650 - Advanced CVP RIP: Computer Vision, Pattern Recognition and Image Processing
3 credits

Investigates new developments in representation and processing of gray-level and color images, including thresholding, segmentation, curve detection, etc. Also examines visual perception, as well as statistical and syntactical pattern classification.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Spring

CS 7660 - Robotics and Autonomous Systems
3 credits

Surveys current advances in robotic and autonomous systems. Reviews current scientific literature in the field, with emphasis on understanding the problems solved and the approaches used.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Fall

CS 7675 - Advanced Data Science and Mining
3 credits

Introduces research topics in data science and mining
(e.g., social media mining) and addresses relevant theoretical foundations, methods, and tools. Course topics include but are not limited to: classification, clustering, link analysis, social media, geography and the social web, crowd sourcing platforms, etc. Project required.

Prerequisite/Restriction: Grade of C- or better in CS 5665 or instructor permission

Cross-listed as: CS 6675

Effective Term
Fall 2016

CS 7680 - Advanced Computer Vision
3 credits

Emphasizes current topics and research in the general area of computer vision. Focuses on detection, recognition, tracking, and analysis of human activity by using computer vision.

Prerequisite/Restriction: 3.0 GPA; grade of B- or better in CS 5650 and enrollment in Computer Science master’s or PhD program

Semester(s) Traditionally Offered: Spring

CS 7810 - Wavelets and Wavelet Algorithms
3

This course offers a hands-on, programmatic introduction to the nature and computation of wavelets for the analysis and synthesis of digital image and audio data. The course emphasizes the practical significance of wavelet algorithms in computer vision and audio analysis and encourages provocative questions, discussions, and creative thinking. Despite the mathematical nature of many topics covered in this course, the course focuses on the algorithmic and programmatic aspects of wavelets to solve a variety of practical problems in image and audio analysis.

Semester(s) Traditionally Offered: Spring

Effective Term
Fall 2016

CS 7820 - Speech and Language Processing
3 credits

General introduction to neuro-linguistic programming (NLP), with an emphasis on computationally effective techniques to solve practical problems in spellchecking, text analysis, speech recognition, and natural language communication with autonomous agents.

Prerequisite/Restriction: Enrollment in CS Master’s or PhD program, or instructor permission

Semester(s) Traditionally Offered: Fall
Effective Term
Summer

CS 7900 - Seminar
2 credits

Series of lectures and presentations on current topics in computer science. Students participate by giving presentations. As part of the course, students are expected to prepare their dissertation proposal.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master’s or PhD program

Pass/Fail only.
Semester(s) Traditionally Offered: Spring

CS 7910 - Special Topics in Intelligent Systems (Topic)
3 credits

Discussion of current topics in intelligent systems, such as parallelism and software systems.

Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master’s or PhD program

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 7920 - Special Topics in Parallelism (Topic)
3 credits

Topics of current interest in the area of parallelism.

Prerequisite/Restriction: Instructor permission and enrollment in Computer Science master’s or PhD program

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
CS 7930 - Special Topics in Software Systems (Topic)
3 credits
Topics of current interest in the area of software systems.
Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master's or PhD program
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 7935 - Topics in Mobile Systems
3 credits
Mobile computing devices are now ubiquitous. Computations and communications on such devices require a new computing paradigm and raise issues such as power-awareness, location-awareness, security, reliability, etc. This course explores mobile systems and issues pertaining to reliable operation.
Prerequisite/Restriction: CS 3100, CS 4700, and CS 5200; or instructor permission
Semester(s) Traditionally Offered: Fall

CS 7950 - Reading and Reports
3 credits
Directed reading on cutting-edge topics in computer science.
Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master's or PhD program
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 7960 - Topics in Bioinformatics (topic)
3 credits
Topics of current interest in bioinformatics.
Prerequisite/Restriction: Instructor permission
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 7970 - Dissertation Research
1-15 credits
PhD dissertation research.
Prerequisite/Restriction: 3.0 GPA; instructor permission and enrollment in Computer Science master's or PhD program
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 7990 - Continuing Graduate Advisement
1-6 credits
Continuing PhD-level advisement.
Prerequisite/Restriction: Prerequisites: 3.0 GPA; Instructor permission and enrollment in Computer Science master's or PhD program
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Cosmetology / Barbering (USU Eastern)

COST 1100 - Cosmetology Theory I
5 credits
Covers bacteriology, decontamination and infection control, permanent waving, chemical hair relaxing, hair cutting and hair lightening. Emphasis on new technology and product knowledge from industry.
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Summer

COST 1110 - Cosmetology Lab I
10 credits
Lab instruction and practical application. Teaches shampooing, scalp treatments, manicuring, hair cutting, hair dressing, tinting and bleaching, and facials.
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Summer

COST 1200 - Cosmetology Theory II
5 credits
Covers hair coloring, skin and disorders, chemistry, properties of scalp and hair, wet and thermal hair styling.
COST 1210 - Cosmetology Lab II
10 credits

Lab instruction and practical application teaches shampooing, scalp treatments, manicuring, hair cutting, hair dressing, tinting and bleaching, and facials.

COST 1300 - Introduction to Barbering
5 credits

Barbering is the art and science of cutting and styling hair, as well as the designing of beards and mustaches. Students receive this preparation while practicing in a salon experience. Students are also prepared in theory classes. Students will practice men's and women's cutting and styling, shaving, chemistry and anatomy, with an emphasis on safety, sanitation and professionalism.

COST 1310 - Introduction to Barbering Lab
10 credits

Barbering is the art and science of cutting and styling hair, as well as the designing of beards and mustaches. Students receive this preparation while practicing in a salon experience. Students are also prepared in theory classes. Students will practice men's and women's cutting and styling, shaving, chemistry and anatomy, with an emphasis on safety, sanitation and professionalism.

COST 1400 - Intermediate Barbering
5 credits

Barbering is the art and science of cutting and styling hair, as well as the designing of beards and mustaches. Students receive this preparation while practicing in a salon experience. Students are also prepared in theory classes. Students will practice men's and women's cutting and styling, shaving, chemistry and anatomy, with an emphasis on safety, sanitation and professionalism.

COST 1410 - Intermediate Barbering Lab
10 credits

Barbering is the art and science of cutting and styling hair, as well as the designing of beards and mustaches. Students receive this preparation while practicing in a salon experience. Students are also prepared in theory classes. Students will practice men's and women's cutting and styling, shaving, chemistry and anatomy, with an emphasis on safety, sanitation and professionalism.

COST 1500 - Professional Vocational Leadership (VICA)
1 credit

Supports and facilitates the goals and objectives of Vocational Industrial Clubs of America (VICA). Students will gain skills in the following areas: personal development, service, team building and leadership, workplace skills, and interview skills. Students may participate in regional, state and national competitions.

Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

COST 2300 - Intermediate Cosmetology Theory I
5 credits

Covers salon business, electricity and light therapy, nails and disorders, manicuring, pedicuring.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

COST 2310 - Intermediate Cosmetology Lab I
10 credits

Lab instruction and practical application teaches shampooing, scalp treatments, manicuring, hair cutting, and styling, shaving, chemistry and anatomy, with an emphasis on safety, sanitation and professionalism.
hair-dressing, tinting and bleaching, and facials.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall
COST 2400 - Intermediate Cosmetology Theory
5 credits
Covers theory of massage, facials, facial make-up and barbering. Lecture classes for State Board. (Review of previous theory classes).

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring
COST 2410 - Intermediate Cosmetology Lab
10 credits
Lab instruction and practical application teaches shampooing, scalp treatments, manicuring, hair cutting, hair-dressing, tinting and bleaching, facials.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring
COST 2500 - Advanced Cosmetology Theory
5 credits
Covers lecture for State Board (review for State License). Advanced techniques. Designed for students who have not completed required hours for State Licensing.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring
COST 2510 - Advanced Cosmetology Lab
5-10 credits
Lab instruction and practical application prepares shampooing, scalp treatments, manicuring, hair cutting, hair-dressing, tinting and bleaching, and facials.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring
COST 2700 - Student Instructor
15 credits
Prepares student for State Board Examinations and includes experience in teaching theory and lab. State Law requires 1000 clock hours for licensing.

Prerequisite/Restriction: Instructor permission

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring, Summer
COST 2800 - Nail Technician
9 credits
Designed to educate students with the knowledge, skills and abilities to practice manicuring, pedicuring and nail enhancements. The 300 hours of instruction prepares the student to meet requirements for taking the state licensing examination.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring
COST 2988 - Special Problems
1-3 credits
Designed as an introductory basic training program for students interested in recreational shooting, hunting, competition shooting, gun collecting, home safety or
personal protection. Program will teach students the basic safety principles and help them develop the knowledge, skill and attitudes that are needed to successfully pursue their shooting interests. Course is the prerequisite for RECR 1060 and 1070. Introduces students to and familiarizes them with the various types of firearms, the mechanics, care and cleaning, history of each type and the unique handling requirements for the following: rifles, shotguns, revolvers and semiautomatic firearms. A large portion of the course will center around general firearm etiquette and safety procedures and students will have an opportunity to practice on a firing range.

Campus: USU Eastern only
Course Fee: $60.00

CJ 1070 - Law Enforcement/Corrections Academy I
3 credits

Campus: USU Eastern only

CJ 1080 - Law Enforcement/Corrections Academy II
3 credits

Six credit hours will be awarded for successful POST certification.

Campus: USU Eastern only

CJ 1090 - Introduction to Law Enforcement
3 credits

Comprehensive study as to the evolvement of law enforcement in America. Emphasis will be placed on the historical aspects of law enforcement and what effect those events have presently. In-depth analysis of Traditional Policing and Community Policing; how Community Policing evolved and what future problems it poses for law enforcement. Recommended for the prospective law enforcement professional, social worker, law student or anyone wishing to learn more about the profession of law enforcement.

Campus: USU Eastern only

CJ 1300 - Introduction to Corrections
3 credits

Examines the history and the administration of corrections in America. Emphasis will be placed on the philosophies of punishment, sentencing strategies, prison community, alternatives to incarceration, and various reform efforts. Critical issues facing corrections will also be examined. Students will generally understand the evolution and administration of corrections in America.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

CJ 1330 - Criminal Law
3 credits

Designed mainly for, but not limited to the student majoring in Criminal Justice. It surveys the American criminal justice system. Elements of crime, defenses, historical foundation, limits, proposes and functions of criminal law are discussed. Students will understand the key general principles that relate to criminal law, criminal liability, complicity, uncompleted crimes, defenses to criminal liability and the various crimes in our legal systems. They will also learn how to read and use statutes and analyze fact situations in light of the law.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

CJ 1340 - Criminal Investigations
3 credits

Introduces students to the criminal, investigation process. Legal, scientific, and administrative aspects of this process will be explored and students will come to appreciate the complexity of conducting a thorough investigation and be able to deal with potential obstacles that are commonly encountered. Course is a valuable precursor to taking Criminalistics. Objective is to acquaint the student with the fundamentals of criminal investigations.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 1350 - Introduction to Forensic Science
3 credits

Mainly designed for the student majoring in Criminal Justice. Includes interrogation and interview, sources of information (electronic/traditional), crime scene procedure, introduction to identification, collection and preservation of evidence, laboratory techniques and case preparation. Students will understand the functions and duties of the forensic scientist and learn basic skills that related to evidence collection, preservation and analysis.
Prerequisite/Restriction: CJ 1010 and CJ 1330 are highly recommended.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

CJ 1355 - Crime Scene Processing
3 credits

Covers the duties and responsibilities of a crime scene technician at the scene of a crime. Includes instruction on the proper collection, handling and storage of evidence. Report writing, proper requests for examination as well as laboratory methods are an integral part of this course.

Prerequisite/Restriction: CJ 1340 or CJ 1350

Campus: USU Eastern only
Course Fee: $50.00

CJ 1360 - Crime Scene Academy
3 credits

Students will receive extensive training to develop credible skills in the area of crime scene processing. These skills will include, but not limited to; analyzing crime scenes, learning proper investigation processes, managing crime scenes, documenting and preserving evidence at a crime scene, becoming familiar with the medical/legal aspects of crime scene investigation and becoming familiar with standardized national procedures. After successfully completing the course and passing the required test, students will be certified as a Crime Scene Technician by the Utah State Bureau of Forensic Services.

Campus: USU Eastern only

CJ 1390 - Introduction to Policing
3 credits

This course analyzes the role of Police in society. The functions of police, including organizational structure, discretion, subculture and interactions with the community are areas covered in detail. The class will also deal with problems in changing technology, corruption, violence and use of force by police today.

Semester(s) Traditionally Offered: Fall, Spring

CJ 1900 - Introduction to the Criminal Justice System
1 credit

This is part of a series intended to introduce the cadet to the Criminal Justice System and illustrate how each area is a part of the system. This block covers: Intro to Criminal System, Intro to Homeland Security, Intro to the US and Utah state Constitution, Intro to Utah Criminal Code, Intro to Utah Court systems.

Semester(s) Traditionally Offered: Fall

CJ 1901 - Police Ethics
1 credit

This course is to introduce Police Ethics and illustrate the importance of ethical actions in law enforcement. This block covers: Ethical Standards, Leadership and Professionalism, Ethical Decision Making, Community Relations, and POST Certification and Investigations.

Semester(s) Traditionally Offered: Fall

CJ 1902 - Officer Fundamentals
1.5 credits

This course is to introduce the cadet to the fundamentals of police work and illustrate their importance in law enforcement. This block covers: Report Writing, Radio Communications, Media Relations, Utah BCI and AFIS, Hazardous Materials Response, Emergency Medical Response, First Aid/CPR, Healthy Lifestyles.

Semester(s) Traditionally Offered: Fall

CJ 1903 - Basic Officer Criminal Law
3 credits

This course is to introduce the cadet to basic criminal law fundamentals of police work and illustrate their importance in law enforcement.

Semester(s) Traditionally Offered: Fall

CJ 1904 - Defensive Tactics I
1 credit

This course is intended to introduce the cadet to: Approaching subjects and positon of interview, Natural Weapons, Low Profile/Terry Frisk, Cuffing, Take Downs; Standing Search, Cuffing, Take Downs; Kneeling Search, Cuffing, Take Downs; Prone Search, Cuffing; Weaponless
**Defense Techniques I, Escort and Transport Postion, Management and Recognition of Excited Delirium/Agitated Chaotic Event**

Semester(s) Traditionally Offered: Fall

CJ 1905 - Officer Patrol and Investigations
3 credits

This course is intended to introduce the cadet to: Gang Awareness, Conflict Resolution, Written Scenarios, Basic Interview and Interrogations, Preliminary Investigations, Crime Scene Protection and Search, Collection and Preservation of Evidence, Victimology, Drug Recognition and Familiarization.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 1910 - Corrections Legal
1 credit

This course is part 1 of 6 concurrent courses to introduce the cadet to the Corrections System and define the legal aspects of working with inmates and their rights. This block covers: Corrections Law and Offender Rights, Prison Rape Elimination Act (PREA), Reasonable Use of Force, and Court Demeanor and Testifying.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 1911 - Corrections Communications
.5 credits

This course is part 2 of 6 concurrent course on Corrections System. It will explain communication with inmates and other correctional entities. This block covers: Decision Making and Problem Solving, Conversation with Leadership, Corrections Ethics and Professionalism, and Correctional Terminology and Operational Guidelines.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 1912 - Inmate Behavior
1.5 credits

This is part 3 of 6 concurrent courses on Corrections System. It will demonstrate methods to deal with inmate behavior and emergencies. This block covers: Suicide Prevention, Staff/offender Interactions, Understanding Human Behavior, Abnormal Behavior, Critical Incidents, and Generalitical Perspectives.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 1913 - Inmate Management
1 credit

This is part 4 of 6 concurrent courses on the Corrections System. It will introduce procedures for inmate management. This block covers: Offender Supervision Strategies, Inmate Discipline, Street Gangs/STG, Gender Responsive Issues, Grievance Process, and Inmate Classification.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 1914 - Inmate Control
1.5 credits


Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 1915 - Physical Skills
3.5 credits

This is part 6 of 6 concurrent courses on the Corrections System. It will reinforce the physical skills needed in a correctional setting. This block covers: Pressure Point Control Tactics, Spontaneous Knife Defense, Ground Tactics, In-Custody Restraints, Transportation of Inmates, Head Counts and Physical Training.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 1920 - Peace Officer Fundamentals
2 credits

This course is 1 of 7 concurrent courses training cadets in the aspects of crime investigations in various levels of police work. This block covers: Introduction to Emergency Vehicle Operations, Introduction to Firearms Handling, and Introduction to Scenario Training.
Prerequisite/Restriction: CJ 1900, CJ 1901, CJ 1902, CJ 1903, CJ 1904, CJ 1905 Taken concurrently with CJ 1921, CJ 1922, CJ 1923, CJ 1924, CJ 1925, CJ 1926

Semester(s) Traditionally Offered: Spring

CJ 1921 - Peace Office Criminal Law
1 credit

This course is 2 of 7 concurrent courses training cadets in the aspects of crime investigations in various levels of police work. This block covers: Report Writing II, Court Demeanor and Testifying, Civil Disputes, Traffic Law, Drive License, and Law and Hearing.

Prerequisite/Restriction: CJ 1900, CJ 1901, CJ 1902, CJ 1903, CJ 1904, CJ 1905 Taken concurrently with CJ 1920, CJ 1921, CJ 1922, CJ 1923, CJ 1924, CJ 1925, CJ 1926

Semester(s) Traditionally Offered: Spring

CJ 1922 - Defensive Tactics II
2 credits

This course is 3 of 7 concurrent courses training cadets in the aspects of defensive tactics as it pertains to police work. This block covers: Weaponless Defense Techniques-Part II, Weapon Protection and Retention, Ground Tactics, and Impact Weapons.

Prerequisite/Restriction: CJ 1900, CJ 1901, CJ 1902, CJ 1903, CJ 1904, CJ 1905 Taken concurrently with CJ 1920, CJ 1921, CJ 1922, CJ 1923, CJ 1924, CJ 1925, CJ 1926

Semester(s) Traditionally Offered: Spring

CJ 1923 - Patrol Functions
6 credits

This course is 4 of 7 concurrent courses training cadets in the aspects of Patrol Functions as involved in everyday police work. This block covers: Patrol Concepts, Immediate Response Tactics, Critical Incident Casualty Care, Mental Conditioning for Combat, Pedestrian/Vehicle Stop and Approach, Crimes in Profress, Hostage/Barricaded Subjects.

Prerequisite/Restriction: CJ 1900, CJ 1901, CJ 1902, CJ 1903, CJ 1904, CJ 1905 Taken concurrently with CJ 1920, CJ 1921, CJ 1922, CJ 1924, CJ 1925, CJ 1926

Semester(s) Traditionally Offered: Spring

CJ 1924 - Police Investigations
3 credits

This course is 5 of 7 concurrent courses training cadets in the aspects of crime investigations in various levels of police work. This block covers: Sex Crimes Investigation, Dead Body Investigation, Follow-up Investigations, Child Abuse and Neglect, Traffic Accident Investigation, Domestic Violence, Cohabitation Abuse Procedures, Identity

Prerequisite/Restriction: CJ 1900, CJ 1901, CJ 1902, CJ 1903, CJ 1904, CJ 1905 Taken concurrently with CJ 1920, CJ 1921, CJ 1922, CJ 1923, CJ 1924, CJ 1925, CJ 1926

Semester(s) Traditionally Offered: Spring

CJ 1925 - Intoxilyzer/DUI Training
2 credits

This course is 6 of 7 concurrent courses training cadets in the aspects of crime investigations in various levels of police work. This block covers: Recognizing and Handling Drugs and Narcotics, Intoxilyzer Operation and Certification, DUI and Standardized Field Sobriety Testing.

Prerequisite/Restriction: CJ 1900, CJ 1901, CJ 1902, CJ 1903, CJ 1904, CJ 1905 Taken concurrently with CJ 1920, CJ 1921, CJ 1922, CJ 1923, CJ 1924, CJ 1926

Semester(s) Traditionally Offered: Spring

CJ 1926 - Firearms
3 credits

This course is 7 of 7 concurrent courses training cadets in the aspects of crime investigations in various levels of police work. This block covers: Handgun Handling and Safe Operation, Firearms Range/Day Shoot, Firearms/Night Shoot.

Prerequisite/Restriction: CJ 1900, CJ 1901, CJ 1902, CJ 1903, CJ 1904, CJ 1905 Taken concurrently with CJ 1920, CJ 1921, CJ 1922, CJ 1923, CJ 1924, CJ 1925

Semester(s) Traditionally Offered: Spring
CJ 2110 - Security
3 credits

Designed as a requirement mainly for the student majoring in Criminal Justice. Examines the diverse components which make up the security function, as well as principles and concepts in physical security, loss control and crime prevention. Students will know and understand the historical and professional principles of public and private security and crime prevention, as well as risk management and loss control principles.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

CJ 2350 - Laws of Evidence
3 credits

Designed mainly for the student majoring in Criminal Justice. Deals with the principles and rules of law emphasizing evidentiary problems related to criminal cases. An introduction and overview of the court process and problems related to the fact finding process of juries. Explores the courtroom procedures as they relate to evidence and its uses in the courtroom, with emphasis upon the introduction of evidence and the rules pertaining thereto. Students will understand the value of the rules of evidence in the law and be able to understand and apply them to fact scenarios.

Prerequisite/Restriction: CJ 1010 is highly recommended

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

CJ 2360 - Juvenile Law and Procedures
3 credits

Designed mainly for the student majoring in Criminal Justice. Covers the juvenile justice system emphasizing Utah law and procedure. Studies differences between juvenile and adult systems, delinquent acts, juvenile treatment as adults and role and function of probation, youth corrections, family services and the community. Students will generally understand the nature and origins of juvenile law, the principles and laws that pertain to juvenile delinquency; neglect, abuse and dependency proceedings; and status offenses. They will also learn how to read and use statutes and analyze fact situations in light of the law.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

CJ 2340 - Survey of Criminal Procedure
3 credits

Introduces students to the following concepts; historical development of laws and crime causation, historical development of the Justice System, the arrest, the initial appearance, pretrial proceedings, place and time of trial, the trial, confrontation and assistance of counsel, pretrial motions, hearings and plea negotiations, the trial and the roles of major participants, the jury, trial procedure, the jury instructions and deliberation, the verdict, appeals and appellate citations, the sentence and correctional procedures, sentencing philosophy and clemency, extradition process, juvenile system focus and victims’ rights.

Prerequisite/Restriction: CJ 1010 and CJ 1330 and CJ 2350 or special permission from the instructor

Campus: USU Eastern only

CJ 2330 - Juvenile Justice
3 credits

Designed mainly for the student majoring in Criminal Justice. Studies the origin, philosophy, and development of the juvenile justice system, particularly the juvenile court. Emphasis is placed upon laws, detention, adjudication, probation, after-care, foster homes, and other alternative correctional practices. Students will understand the nature and origins of juvenile law and the guiding principles that drive the system.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

CJ 2370 - Child Abuse and Neglect
3 credits

Overview of causes, identification, reporting, and legal issues pertaining to children who are abused and/or neglected. Cycle of domestic violence and its effects on children will be discussed. Primary objectives are to assist students in gaining an insight of what constitutes child maltreatment and domestic violence, assess underlying causes of abuse and neglect, and how it is addressed within the criminal justice system.
CJ 2860 - Criminal Justice Field Experience
3 credits
(for second year program majors only) Designed for students majoring in Criminal Justice. An internship with city, county, and state criminal justice agencies. Registration is by permission of the instructor. Students will gain first hand experience and knowledge of an area of criminal justice by working with, riding with, or observing a practitioner and will be able to directly evaluate their own interest level in the field.

Repeatable for a total of six credit hours with consent of instructor.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DAN C 1010 - Dance in Culture (BCA)
BCA Breadth Creative Arts
3 credits
Study of dance as one of the first art forms, from the primitive to its present state. Dance will also be studied sociologically as well as historically. Students will be exposed to the development of dance through history as it has been influenced by various economic and political forces. Students will be provided with information concerning outstanding contributions to dance and its authorities in the 20th century. Hopefully, the student will develop an appreciation of dance in contemporary society.

Campus: USU Eastern only
DAN C 1100 - Ballet I
1 credit
Basic ballet course for men and women to condition the body, develop an appreciation for ballet through its specific exercise forms and acquire the basic skill of ballet technique. Class is open to anyone. A text is used and grading is done by two written tests, attendance, and a performance final. The French-Bournonville as well as the Russian techniques are taught. Video is used to expose students to the professional performance as well as dance history. Students also begin learning the importance of understanding anatomy, exercise physiology, kinesiology, music theory, theater practices and techniques, and physics as it relates to ballet and dance in general.

Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DAN C 1200 - Modern Dance I
1 credit
Designed mainly for students majoring in Criminal Justice. There will be a variety of short courses, institutes and special problems which will work under this number. The number of credits earned will be determined by the department. Classes will be designed on demand.

Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

Dance (USU Eastern)

DAN C 1010 - Dance in Culture (BCA)
BCA Breadth Creative Arts
3 credits
Study of dance as one of the first art forms, from the primitive to its present state. Dance will also be studied sociologically as well as historically. Students will be exposed to the development of dance through history as it has been influenced by various economic and political forces. Students will be provided with information concerning outstanding contributions to dance and its authorities in the 20th century. Hopefully, the student will develop an appreciation of dance in contemporary society.

Campus: USU Eastern only
DAN C 1100 - Ballet I
1 credit
Basic ballet course for men and women to condition the body, develop an appreciation for ballet through its specific exercise forms and acquire the basic skill of ballet technique. Class is open to anyone. A text is used and grading is done by two written tests, attendance, and a performance final. The French-Bournonville as well as the Russian techniques are taught. Video is used to expose students to the professional performance as well as dance history. Students also begin learning the importance of understanding anatomy, exercise physiology, kinesiology, music theory, theater practices and techniques, and physics as it relates to ballet and dance in general.

Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DAN C 1200 - Modern Dance I
1 credit
Designed mainly for students majoring in Criminal Justice. There will be a variety of short courses, institutes and special problems which will work under this number. The number of credits earned will be determined by the department. Classes will be designed on demand.

Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

Dance (USU Eastern)
Graham, Denis/Shawn and Cunningham. Video will be used as well as a text. Movement experiences will range from the classroom situation to large open space activities including out of doors. Students will learn to analyze others' movement patterns and how people communicate through movement. This is an important aspect in dance therapy. Music, as well as music theory, will be explored. Grading will be on movement projects, tests, and a final movement project.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 1210 - Ballet II
1 credit

Continuation of basic ballet technique for men and women who wish to become more proficient in the art and form of classical ballet. A text is used and grading is done based on attendance, two written examinations and a performance final. There is a continuation of the French/Bourneville as well as Russian techniques. Video is used for exposure to dance performance as well as technique. Dance history and ballet tradition is continued. Students continue the study of anatomy exercise physiology, kinesiology, music, theater and performance techniques as well as physics. Based on proficiency, some of these student may become eligible to audition for Dance Ensemble, DANC 2310.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 1220 - Beginning Pointe
1 credit

Designed for female ballet students with at least 2 years of Ballet training and who are observed to be ready for pointe work. Students must be physiologically mature and have the proper alignment and strength to dance on Pointe. A text is used and at least two written examinations are given plus a performance final. Each student progresses at her own rate and is graded accordingly as all are different. The rule of thumb is a child should be at least 11-12 before Pointe is allowed.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 1240 - Musical Theatre Movement
1 credit

Involves a study of the fundamental types of movement used in the theater including mime, improvisation and basic musical theater dance forms. Class is open to any student that has had some experience or training in ballet, modern, or jazz dance and is interested in musical theater. Class is performance based. Students learn aspects of movement on stage in the areas of dance for musical theater and are also exposed to mime and other non-verbal forms of communication. Final project involves each student choreographing a 1 to 1.5 minute piece that would fit a period and style of a broadway show. Students are also required to research, use video and critique a broadway show.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Alternate Years

DANC 1500 - Jazz Dance I
1 credit

Designed for the dancer who has already been exposed to Modern Dance or Classical Ballet technique. It is not a beginning class. Students should already have basic placement and traditional dance techniques in mind so as to be able to adequately explore the pure jazz technique. Class will explore the Giordano, Maddox, and Luigi methods as well as other methods. Video, handouts and a text are used. Grading is based on attendance, two tests, and a final performance project.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring, Alternate Years

DANC 1520 - Folk/Cultural Dance
1 credit

Beginning class for men and women interested in ethnic, character, and folk dance for the stage. Open to anyone with some dance background. A text is used as well as video. Grading is based on attendance, tests and a performance final. History and background surrounding the origins of many of the national dances will be
explored as well as the differences between the three types.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Alternate Years

DANC 1580 - Tap I
1 credit

Designed for the beginning and intermediate tap dancer. The class is open to anyone. Basic tap technique will be covered as well as terminology and history of the dance form. Includes the exploration of the current phase of tap and also the relationship of the basic differences between clogging and tap. Students will be required to reach a certain level of proficiency. Handouts and video will be used. Grading is based on attendance and performance.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring, Alternate Years

DANC 2200 - Pointe and Variations
1 credit

Designed for the female dancer who has met all the technical and physical requirements for solo variations and pas de deux. For women who have reached the maturity level to learn the art of partnering and pas de deux. Point class for women requiring intermediate-advanced technique. Students will explore the history and choreographic style of at least 5 choreographers including George Balanchine, William and Lew Christianson, Frederick Ashton, Richard Arpel, and Twyla Tharp. Students will learn at least that many variations. Grading is based on attendance and increased proficiency on Pointe.

Prerequisite/Restriction: Instructor permission
Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 2220 - Modern Dance II
1 credit

Designed for those who have had at least one year of experience in modern dance techniques. Course is a continuation of DANC 1200. Music and music theory will be continued. Students will be encouraged to explore their own movement patterns as well as the modern choreographers of the present such as Alvin Ailey and Paul Taylor.

Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 2240 - Ballet III
1 credit

Designed for the more proficient dancer, one who wishes to use classical ballet as an important part of their career. Both barre and center practice will consist of longer, more intricate combinations. Physical demands will be greater as to help the students reach an advanced performance as well as technical level. The same styles of technique will be taught as in the lower ballet classes as well as the continued exploration of dance related topics. Grading is based on tests from the required texts as well as attendance and effort. Some library research will be required.

Prerequisite/Restriction: Instructor permission
Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 2260 - Dance Composition
1-2 credits

Designed for the intermediate dancer to allow them an
opportunity to explore their own creative techniques in modern, jazz and classical ballet. Grading is based on attendance, effort, creativity, interim projects, and a final choreographic project. Final project may be a collaboration between two students. Some of the student choreography may be performed in Ballet Repertory's Spring Concert.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 2310 - Dance Ensemble
1-2 credits

Performance-based class. The members are students who wish to perform. Company performs two major concerts per year as well as Lecture Demos and other performing opportunities. Time and credit hours are arranged by the instructor.

Prerequisite/Restriction: Membership is by audition conducted by the Artistic Director
Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 2800 - Dance Production
1-3 credits

Designed for the dancers who wish to perform throughout Utah with the USU-Eastern Dance Department. Performances are used for education as well as recruiting. Students will also learn the correct performance protocol from the aspect of a performer as well as a member of the audience.

Prerequisite/Restriction: Students must be a member of DANC 2310
Campus: USU Eastern only

DANC 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in dance education. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements. Students must meet certain proficiency requirements and have permission from the instructor or coordinator.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Eastern only

DANC 2988 - Special Problems
1-3 credits

Individual work approved by the instructor. Time, credit and content to be arranged.

Repeatable for credit
Campus: USU Eastern only

DANC 2999 - Workshop
1-3 credits

Designed to meet the changing needs and educational background and opportunities of the dance students. Permission of the instructor is required. Content, and credit hours arranged by the instructor only. No previous dance experience required.

Repeatable for credit
Campus: USU Eastern only

Diesel Equipment Technology (USU Eastern)

DSME 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

DSME 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

DSME 1000 - Introduction to Transportation Technology
1
4 credits

First course in automotive or diesel technology. Students
will gain needed skills in shop safety and other basic skills that will prepare students for specific automotive or diesel courses. The following topics will be covered: using manual and information systems, precision measurement, tires and wheels, bearings, headlamp adjustment, oils and fluids, cleaning methods, gaskets and sealants, cooling systems and belts and hoses. Course can be articulated with high school automotive courses.

Cross-listed as: AUTO 1000

Campus: USU Eastern only

DSME 1110 - Diesel Engine Overhaul Theory
4 credits

Designed to instruct the student on correct diesel engine overhaul procedures from disassembly to assembly. Identification, operation, inspection, repair, maintenance and failure analysis of each diesel engine component will be discussed. Attention is also given to parts cleaning methods as well as fasteners and measuring tools.

Prerequisite/Restriction: MATH 0950 or a higher level MATH course

Campus: USU Eastern only

DSME 1130 - Diesel Engine Overhaul Lab
4 credits

Hands-on experience overhauling a diesel engine and functions much like a diesel engine repair shop. Students will individually disassemble, inspect, and rebuild at least one diesel engine. Emphasis is placed on component identification, measuring, inspection, analyzing wear, and detecting parts failure. Students are introduced to various methods for cleaning parts using the latest cleaning technology as well as identifying fasteners and using measuring and hand tools. Particular attention is given to attendance, quality of work, productivity

Campus: USU Eastern only

DSME 1310 - Fluid Power Theory
4 credits

Classroom instruction is given in the basic fundamental principles of fluid power. Students will discuss and mathematically calculate the relationships between hydraulic pressure, force, area, and resistance as well as rpm, torque, hydraulic horsepower, energy and heat loss.

Covers the theory and operation of hydraulic fluid, reservoir design, filters, pumps, actuators, pressure controls, directional controls, and flow controls. Students will have the opportunity to learn schematic symbols through representations of various types of circuit design representing both closed loop and open center systems in industrial as well as mobile applications. Topics discussed will be pressure compensated systems, hydrostatic drive circuits and system troubleshooting. As the course progresses, students will be introduced to methods of troubleshooting hydraulic systems using a flow meter and pressure gauges. Students will also identify and review hydraulic fittings, hose types, and safety.

Prerequisite/Restriction: Completion of or concurrent registration in MATH 0950 or a higher level MATH course

Corequisite: DSME 1330

Campus: USU Eastern only

DSME 1330 - Fluid Power Lab
4 credits

Hands-on experience identifying, testing, troubleshooting, and rebuilding various brands of hydraulic components. Students will have the opportunity to use a flow meter and pressure gauges to troubleshoot hydraulic components as well as test different components on a hydraulic test bench. Particular emphasis is placed on component identification, failure analysis and hydraulic fitting identification.

Corequisite: DSME 1310

Campus: USU Eastern only

DSME 1340 - Mobile Electrical and Electronics Theory
5 credits

Students will study the basic principles of electricity including electron flow in series and parallel circuits, Ohm’s law, magnetism and semiconductor devices related to the mobile industry. The theory and operation of a complete vehicle electrical system and its various components will be discussed in a series of sub-systems. These sub-systems include: the battery, starter and starting system, alternator and charging system, gauges
and instrument panel, vehicle lighting and accessories, engine electronic sensors, as well as the wiring and connections used in each of these systems. Students have the opportunity to learn schematic symbols by studying the various types of electrical circuits used in mobile equipment. Students will be introduced to different test instruments such as the digital multi-meter and testing techniques unique to each type of equipment will be presented.

Prerequisite/Restriction: MATH 0950 or a higher level MATH course

Campus: USU Eastern only

DSME 1360 - Mobile Electrical and Electronics Lab
3 credits

Hands-on experience is given to the student enrolled in DSME 1360. Each individual type of testing equipment is demonstrated as well as techniques given for troubleshooting, servicing and testing electrical systems: Students demonstrate their proficiency using this equipment to test batteries, starters and the starting system, the alternator and charging system, gauges, lights and accessories, engine sensors, as well as the wiring harness and connections used in each of these systems. Particular emphasis is placed on component identification, isolating component failures, and electrical safety procedures for both personal safety as well as preventing electrical system damage.

Campus: USU Eastern only

DSME 1500 - Professional Vocational Leadership (VICA)
1 credit

Supports and facilitates the goals and objectives of Vocational Industrial Clubs of America (VICA). Students will gain skills in the following areas: personal development, service, team building and leadership, workplace skills, and interview skills. Students may participate in regional, state and national competitions.

Repeatable for credit
Campus: USU Eastern only

DSME 2210 - Advanced Diesel Engine Theory
5 credits

Continuation of DSME 1110. Rather than focusing on individual engine components, this course covers engine systems: i.e. lubrication, cooling, intake and exhaust, and fuel systems. Particular attention is given to the theory and operation of the diesel engine combustion process while controlling engine speed and torque through the use of mechanical governors and engine electronics. This course will focus particularly on Cat, Cummins, and Detroit diesel engine electronics and computer software.

Prerequisite/Restriction: DSME 1110; MATH 0950 or a higher level MATH course

Campus: USU Eastern only

DSME 2230 - Advanced Diesel Engine Lab
5 credits

Continuation of DSME 1130. After an engine is rebuilt it will need to be tested on the dynamometer. The dyno provides opportunities for troubleshooting “live” engines. Students will dyno test the engine they rebuilt in DSME 1130 as well as perform timing and tune-up procedures on different models of diesel engines. Students will have the opportunity to use a laptop computer to program diagnose Cat, Cummins, and Detroit diesel electronic engines. Particular attention is given to attendance, quality of work, productivity during class time and the ability to follow detailed written procedures from service manuals. Shop safety is also stressed.

Prerequisite/Restriction: DSME 1130

Campus: USU Eastern only

DSME 2410 - Heavy Duty Chassis and Power Train Theory
5 credits

Covers highway truck air systems, foundation brake repair and maintenance, front end, tandem, and trailer axle alignment, heavy duty suspension systems, annual and automatic transmissions, clutches, differentials, and drive lines. Students will calculate drive line angles, gear ratios, and tire size, as well as troubleshoot and analyze tire wear, failures of gears, universal joints, clutches, axles, brakes.

Campus: USU Eastern only

DSME 2430 - Heavy Duty Chassis and Power Train Lab
5 credits
Gives students a hands on opportunity to perform preventive maintenance, inspection, adjustments, and repair to air brakes, suspension systems, clutches, transmissions, differentials, and drive line components used in heavy duty diesel equipment. Students will also do computerized front end and tandem alignment on medium and heavy duty trucks. Particular attention is given to attendance, quality of work, productivity during class time and the ability to follow detailed written procedures from service annuals. Shop safety is also stressed.

Campus: USU Eastern only

DSME 2440 - Mobile Air Conditioning Theory
2 credits

Covers the principles of heat transfer using refrigerant as the medium. Particular attention is given to the identification and operation of individual system components as well as the variations in system design from OEM to OEM. Different types of refrigerants used in the mobile industry as well as recovery, recycling, storage, handling, and disposal will be discussed. Students are taught methods for R12 to R134A conversion. After EPA laws and guide lines are taught, the student will have the opportunity to test for an IMACA certificate.

Campus: USU Eastern only

DSME 2460 - Mobile Air Conditioning Lab
1 credit

Students are given the hands-on opportunity to locate, identify, test, service, and troubleshoot different types of mobile AC systems using EPA approved equipment and procedures. They will demonstrate their proficiency using recovery recycling, evacuation, and charging equipment for both R-12 and R-134A refrigerants. System conversion from R-12 to R134A is also demonstrated.

Campus: USU Eastern only

DSME 2977 - Cooperative Education
1-3 credits

Provides paid, on-the-job work experience directly related to a specific lab course of study in the student’s major. All activities including attendance, on-site work visits, employer and coordinator evaluations, and written assignments are monitored by the co-op coordinator.

Prerequisite/Restriction: Approval from Director of Cooperative Education

Repeatable for credit

Campus: USU Eastern only

DSME 2988 - Special Problems
1-3 credits

Lab time approved by the instructor for extra repair projects and “live work” which cannot be completed during normal lab hours. Time and credit to be approved by the instructor.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Campus: USU Eastern only

Economics

ECN 1010 - Economics as a Social Science (BSS)
BSS Breadth Social Sciences
3 credits

Overviews both microeconomics and macroeconomics for students planning no further formal study of business and/or economics. Analysis of resource allocation, supply and demand, price determination under competitive and monopolistic conditions. Analyzes factors influencing aggregate levels of output, employment, and prices, introduction to U.S. fiscal and monetary policy, international trade and international monetary systems.

Campus: USU Eastern only

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 1500 - Introduction to Economic Institutions, History, and Principles (BAI)
BAI Breadth American Institutions
3 credits

Designed to build an understanding of economic institutions, history, and principles. Relationship between private and public sectors of U.S. economy. Analysis of major economic institutions, such as property rights, markets, business organizations, labor unions, money and banking, trade, and taxation.

Semester(s) Traditionally Offered: Fall, Spring, Summer
ECN 2010 - Introduction to Microeconomics (BSS)
BSS Breadth Social Sciences
3 credits

Designed to build an understanding of the economics of
the marketplace from the perspectives of individual
consumer and producer or business. Development and
application of microeconomic principles to demonstrate
the role and limitations of competitive markets in
motivating socially efficient consumer, business, and
public sector choices.

Prerequisite/Restriction: ECN 1500

Cross-listed as: APEC 2010.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 3010 - Managerial Economics (DSS)
DSS Depth Social Sciences
3 credits

Microeconomic principles applied to economic decision-
making and policy formulation, with emphasis at the
level of business firm and the individual consumer.
Designed for undergraduate business and accounting
majors. Credit will not be given for both ECN 3010 and
ECN 4010/APEC 4010.

Prerequisite/Restriction: ECN 2010/APEC 2010, MATH
1100 or MATH 1210, STAT 2300 or STAT 2000

Semester(s) Traditionally Offered: Fall, Spring

ECN 3170 - Law and Economics
3 credits

Explains legal and political rules, the organization of
government, and other institutional processes. Uses
standard microeconomic tools and concepts, such as
scarcity, choice, preferences, incentives, and supply and
demand.

Prerequisite/Restriction: POLS 1100

Cross-listed as: POLS 3170.

Semester(s) Traditionally Offered: Spring

ECN 3200 - Analytical Rigor: Scientific Methodology in
Business and the Social Sciences (DSS)
DSS Depth Social Sciences
3 credits

Analysis of behavior of consumers and business firms.
Application of theory to the solution of real world
problems. Credit will not be given for both ECN 3010 and
ECN 4010/APEC 4010.

Prerequisite/Restriction: ECN 2010/APEC 2010, MATH
1100 or MATH 1210, and STAT 2300 or STAT 2000

Cross-listed as: APEC 4010.
ECN 4020 - Intermediate Macroeconomics
3 credits

Analysis of underlying causes of unemployment, economic instability, inflation, and economic growth.

Prerequisite/Restriction: ECN 1500; MATH 1100 or MATH 1210

Semester(s) Traditionally Offered: Fall, Spring

ECN 4250 - Economics Internship
1-9 credits

Provides economics internship experience in a career related position approved by the department of Economics and Finance. Course will not qualify as upper division ECN elective.

Prerequisite/Restriction: Grade of C or better in ECN 1500 and ECN 2010 and advisor approval; admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Repeatable for credit
Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 4310 - Mathematical Methods in Economics and Finance I (QI)
QI Quantitative Intensive
3 credits

Covers single-variable and multi-variable calculus, exponents and logarithms, linear algebra, and implicit functions. These concepts find economics applications in the theory of the firm, time value of money, IS-LM macro modeling, and more.

Prerequisite/Restriction: ECN 2010/APEC 2010; MATH 1100 or MATH 1210

Semester(s) Traditionally Offered: Fall

ECN 4500 - The Political Economy of the European Union
3 credits

This course provides students with an introduction of the economic and political environment of the European Union.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

ECN 4900 - Independent Reading and Research
1-3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 4950 - Senior Honors Thesis/Project
3 credits

Creative project that will then be written up, and presented, as a Senior Thesis as required for an Honors Plan.

Semester(s) Traditionally Offered: Spring

ECN 4990 - Senior Seminar
1-3 credits

Introduces students to current research and special topics in economics.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ECN 5000 - Advanced Macroeconomic Topics
3 credits

Covers advanced topics in macroeconomics. Exact topics depend on recent developments in the macroeconomic discipline, the research and teaching expertise of the faculty, and the current state of the macroeconomy, both inside and outside of the U.S. Focuses on studying the most recent developments in macroeconomic theory and applying the theory to the pressing problems in the contemporary macroeconomy.

Prerequisite/Restriction: ECN 4020

Semester(s) Traditionally Offered: Fall

ECN 5020 - Macroeconomic Theory
3 credits

Lays a foundation of advanced macroeconomic analysis, integrating theory, data, and computational methods. Special attention given to real-world issues, with an
emphasis on how economists use macro models and data to improve business and public policy decisions. Topics covered include neoclassical, real business cycle, and macroeconomic policy.

Prerequisite/Restriction: ECN 4010

Semester(s) Traditionally Offered: Spring

ECN 5100 - History of Economic Thought
3 credits

Origin and development of economic theories of leading thinkers in western civilization.

Prerequisite/Restriction: ECN 2010/APEC 2010

Semester(s) Traditionally Offered: Spring

ECN 5110 - Economic History of the United States (DSS)
DSS Depth Social Sciences
3 credits

Development of agriculture, industry, transportation, and finance from colonial times.

Prerequisite/Restriction: ECN 2010/APEC 2010

Semester(s) Traditionally Offered: Fall

ECN 5150 - Comparative Economic Systems (CI/DSS)
CI/DSS Communications Intensive and Depth Social Sciences
3 credits

History, economic theories, and comparative policies of communist, socialist, and capitalistic economies. Problems facing transition economies.

Prerequisite/Restriction: ECN 2010/APEC 2010 and fulfillment of CL2 requirement through coursework or examination (ENGL 2010)

Semester(s) Traditionally Offered: Spring

ECN 5200 - Money and Banking
3 credits

Covers financial markets and the determination of interest rates and asset prices; the money supply process; the structure of the Federal Reserve System and the goals of the Federal Open Market Committee; other topical central banking issues; and the effects of monetary policy on output, interest rates, inflation, unemployment, financial markets, and exchange rates.

Prerequisite/Restriction: ECN 4020

Semester(s) Traditionally Offered: Fall

ECN 5300 - Industrial Organization-Game Theory
3 credits

Emphasizes market structure, firm conduct, and economic efficiency. Topics include competition, game theory, monopoly, oligopoly, monopolistic competition, firm strategies, and anti-trust policy in the United States.

Prerequisite/Restriction: ECN 4020 and either ECN 3010 or ECN 4010 or APEC 4010

Semester(s) Traditionally Offered: Spring

Effective Term Fall 2016

ECN 5310 - Mathematical Methods for Economics and Finance II (QI)
QI Quantitative Intensive
3 credits

Covers constrained optimization, unconstrained optimization, integral calculus, differential equations, probability theory, and other related topics. These concepts find application in the theory of the firm, the theory of the consumer, game theory, least squares regression analysis, portfolio theory, asset pricing, insurance contracts, choice under uncertainty, and more.

Prerequisite/Restriction: ECN 4310

Semester(s) Traditionally Offered: Spring

ECN 5330 - Applied Econometrics (QI)
QI Quantitative Intensive
3 credits

Introduction to basic statistics, simple linear regression, multiple regression, and simultaneous equation models for economics.

Prerequisite/Restriction: STAT 2000 or STAT 2300 or STAT 3000
Cross-listed as: APEC 5330.

Semester(s) Traditionally Offered: Spring

ECN 5400 - International Trade Theory
3 credits

Intermediate-level issues in international trade theory and commercial policy. Topics include competitive and noncompetitive trade models, trade policy, balance of payments accounting, exchange rates, international lending and investment, and economic growth.

Prerequisite/Restriction: ECN 4020; ECN 3010 or ECN 4010/APEC 4010

Semester(s) Traditionally Offered: Fall

ECN 5500 - Public Finance (CI)
CI Communications Intensive
3 credits

One of the most important questions in economics is when or if we should abandon the personal decisions of markets and substitute choosing with and for others through government. By examining the economic activities of government, including taxation, spending, and regulation, this course attempts to answer that question.

Prerequisite/Restriction: ECN 4010

Semester(s) Traditionally Offered: Fall

ECN 5600 - Financial Economics
3 credits

Introduction to development of our present system of money, banking, and financial institutions. Analysis of central bank policy, capital markets, speculative markets, and portfolio theory.

Prerequisite/Restriction: ECN 4020; ECN 3010 or ECN 4010/APEC 4010

Semester(s) Traditionally Offered: Spring

ECN 5700 - Economics of Public Choice
3 credits

The application of rational choice theories of individual behavior to the political processes of representative democracies and other systems of governance. Topics include voting; legislatures; autocrats and bureaucrats; judges; the provision of public goods, and the growth of government.

Prerequisite/Restriction: ECN 4010

Semester(s) Traditionally Offered: Spring

ECN 5800 - Topics in Applied Microeconomics
3 credits

Covers advanced topics in applied microeconomics. Exact topics depend on recent developments in the microeconomic discipline and the research and teaching expertise of the faculty. Focuses on using data and econometric methods to test microeconomic theories and to examine pressing social issues.

Prerequisite/Restriction: ECN 4020 and ECN 3010 or ECN 4010/APEC 4010

Semester(s) Traditionally Offered: Spring

Effective Term
Fall 2016

ECN 5900 - Labor Economics
3 credits

The supply and demand for labor, the determination of wages and employment, labor market facts, and other related issues such human capital development, contracts, bargaining, job search, mobility, migration, inequality, and discrimination.

Prerequisite/Restriction: ECN 4020, and ECN 3010 or ECN 4010/APEC 4010

Semester(s) Traditionally Offered: Fall

Effective Term
Fall 2016

ECN 5950 - Economic Research and Methods (QI)
QI Quantitative Intensive
3 credits

Introduction and use of research methods to study focused research topics in economics. Specific topics and methods can vary according to the expertise of the instructor. Methods used within course research can include mathematical modeling, simulation and econometric estimation techniques.
Prerequisite/Restriction: ECN 4010 and ECN 4020

Semester(s) Traditionally Offered: Spring

ECN 6050 - Fundamentals of Economics
3 credits

Introduction of economic principles for students entering a master's degree in the Huntsman School of Business.

Prerequisite/Restriction: Acceptance into a Huntsman School of Business master's degree program

Semester(s) Traditionally Offered: Summer

ECN 6250 - Graduate Internship
1-3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 6310 - Economics for Decision Making
2-3 credits

Application of concepts and theories, based on managerial economics, to business problems. Addresses cost theory, pricing, market structures, and forecasting.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 6330 - Applied Econometrics
3 credits

Provides graduate-level introduction to applied regression tools, including: simple and multivariate regression analysis; linear, nonlinear, and qualitative dependent variable models; distributed lags; seemingly unrelated regression; and model specification and validation tests.

Prerequisite/Restriction: Background in statistics and calculus

Cross-listed as: APEC 6330.

Semester(s) Traditionally Offered: Fall

ECN 6600 - Advanced Financial Economics
3 credits

Analyzes consumer and producer theory exploring the implications for resource allocation and market efficiency and then gradually transitioning through intertemporal economics to finance theory.

Semester(s) Traditionally Offered: Fall

ECN 6910 - Independent Research
1-3 credits

Directed readings. Credits from this course toward any economics graduate degree require approval of the student's advisory committee, the department graduate committee, and the department head.

Prerequisite/Restriction: ECN 4010/APEC 4010 and ECN 5000

Cross-listed as: APEC 6910.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 6970 - Thesis Research
1-9 credits

Master's level research.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 6990 - Continuing Graduate Advisement
1-9 credits

Master's level advisement.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECN 7130 - Microeconomic Theory I
3 credits

Provides a rigorous introduction to graduate-level microeconomic theory. While the specific focus is on the theoretical construct of graduate-level microeconomic models, the broad objective of the class is to lay the foundation for empirical applications in microeconomics. To meet this broad objective, the course covers theory of the firm, consumer theory, market structure, theory of public goods and externalities, and welfare economics. A.
Cross-listed as: APEC 7130.

Semester(s) Traditionally Offered: Fall

ECN 7230 - Macroeconomic Theory I
3 credits

Lays a foundation of advanced macroeconomic analysis, integrating theory, data, and computational methods. Special attention given to real-world issues, with an emphasis on how economists use macro models and data to improve business and public policy decisions. Topics covered include neoclassical and endogenous growth theories, real business cycle and new Keynesian theories of economic fluctuations, monetary theory, macroeconomic policy, and open-economy macroeconomics.

Semester(s) Traditionally Offered: Fall

ECN 7240 - Macroeconomic Theory II
3 credits

Extends the foundations of ECN 7230 with a more in-depth look at the theory and computational aspects of various models of economic growth and business cycles.

Prerequisite/Restriction: ECN 7230 and ECN 7360/APEC 7360

Cross-listed as: APEC 7240

ECN 7310 - Econometrics I
3 credits

Begins with a review of probability and statistics. Remainder of course is spent discussing the Classical linear regression model, least squares and maximum likelihood estimation, finite and asymptotic sample properties, inference, prediction, and nonlinear optimization.

Cross-listed as: APEC 7310

Semester(s) Traditionally Offered: Fall

ECN 7320 - Econometrics II
3 credits

Extension of ECN 7310, covering topics such as nonspherical disturbances, panel data, simultaneous equations, time series and distributed lag models, and limited and qualitative dependent variable models.

Prerequisite/Restriction: ECN 7310/APEC 7310

Cross-listed as: APEC 7320.

Semester(s) Traditionally Offered: Spring

ECN 7350 - Mathematical Economics I
3 credits

Includes linear equations, matrix algebra, multivariate calculus, static optimization, comparative static analysis, constrained optimization, and Kuhn-Tucker conditions.

Cross-listed as: APEC 7350.

Semester(s) Traditionally Offered: Fall

ECN 7360 - Mathematical Economics II
3 credits

Extends the presentation of ECN 7350 by covering applications of constrained optimization, the envelope theorem and applications, differential equations, dynamic economics, and optimal control.

Prerequisite/Restriction: ECN 7350/APEC 7350

Semester(s) Traditionally Offered: Spring

Education

EDUC 1000 - Teacher Assistant Experience
1-3 credits

For education students. Designed to familiarize them with the teaching role and to assist cooperating teachers. Classroom experiences in early childhood, elementary, or secondary education available while assisting a certified teacher in a variety of settings.

Prerequisite/Restriction: FCHD 2660 or TEAL 1010

Campus: USU Eastern only

EDUC 1005 - Teacher Assistant Experience
1-3 credits

For education students. Designed to familiarize them
with the teaching role and to assist cooperating teachers. Classroom experiences in early childhood, elementary, or secondary education available while assisting a certified teacher in a variety of settings.

Prerequisite/Restriction: FCHD 2660 or TEAL 1010

Campus: USU Eastern only

EDUC 1800 - Native American Education
3 credits

Examines Native American education in both traditional and historical context. Forms will be given to strategies designed to help Native Americans succeed in education.

Campus: USU Eastern only

EDUC 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in education. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit.

Prerequisite/Restriction: FCHD 2660 or TEAL 1010; and instructor permission

Repeatable for credit
Campus: USU Eastern only

EDUC 2988 - Special Problems
1-3 credits

Individual, departmental work experiences designed and approved by the instructor.

Repeatable for credit
Campus: USU Eastern only

EDUC 5000 - Senior Honors Seminar
2 credits

For students in the Emma Eccles Jones College of Education and Human Services to explore an honors interdisciplinary theme selected by the Honors Committee as a culmination of an honors experience.

Semester(s) Traditionally Offered: Spring

EDUC 5560 - Special Topics
0.5-4 credits

Field-based program focusing upon characteristics of effective teaching methodologies, teaching performance, curriculum decision making, value guidelines, and the characteristics of the learner. May be graded with a letter grade or graded as Pass/Fail, as determined by the instructor.

Cross-listed as: EDUC 6560 and TEAL 5560/TEAL 6560.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

EDUC 6010 - Introduction to Program Evaluation: Evaluation Models and Practical Guidelines
3 credits

Alternative approaches and practical guidelines for conducting evaluation studies. Through case studies and simulations, addresses impact of social, political, and ethical issues on evaluation.

Cross-listed as: PSY 6010.

Semester(s) Traditionally Offered: Fall

EDUC 6040 - Applied Research Methods
3 credits

Applied introduction to quantitative and qualitative research methodologies and designs used in educational, social and health sciences. Coverage of research ethics, literature searches and critiques, components of research studies, reliability and validity, APA format, and communication of research results.

Semester(s) Traditionally Offered: Fall Effective Term
Fall 2016

EDUC 6050 - Applied Statistical Analysis
3 credits

Applied introduction to statistical methods commonly used in educational, social, and health sciences. Coverage of data types, data base creation, data exploration and visualization; use of statistical software to compute descriptive and inferential statistics, including correlation, regression, group comparisons (t-tests, ANOVA), and categorical methods.
Prerequisite/Restriction: EDUC 6040 Applied Research Methods

Semester(s) Traditionally Offered: Spring
Effective Term
Spring
EDUC 6540 - Data-Based Decision Making for School Leaders
3 credits
Prepares prospective school leaders to conduct research, as well as to collect and analyze data for decision making and program evaluation in schools.

Semester(s) Traditionally Offered: Fall
EDUC 6560 - Special Topics
0.5-4 credits
Field-based program focusing upon characteristics of effective teaching methodologies, teaching performance, curriculum decision making, value guidelines, and the characteristics of the learner. May be graded with a letter grade or graded as Pass/Fail, as determined by the instructor.

Cross-listed as: EDUC 5560 and TEAL 6560/TEAL 5560.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
EDUC 6570 - Introduction to Educational and Psychological Research
3 credits
Provides introduction to research methods, including identification of research problem, review and evaluation of research literature, and design and implementation of research project.

Prerequisite/Restriction: PSY 3010
Cross-listed as: PSY 6570.
Semester(s) Traditionally Offered: Spring, Fall
Course Fee: $6.00
EDUC 6600 - Research Design and Analysis I
3 credits
Research design and statistical concepts for research in education, human services, and psychology, with emphasis on the selection and interpretation of statistical analyses.

Prerequisite/Restriction: EDUC 6570/PSY 6570, passing score on 6600 Pretest via WebCT, and instructor permission
Cross-listed as: PSY 6600.
Semester(s) Traditionally Offered: Fall, Spring, Summer
EDUC 6770 - Qualitative Methods I
3 credits
Introduction to qualitative research, including foundations; research designs and strategies of inquiry (case studies, ethnography, phenomenology, grounded theory, biographical, historical, participative inquiry); sampling; fieldwork and data collection; and analysis.

Prerequisite/Restriction: EDUC 6570/PSY 6570
Semester(s) Traditionally Offered: Fall, Spring
EDUC 6800 - Mixed Methods Research
3
Design and analysis of mixed methods research studies in education and human services. Emphasis on examining epistemological and philosophical issues, sampling, data collection, alternative designs, multiple mixed methods research models, analytic techniques, and relationships among research design, theory, and epistemology.

Semester(s) Traditionally Offered: Spring, Taught Alternate Years, Odd Years
Effective Term
Spring
EDUC 7610 - Research Design and Analysis II
3 credits
Advanced treatment of research design and statistical concepts and issues in educational, human services, and psychological research.

Prerequisite/Restriction: EDUC 6600 or PSY 6600 and STAT 5200
Cross-listed as: PSY 7610
EDUC 7650 - Longitudinal Research Design and Analysis
3 credits
Applied longitudinal study design and analysis for research in behavioral and educational sciences. Explores case-control, cohort, cross-over, complex sample, and randomized controlled trial designs. Examines analytical methods for observed outcomes of various distributions (e.g., Gaussian, Binomial, Poisson).
Prerequisite/Restriction: EDUC 7610 or PSY 7610

Semester(s) Traditionally Offered: Spring

EDUC 7670 - Literature Reviews in Education and Psychology
2 credits
Advanced concepts in designing, writing, and critiquing literature reviews.
Prerequisite/Restriction: EDUC 6600/PSY 6600 or instructor permission
Cross-listed as: PSY 7670.

Semester(s) Traditionally Offered: Spring

EDUC 7700 - Grant Writing
3 credits
Students learn to identify funding sources, select strategies for seeking resources, and write proposals for research, development, training, and service activities in education, psychology, and related fields.
Prerequisite/Restriction: EDUC 6570/PSY 6570
Cross-listed as: SPED 7700

Semester(s) Traditionally Offered: Spring

EDUC 7780 - Qualitative Methods II
3 credits
Builds on and applies concepts covered in EDUC 6770, emphasizing analysis of data, critique of qualitative research, and design and implementation of qualitative research.
Prerequisite/Restriction: EDUC 6770

Semester(s) Traditionally Offered: Spring

EDUC 7990 - Continuing Graduate Advisement
1-9 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Electrical and Computer Engineering

ECE 2250 - Electrical Circuits 1
3 credits
Introduction to electrical circuits and basic circuit elements. Circuit theory, analysis techniques, and introduction to design. DC analysis. First-order inductive and capacitive circuits. Operational amplifiers. Mutual inductance. Introduction to computer-aided design and analysis. Lab work required.
Prerequisite/Restriction: MATH 1220 and MATH 2270 (prerequisite or corequisite)

Semester(s) Traditionally Offered: Fall
Course Fee: $90.00

ECE 2290 - Electrical Circuits 2
3 credits
Continuation of electrical circuits and basic circuit elements concepts: Second-order RLC circuits. AC steady-state analysis, steady-state power and three-phase circuits, filters, and Bode diagrams. Continuation of computer-aided design and analysis. Lab work required.
Prerequisite/Restriction: ECE 2250 and MATH 2280 (prerequisite or corequisite)

Semester(s) Traditionally Offered: Spring
Course Fee: $90.00
ECE 2700 - Digital Circuits
4 credits

Introduction to boolean logic, finite state machines, basic datapath components, and register-transfer level (RTL) design. Design of combinational and sequential logic circuits with programmable logic devices. Design of digital systems. Simulations and timing analysis. Three lectures, one lab.

Prerequisite/Restriction: Minimum grade of C- in CS 1400

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $90.00

ECE 3410 - Microelectronics I
4 credits

Fundamentals of transistors, operational amplifiers, and other integrated circuits, along with their utilization in amplifiers, switches, and other applications. Laboratory work required.

Prerequisite/Restriction: ECE 2290 and ECE 3620 (may be taken concurrently) Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

ECE 3620 - Continuous-Time Systems and Signals
3 credits

Time domain analysis of higher-order systems: impulse response and convolution. Laplace transform analysis of circuits and systems. Frequency domain analysis including discrete Fourier series, Fourier transforms, and analog filter design. State-space representations and analysis of systems. Some lab work required.

Prerequisite/Restriction: CS 1410, ECE 2290, MATH 2280 Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall, Spring

ECE 3640 - Discrete-Time Systems and Signals
3 credits

Sampling of continuous-time signals. Time and z-transform domain analysis of discrete-time systems. Frequency domain analysis using the discrete-time Fourier transform, DFT and FFT. Frequency response and digital filter design. Some lab and computational work required.

Prerequisite/Restriction: ECE 3620 Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

ECE 3710 - Microcontroller Hardware and Software
4 credits

Synthesis of microcontroller systems, including hardware, programming, and interfacing. Covers architecture basics, instruction set, assembly language programming, I/O, timing, and interrupts. Includes hands-on implementation. Three lectures, one lab.

Prerequisite/Restriction: ECE 2250, ECE 2700, CS 1410, and student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall

ECE 3810 - Engineering Professionalism
1 credit

Introduces students to life as an engineer, including: the design process, working in teams, understanding professional and ethical responsibility, the impact of engineering on society, and the need for continued professional development. Also includes discussion of how engineering meets the contemporary needs of society.

Prerequisite/Restriction: ENGR 3080 (may be taken concurrently) Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall, Spring

ECE 3870 - Electromagnetics I
4 credits

Discussion of Maxwell’s equations, electromagnetic waves, power and energy, reflection and refraction processes, transmission lines, waveguides, and antennas. Explores electrostatic and magnetostatic fields produced by charge and current distributions, as well as electromagnetic forces and materials.

Prerequisite/Restriction: ECE 2290, MATH 2210, MATH 2280
2270, MATH 2280, PHYS 2220, and student must be in
the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

ECE 4250 - Internship/Co-op
3 credits

Planned, career-related work experience in industry. Students must register with USU Co-op Office and have program approved by the ECE co-op advisor. Written report required.

Prerequisite/Restriction: Student must be in the Professional Engineering Program.

Repeatable for credit. Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECE 4820 - Engineering Design I
1 credit

Individual or team engineering project proposal development. Interdisciplinary projects strongly encouraged. Written project proposal required.

Prerequisite/Restriction: ECE 3810 and student must be in the Professional Engineering Program

Corequisite: ECE 4830

Semester(s) Traditionally Offered: Fall, Spring

ECE 4830 - Engineering Communications I
1 credit

Professional engineering project proposal writing methods, including budget development and project scheduling (Gantt) charts. Project progress report writing.

Prerequisite/Restriction: ECE 3810 and student must be in the Professional Engineering Program

Corequisite: ECE 4820 or senior-level capstone course

Semester(s) Traditionally Offered: Fall, Spring

ECE 4840 - Engineering Design II (CI)
CI Communications Intensive
2 credits

Design, development, and testing of the engineering project proposed in ECE 4820. Interdisciplinary projects strongly encouraged. Design and test plans required.

Prerequisite/Restriction: ECE 4820 or capstone course and student must be in the Professional Engineering Program

Corequisite: ECE 4850

Semester(s) Traditionally Offered: Fall, Spring

ECE 4850 - Engineering Communications II (CI)
CI Communications Intensive
1 credit

Includes professional engineering project reports, oral design reviews, presentation graphics, and project presentation.

Prerequisite/Restriction: ECE 4830 and student must be in the Professional Engineering Program

Corequisite: ECE 4840

Semester(s) Traditionally Offered: Fall, Spring

ECE 4930 - Special Studies for Undergraduates
1-3 credits

Independent or group study of engineering problems not covered in regular course offerings.

Prerequisite/Restriction: Student must be in the Professional Engineering Program.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ECE 5140 - Electrical Energy Engineering
3 credits

Introduction to electrical energy and power sources, distribution and consumption; economics, device, instrumentation, and systems analysis/design.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing.

Semester(s) Traditionally Offered: Fall
ECE 5220 - Electro-optical Engineering  
3 credits

Explores optical principles; image formation; electro-optical materials and components; electro-optical detectors, radiometry, and photometry; electro-optical devices and instruments; and electro-optical systems analysis and design. Designed for senior-level undergraduates and first-year graduate students.

Prerequisite/Restriction: ECE 3870 or PHYS 3600 and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring

ECE 5230 - Spacecraft Systems Engineering  
3 credits

Spacecraft communications, telemetry systems, and command and data handling. Introduction to astrodynamics and orbit design. Electrical power generation and storage. Spacecraft subsystems (e.g., guidance, navigation, and control).

Prerequisite/Restriction: MATH 2270, MATH 2280, and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

ECE 5240 - Space System Design  
3 credits

Students in teams perform a space system design involving all aspects, including technical, cost, and schedule. Class is linked to national design competitions and/or current USU spacecraft design projects.

Prerequisite/Restriction: ECE 5230 or MAE 5520 Student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: MAE 5530.

Semester(s) Traditionally Offered: Spring

ECE 5310 - Control Systems  
3 credits

Study of analog and computer controlled systems, classical and modern control system design methods, s-

ECE 5320 - Mechatronics  
4 credits

Principles, modeling, interfacing, and signal conditioning of motion sensors and actuators. Hardware-in-the-loop simulation and rapid prototyping of real-time closed-loop computer control of electromechanical systems. Modeling, analysis, and identification of discrete-time or sampled-data dynamic systems. Commonly used digital controller design methods. Introduction to nonlinear effects and their compensation in mechatronic systems. Laboratory work and a design project required. Three lectures and one lab.

Cross-listed as: MAE 5320

Semester(s) Traditionally Offered: Spring

Effective Term

Spring

ECE 5410 - Semiconductor Devices  
3 credits

Introduction to semiconductor physics and devices. Students receive an introduction to the operation of the most important devices used in integrated circuit technology. Emphasis placed on understanding device operation.

Prerequisite/Restriction: ECE 3410 and student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: MAE 5530.

Semester(s) Traditionally Offered: Spring

ECE 5420 - Microelectronics II  
3 credits

Design of electronic circuits for applications in instrumentation, communication, control, and power
systems.

Prerequisite/Restriction: ECE 3410 and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall
ECE 5440 - Analog VLSI I
3 credits
Introduces design principles and techniques for fully-integrated CMOS analog circuits. Topics include advanced MOSFET device modeling, design and verification of operational amplifiers, and switched-capacitor circuits.

Prerequisite/Restriction: ECE 5420 and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring
ECE 5460 - VLSI Design Automation
3 credits
Introduction to basic algorithms and methodologies for automating the design of modern VLSI circuits. Emphasis on physical design problems, including partitioning, floorplanning, and place and route of VLSI circuits. Identification and formulation of CAD design problems using algorithmic paradigms, such as simulated annealing, dynamic programming, and mathematical programming. Students gain experience in the development of VLSI-CAD tools.

Prerequisite/Restriction: ECE 2700 and professional program or graduate standing

Cross-listed as: ECE 6460

Semester(s) Traditionally Offered: Fall
ECE 5470 - VLSI Design
3 credits
Introduces the standard cell library-based design flow in VLSI, including design methodology and IP design, CMOS circuit design styles, and design technology for low power and thermal aware designs.

Prerequisite/Restriction: ECE 5460/ECE 6460 or equivalent Student must be in the Professional Engineering Program and have Graduate Standing

Cross-listed as: ECE 6470

Semester(s) Traditionally Offered: Spring
ECE 5480 - VLSI Testing and Verification
3 credits
Theory and practice of testing and verification of VLSI systems. Topics include fault modeling, fault simulation, test generation, scan design and design for testability (DFT). Students develop experience with commercial testing and DFT tools.

Prerequisite/Restriction: ECE 2700 and professional program or graduate standing

Cross-listed as: ECE 6480

Semester(s) Traditionally Offered: Spring

ECE 5600 - Introduction to Computer Networks
3 credits
Introduction to computer network terminology, network applications, network technologies and internetworking. Protocol stacks are introduced, and each layer is studied. Particular attention is paid to the TCP/IP protocol stack.

Prerequisite/Restriction: ECE 3620, and either MATH 5710 or STAT 3000 Student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: ECE 6460

Semester(s) Traditionally Offered: Fall
ECE 5630 - Digital Signal and Image Processing
3 credits
Theory and applications of digital signal and image processing, including filter design, multi-rate processing, filter banks, array processing, and 2D systems, signals and transforms. Some lab and computational work required.

Prerequisite/Restriction: ECE 3640 or equivalent Student must be in the Professional Engineering Program and have Graduate Standing
ECE 5640 - Real-Time Processors
4 credits

Real-time processor architectures and methods used for
digital signal processing. Includes C and assembly
language programming, modern DSP architectures, tools
for real-time system development, and finite word-length
effects. Laboratory includes implementation of
hardware-based real-time systems. Three lectures, one
lab.

Prerequisite/Restriction: ECE 3640 and ECE 3710
Student must be in the Professional Engineering Program
or have Graduate Standing

ECE 5660 - Communication Systems I
3 credits

Explores fundamentals of analog and digital
communication systems. Focuses on modulation,
demodulation, detection, and synchronization.

Prerequisite/Restriction: ECE 3640 and MATH 5710
Student must be in the Professional Engineering Program
or have Graduate Standing

ECE 5680 - Transceiver Systems Engineering
3 credits

Systems engineering approach to the design of
transmitters and receivers, focusing on the design using
off-the-shelf components. System-level cascades and
system architectures are considered. Students design,
build and demonstrate a system of their own.

Prerequisite/Restriction: Student must be in the
Professional Engineering Program and have Graduate
Standing.

Corequisite: ECE 3640 or equivalent. Not available to
pre-majors.

ECE 5700 - Introduction to Microfabrication
3 credits

Materials, wet chemical cleaning and etch,
photolithography, metal deposition, doping, carrier
density and conductivity, microfluidics, micro-electronic-
mechanical-systems.

Prerequisite/Restriction: PHYS 2210, PHYS 2215, PHYS
2220 and PHYS 2225 or instructor permission. Student
must be in the Professional Engineering Program or have
Graduate Standing

Cross-listed as: BENG 5700 and PHYS 5700

ECE 5720 - Computer Systems Programming and
Architecture
3 credits

Advanced assembly language and systems programming
concerned with performance. Study of modern computer
architecture issues, such as caching, pipelining,
concurrent instruction execution, and virtual memory.

Prerequisite/Restriction: ECE 2700 and ECE 3710 (can
be taken as a co-requisite also) Student must be in the
Professional Engineering Program or have Graduate
Standing

ECE 5750 - Computer Architecture
3 credits

Modern architecture fundamentals, instruction set
analysis and design, pipelined and superscalar
architectures, software-hardware interaction, memory
hierarchy, virtual memory stresses, and evaluation of
multi-level systems.

Prerequisite/Restriction: ECE 5720 or equivalent
Student must be in the Professional Engineering Program
or have Graduate Standing

Cross-listed as: ECE 6750
Examines unique vulnerabilities of embedded systems; emphasis on utilizing hardware and the physical layer for attacks and countermeasures. Topics include hardware trojans, cryptographic hashing, stack-based attacks, side-channel attacks, physically unclonable functions, identification of devices based on physical characteristics, and fault-injection attacks.

Prerequisite/Restriction: ECE 3410 (or corequisite), ECE 3710, and Admission to the Professional Program, or Graduate Standing

Cross-listed as: ECE 6760

Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2017

Design of hardware and software interfaces to microcomputers for instrumentation and control applications. Three lectures, one lab.

Prerequisite/Restriction: ECE 3710 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring

Real-time system design and implementation of basic concepts, including modeling, scheduling, resource access control, synchronization, and communication. Emphasis placed on both theory and practice. Exploration of open topics and current challenges in designing real-time systems. Includes hands-on implementation. Three lectures, one lab.

Prerequisite/Restriction: ECE 5720 Student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: ECE 6780

Semester(s) Traditionally Offered: Spring

Effective Term
Fall 2017

Prerequisite/Restriction: ECE 3870 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

Impedance matching, microwave network analysis, waveguides, nonlinear elements, analysis and design of power dividers, filters, and ferromagnetic circuits. Laboratory work required.

Prerequisite/Restriction: ECE 3870 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring

Theory and application of electromagnetic radiation and radiating structures. Emphasis on antenna designs for modern wireless communications and radar systems. P.

Prerequisite/Restriction: ECE 3870 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

Independent or group study of engineering problems not covered in regular course offerings.

Prerequisite/Restriction: Student must be in the
Professional Engineering Program or have Graduate Standing.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ECE 6010 - Stochastic Processes in Electronic Systems
3 credits
Introduction to stochastic processes in communications, signal processing, digital and computer systems, and control. Topics include continuous and discrete random processes, correlation and power spectral density, optimal filtering, Markov chains, and queuing theory.

Prerequisite/Restriction: Graduate status
Semester(s) Traditionally Offered: Fall

ECE 6030 - Mathematical Methods for Signals and Systems
3 credits
Signal representation using vector spaces. Linear algebraic techniques for signal modeling and estimation. Optimal detection and estimation algorithms, with applications.

Prerequisite/Restriction: Graduate status
Semester(s) Traditionally Offered: Spring

ECE 6040 - Convex Optimization
3 credits
The theory of convex optimization and applications, as applied to engineering. Numerical methods for solving convex optimization problems are presented. Computational work required.

Semester(s) Traditionally Offered: Fall

ECE 6140 - Advanced Electrical Energy Engineering
3 credits
Computer-aided design of electromechanical, solar, chemical, hydroelectric, hydrocarbon, wind, nuclear, geothermal, oceanic, transmission, and distribution systems. Priority assessment is given to efficiency, reliability, cost effectiveness, and reduced environmental impact (renewable and nonrenewable energy).

Prerequisite/Restriction: ECE 5140
Semester(s) Traditionally Offered: Fall

ECE 6240 - Space Environment and Engineering
3 credits
Study of space environment and models used for engineering analysis. Topics include considerations for engineering in the space environment, such as plasma interactions, debris, chemical reactions, radiation effects, and thermal issues.

Prerequisite/Restriction: MATH 2270, MATH 2280
Corequisite: ECE 5230.
Cross-listed as: PHYS 6240.

Semester(s) Traditionally Offered: Fall

ECE 6250 - Graduate Internship/Coop
1-3 credits
Planned work experience in industry. Detailed program; must have prior approval. Written report required.

Prerequisite/Restriction: Instructor permission
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ECE 6320 - Linear Multivariable Control
3 credits
Modeling, analysis, and design of multi-input, multi-output control systems, including both state space and transfer matrix approaches, with an emphasis on stability.

Prerequisite/Restriction: ECE 5310 or MAE 5310
Cross-listed as: MAE 6320.

Semester(s) Traditionally Offered: Fall

ECE 6340 - Spacecraft Attitude Control
3 credits
Spacecraft attitude dynamics and controls. Spin stabilized, three axis, and dual spin modes. Attitude determination techniques.
Cross-listed as: MAE 6340

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

ECE 6345 - Space Attitude Control Applications
3 credits

Applications of spacecraft attitude control concepts including attitude control and determination sensors, actuators, and algorithms.

Effective Term
Spring 2017

ECE 6460 - VLSI Design Automation
3 credits

Introduction to basic algorithms and methodologies for automating the design of modern VLSI circuits. Emphasis on physical design problems, including partitioning, floorplanning, and place and route of VLSI circuits. Identification and formulation of CAD design problems using algorithmic paradigms, such as simulated annealing, dynamic programming, and mathematical programming. Students gain experience in the development of VLSI-CAD tools.

Prerequisite/Restriction: CS 1400 and ECE 2700

Cross-listed as: ECE 5460.

Cross-listed as: ECE 5460.

Semester(s) Traditionally Offered: Fall

ECE 6470 - Digital VLSI System Design II
3 credits

Introduces the standard cell library-based design flow in VLSI, including design methodology and IP design, CMOS circuit design styles, and design technology for low power and thermal aware designs.

Prerequisite/Restriction: ECE 5460/ECE 6460 or equivalent

Cross-listed as: ECE 5470

Semester(s) Traditionally Offered: Spring

ECE 6480 - VLSI Testing and Verification
3 Credits

Theory and practice of testing and verification of VLSI systems. Topics include fault modeling, fault simulation, test generation, scan design and design for testability (DFT). Students develop experience with commercial testing and DFT tools.

Prerequisite/Restriction: ECE 2700 and professional program or graduate standing

Cross-listed as: ECE 5480

Semester(s) Traditionally Offered: Spring

ECE 6560 - Spacecraft Navigation
3 credits


Prerequisite/Restriction: MAE 5310 or ECE 5310 or equivalent

Cross-listed as: MAE 6560.

Semester(s) Traditionally Offered: Spring

ECE 6600 - Wireless and Mobile Networking
3 credits

Structure, system aspects and protocols of wireless networks, and basic performance evaluation capabilities. The focus is on the generations of cellular networks, satellite networks, wireless LANs, WANs, and PANs.

Prerequisite/Restriction: ECE 5600

Semester(s) Traditionally Offered: Spring

ECE 6750 - Computer Architecture
3 credits

Modern architecture fundamentals, instruction set analysis and design, pipelined and superscalar architectures, software-hardware interaction, memory
hierarchy, virtual memory stresses, and evaluation of multi-level systems.

Prerequisite/Restriction: ECE 5720 or equivalent
Student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: ECE 5750

Semester(s) Traditionally Offered: Spring
ECE 6760 - Hardware and Embedded Systems Security
4

Examines unique vulnerabilities of embedded systems; emphasis on utilizing hardware and the physical layer for attacks and countermeasures. Topics include hardware trojans, cryptographic hashing, stack-based attacks, side-channel attacks, physically unclonable functions, identification of devices based on physical characteristics, and fault-injection attacks.

Cross-listed as: ECE 5760

Effective Term
Spring 2017
ECE 6780 - Embedded Real-Time Systems
4 credits

Real-time system design and implementation of basic concepts, including modeling, scheduling, resource access control, synchronization, and communication. Emphasis placed on both theory and practice. Exploration of open topics and current challenges in designing real-time systems. Includes hands-on implementation. Three lectures, one lab.

Prerequisite/Restriction: ECE 5720 Student must be in the Professional Engineering Program or have graduate standing

Cross-listed as: ECE 5780

Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2016
ECE 6800 - Electrical Engineering Colloquium
0.5 credit

Weekly seminars or colloquia. Students are normally required to enroll for two semesters.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

ECE 6830 - Microwaves II
3 credits

Microwave amplifier design for noise, gain, and power match; microwave semiconductor and vacuum-tube devices; microwave oscillators; and microwave system performance characterization. Laboratory work required.

Prerequisite/Restriction: ECE 5800, ECE 5810, or equivalent

Semester(s) Traditionally Offered: Fall
ECE 6930 - Special Topics in Electrical Engineering
1-6 credits

Independent or group study in electrical engineering topics, such as automated systems, optics and laser engineering, electro-acoustics, solid-state materials, devices, and intelligent systems engineering.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
ECE 6950 - Design Project
3 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
ECE 6970 - Thesis Research, MS
1-6 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
ECE 6990 - Continuing Graduate Advisement
1-6 credits

Prerequisite/Restriction: Permission of Electrical and Computer Engineering Department

Repeatable for credit.
ECE 7030 - Detection and Estimation Theory
3 credits


Prerequisite/Restriction: ECE 6010, ECE 6030

ECE 7210 - Spacecraft Instrumentation
3 credits

Theory, engineering, and data reduction techniques of spacecraft instrumentation for space science and spacecraft systems.

Prerequisite/Restriction: ECE 6240/PHYS 6240

Cross-listed as: PHYS 7210.

ECE 7330 - Nonlinear and Adaptive Control
3 credits

Methods of nonlinear and adaptive control system design and analysis. Includes qualitative and quantitative theories, graphical methods, frequency domain methods, sliding surface design, linear parameter estimation methods, and direct and indirect adaptive control techniques.

Prerequisite/Restriction: ECE 6320/MAE 6320

Cross-listed as: MAE 7330.

ECE 7340 - Advanced Aerospace Controls
3 credits

The application of multi-variable optimal control techniques to aircraft, missiles and spacecraft.

Prerequisite/Restriction: ECE 6320/MAE 6320

ECE 7360 - Optimal and Robust Control
3 credits

Advanced methods of control system analysis and design. Operator approaches to optimal control, including LQR, LQG, and L1 optimization techniques. Robust control theory, including QFT, H-infinity, and interval polynomial approaches.

Prerequisite/Restriction: ECE 6320/MAE 6320 or instructor permission

Cross-listed as: MAE 7360.

ECE 7440 - Mixed-Signal VLSI Systems
3 credits

Covers specification, design, and verification of integrated systems with both analog and digital components. Particular emphasis given to data converter circuits (ADC and DAC), focusing on current research problems in the field.

Prerequisite/Restriction: ECE 5440

Cross-listed as: MAE 7440.

ECE 7600 - Advanced Wireless Networks
3 credits

Wireless network definition, characterization, design, and optimization. Methods for improving network capacity, including interference management, power control, carrier sense turning, radio resource management, temporal/spatial and diversity and scheduling. Other topics include mobility management, energy efficiency, and QoS.

Prerequisite/Restriction: ECE 6010 and ECE 6600

Semester(s) Traditionally Offered: Fall
ECE 7630 - Advanced Digital Signal and Image Processing
3 credits

Advanced digital signal and image processing theory and methods. Topics selected from: optimal filter design, adaptive filtering, spectral estimation, beamforming, tomography, data compression, restoration/superresolution, etc.

Prerequisite/Restriction: ECE 5630, ECE 6010, ECE 6030
Corequisite: ECE 6030 (prerequisite or corequisite)

Semester(s) Traditionally Offered: Spring

ECE 7670 - Coding Theory and Practice in Communication
3 credits

Examination of codes employed in digital communications, including discussion of error correction codes over finite fields. Reed-Solomon, convolutional, and trellis coding. Advanced coding techniques.

Prerequisite/Restriction: ECE 6010 or ECE 6030 and ECE 5660 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall

ECE 7720 - Parallel Computer Architecture
3 credits

Covers parallelism and the design of parallel computer architectures. Explores various hardware techniques designed to support parallel execution across a range of real-world applications. Examines various components of parallel computer systems and design trade-offs in the light of underlying circuit characteristics.

Prerequisite/Restriction: ECE 5750, ECE 6750 or equivalent, or instructor permission

Semester(s) Traditionally Offered: Fall
Effective Term
Fall, Summer

ECE 7860 - Computational Electromagnetics A
3 credits

Using Finite Difference Time Domain (FDTD) and Finite Element Method (FEM) methods to solve electromagnetics problems that includes waveguides, scattering problems, and electromagnetic wave propagation in different media.

Prerequisite/Restriction: ECE 5800

Semester(s) Traditionally Offered: Spring

ECE 7890 - Computational Electromagnetics B
3 credits

Modeling electromagnetic problems with integral equations and solve using Methods of Moments (MOM). Solving complex electromagnetic problems using Boundary Integral Finite Element Method (BI-FEM), which is a hybrid computational electromagnetic method by integration MOM and Finite Element Method (FEM).

Semester(s) Traditionally Offered: Spring

ECE 7930 - Special Topics in Electrical Engineering
1-6 credits

Independent or group study in electrical engineering topics, such as automated systems, laser engineering, electroacoustics, solid-state materials, devices, and intelligent systems engineering.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ECE 7970 - Dissertation Research
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

ECE 7990 - Continuing Graduate Advisement
1-9 credits

Prerequisite: Permission of Electrical and Computer Engineering Department.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

ELET 1110 - Electronics/Electrical Mathematics (MA)
3 credits

MA Mathematics
Covers the various specialized mathematical topics unique to and necessary for the study of electronics/electricity. These topics include but are not limited to: Systems of Units, Units of Measure, Scientific vs. Metric Prefix Notation of Numbers/Units, Functions, Complex Numbers, and Vectors, Numbering Systems, Introductory Statistics and Derivative and Integral Calculus as it applies to Electrical/Electronic Systems and Components.

Prerequisite/Restriction: MATH 0950 or higher level MATH course, ACT Math score of 17 or higher or equivalent SAT Math score, score of 40 or satisfactory score on the Math Placement Exam, or math exam given by the program

Campus: USU Eastern only

ELET 1120 - Computer Tools for Technology
Computer and Information Literacy
2 credits

Covers various software packages and systems used by electronic/electrical technicians and technologists as tools in the analysis and design of systems. Topics include but are not limited to: Pspice, MathCad, Structure Programming C++, Internet retrieval of manufacturers data sheets, work-processing, spreadsheets and graphing, HP48G programming techniques and programmable logic device programming software.

Prerequisite/Restriction: Completion or concurrent registration in MATH 1060 or AP Calculus AB score of 3 or higher; or ELET 1110

Campus: USU Eastern only

ELET 1130 - Circuit Analysis
6 credits

Covers basic and advanced DC and AC electric circuit topics. These topics include but are not limited to: Ohm’s Law, Kirchhoff’s Voltage and Current Laws, resistance, capacitance, inductance, conductance, reactance, susceptance, impedance, admittance, and RC and RL time constants. Analysis of series, parallel, series-parallel and bridge networks using Superposition, Thevenin’s and Maximum Power Transfer Theorems, Resonance, Mesh and Nodal Analysis; and Source and -Y Conversions.

Prerequisite/Restriction: Completion or concurrent registration in ELET 1140; and MATH 1060 or AP Calculus AB score of 3 or higher or ELET 1110

Campus: USU Eastern only

ELET 1140 - Circuit Analysis Lab
1 credit

Provides practical experience related to topics in ELET 1130. Emphasis is placed on validation of concepts, laws, theorems and methods of analysis used in the classroom. In addition students will be required to design circuits and develop familiarity with electronic components, bread boarding and the proper use of test equipment. Laboratory reporting techniques will be developed through report writing.

Prerequisite/Restriction: Completion of or concurrent registration in ELET 1110 and ELET 1120

Campus: USU Eastern only

ELET 1150 - Digital Systems Theory
4 credits

Introduces the fundamentals of digital logic circuits and systems. Topics include but not limited to: Numbering systems and codes, logic gates operation, Boolean algebra, combinational logic and design, flip-flops, counters, timers, registers, programmable logic devices, memories, logic families, interfacing circuits, sequential logic design and an introduction to Microprocessors.

Prerequisite/Restriction: Completion or concurrent registration in MATH 1060 or AP Calculus AB score of 3 or higher; or ELET 1110 and ELET 1120

Corequisite: ELET 1160

Campus: USU Eastern only

ELET 1160 - Digital Systems Lab
1 credit

Provides practical experience related to topics in ELET 1150. Emphasis is placed on validation of concepts, laws, theorems and methods of analysis used in the classroom. In addition students will be required to design combinational and sequential circuits and develop familiarity with programmable logic devices and programming, digital electronic components, data sheet interpretation and use, and the proper use of test
equipment. Laboratory reporting techniques will be developed through report writing.

Prerequisite/Restriction: ELET 1110, ELET 1120, and fulfillment of the CL1 requirement through coursework or examination (ENGL 1010)

Corequisite: ELET 1150

Campus: USU Eastern only

ELET 1170 - Electronic Devices and Circuits
6 credits

Introduces the basic physics of solid state devices, and the analysis and applications of Diodes, Bipolar Junction Transistors, Field-Effect Transistors, Thyristors and Linear Integrated circuits.

Prerequisite/Restriction: ELET 1130

Corequisite: ELET 1180

Campus: USU Eastern only

ELET 1180 - Electronic Devices and Circuits Lab
1 credit

Provides practical experience related to topics in ELET 1170. Emphasis is placed on validation of concepts, laws, theorems and methods of analysis used in the classroom. In addition students will be required to design circuits and develop familiarity with electronic components, bread boarding and the proper use of test equipment. Laboratory reporting techniques will be developed through report writing.

Prerequisite/Restriction: ELET 1120

Corequisite: ELET 1170

Campus: USU Eastern only

ELET 1200 - Motors, Controls and OLC’s
4 credits

Covers the theory, operation and applications of motors, motor controls and programmable logic controllers.

Prerequisite/Restriction: ELET 1130

Corequisite: ELET 1210

Campus: USU Eastern only

ELET 1210 - Motors, Controls and PLC’s Lab
1 credit

Provides practical experience related to topics in ELET 1200. Emphasis is placed on correctly wiring various motor control applications, programming and interfacing the PLC and validation of characteristics of different motor configurations. In addition students will be required to design PLC software and interface wiring to specifications. Laboratory reporting techniques will be developed through report writing.

Prerequisite/Restriction: ELET 1130 and ELET 1160

Corequisite: ELET 1200

Campus: USU Eastern only

ELET 2130 - Communication Systems
3 credits

Studies the operational characteristics of Amplitude, Frequency and Phase Modulation techniques; and their applications in today's communication systems. In addition, digital communication techniques and technologies are explored.

Prerequisite/Restriction: ELET 11170 and ELET 1180

Corequisite: ELET 2140

Campus: USU Eastern only

ELET 2140 - Communication Systems lab
1 credit

Reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of test equipment, verification of operational characteristics, building and testing systems, and laboratory reporting.

Corequisite: ELET 2130

Campus: USU Eastern only

ELET 2150 - Industrial Instrumentation Systems
6 credits
Comprehensive study of the theory, physics, and devices that measure and control temperature, pressure, flow and level in the world of process control. Students are required to calculate, graph, interpolate, discuss, define, and articulate all concepts relative to these parameters and the devices used to measure them.

Prerequisite/Restriction: ELET 1130, ELET 1140, ELET 1150, ELET 1160, ELET 1170, and ELET 1180

Corequisite: ELET 2160

Campus: USU Eastern only

ELET 2160 - Industrial Instrumentation Systems Lab
1 credit

Provides the practical exposure to the devices studied in ELET 2150. Students will be expected to properly setup, calibrate, test and troubleshoot actual devices used to measure process parameters. In addition, students are required to interpret manufacturer's specifications to perform the necessary, safe and accurate calibration of various transmitters, sensors, and systems. Students will also be required to convey technical information through written reports.

Prerequisite/Restriction: ELET 1130, ELET 1140, ELET 1150, ELET 1160, ELET 1170, and ELET 1180

Corequisite: ELET 2150

Campus: USU Eastern only

ELET 2210 - Advanced PLC’s
3 credits

Examines the advanced analog instruction set of the programmable logic controller and its uses in a variety of industrial applications. Also covers the PC software programming package used to program PLC’s, and the interfacing requirements for use in practical systems.

Prerequisite/Restriction: ELET 1200, ELET 1210, ELET 2150, and ELET 2160

Corequisite: ELET 2220

Campus: USU Eastern only

ELET 2220 - Advanced PLC’s Lab
1 credit

Reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of equipment, programming of PLC’s, interfacing to control systems and laboratory reporting.

Corequisite: ELET 2210

Campus: USU Eastern only

ELET 2230 - Communication Systems II
3 credits

Reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of test equipment, verification of operational characteristics, building and testing systems, and laboratory reporting.

Prerequisite/Restriction: ELET 2130 and ELET 2340

Corequisite: ELET 2240

Campus: USU Eastern only

ELET 2240 - Communication Systems II Lab
1 credit

Reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of test equipment, verification of operational characteristics, building and testing systems, and laboratory reporting.

Corequisite: ELET 2230

Campus: USU Eastern only

ELET 2250 - Industrial Control Systems
6 credits

Studies industrial control systems, transducers, signal conditioning systems and techniques, sensors, servos, and their applications in the commercial and industrial environments.

Prerequisite/Restriction: ELET 1170 and ELET 1180
Corequisite: ELET 2260
Campus: USU Eastern only
ELET 2260 - Industrial Control Systems Lab
1 credit

Reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of test equipment, building and testing systems, and laboratory reporting.

Corequisite: ELET 2250
Campus: USU Eastern only
ELET 2330 - Telecom Mediums
3 credits

Studies the characteristics, applications, planning, implementation, and management of telecommunication mediums.

Corequisite: ELET 2340
Campus: USU Eastern only
ELET 2340 - Telecom Mediums Lab
1 credit

Gives practical application to the topics studied in ELET 2330, as well as familiarizes the student with the use of basic tools, equipment, and troubleshooting these mediums.

Corequisite: ELET 2330
Campus: USU Eastern only
ELET 2510 - Telecom Systems
3 credits

Gives students an overview and history of the telecommunications industry, covering many voice telecom systems and data telecom systems. Students will be able to construct, troubleshoot, test and verify the proper operation of voice based telecommunication systems. Also safely test equipment and tools to measure operational parameters for purposes of diagnosis, repair and verification of proper operation.

Corequisite: ELET 2520
Campus: USU Eastern only
ELET 2520 - Telecom Systems Lab
1 credit

Gives practical application to the topics studied in ELET 2510, as well as familiarizes the student with the use of basic tools, equipment, and troubleshooting techniques.

Corequisite: ELET 2510
Campus: USU Eastern only
ELET 2977 - Cooperative Education
1-3 credits

Provides on-the-job experience for students majoring in electronics. The student meets with the instructor/coordinator at the beginning and periodically to determine and evaluate objectives, hours to be worked and credit agreement.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Eastern only
ELET 2988 - Special Problems
1-3 credits

Individual work approved by the instructor. Time and credit to be arranged.
Repeatable for credit
Campus: USU Eastern only
Elementary Education
ELED 1010 - Orientation to Elementary Education
3

Level One: Students assess themselves as prospective teachers. Students will be required to observe in the public schools (grades K-6) and complete volunteer service hours in an approved service organization. Please note that students interested in applying for an elementary education program must first complete this course and FCHD 1500 with a B- grade or better.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $30.00
Effective Term
Spring

ELED 3000 - Historical, Social, and Cultural Foundations of Education and School Practicum (CI)
CI Communications Intensive
4-6 credits

Introduction to the historical, social, and cultural foundations of education. Students examine the interdependence of school and society, along with the influence of that interdependence on curricular and instructional practices in early childhood, elementary, and middle-level classrooms.

Prerequisite/Restriction: Admission to an Elementary Education program; grade of B- or better in ELED 1010 and FCHD 1500

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ELED 3005 - Beginning Classroom Management
1 credit

Explores essential principles of classroom motivation and management. Focuses on understanding a learning environment where children work well independently and collaboratively.

Prerequisite/Restriction: Admission to an Elementary Education program; grade of B- or better in ELED 1010 and FCHD 1500

Semester(s) Traditionally Offered: Fall, Spring
ELED 3010 - Practicum Remediation Level II
2-4 credits

Students work to develop defensible teaching ideas and to translate these ideas into practical experiences in elementary classroom settings. Specific arrangements for scheduling, placement with a cooperating teacher, and course requirements are handled by professors from the program level recommending remediation and the Elementary Education Advising Office.

Pass/Fail only.

ELED 3100 - Classroom Reading Instruction
3 credits

Introduces the preservice teacher candidate to the teaching and learning processes associated with reading instruction in the elementary school. Emphasis is placed on developing competencies for teaching phonological awareness, phonics, fluency, vocabulary and comprehension. Focus includes instructional techniques, methods and materials for whole-class reading instruction.

Prerequisite/Restriction: Admission to an Elementary Education program; grade of B- or better in ELED 1010 and FCHD 1500

Semester(s) Traditionally Offered: Fall
ELED 3200 - Literacy Clinic Practicum
3 credits

Teacher candidates work as tutors in the Literacy Clinic. Course emphasizes use of student assessment, implementation of effective literacy instruction, classroom management, and data-based decision making to teach children attending the Literacy Clinic.

Prerequisite/Restriction: ELED 3100 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall, Spring
ELED 3800 - ArtsBridge
2 credits

Students learn to create unique lessons in the arts linked to language arts, math, science, and social studies.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Fall 2016
ELED 4000 - Teaching Science and Practicum Level III
3 credits

Investigation and practical application of science programs, materials, and techniques of instruction for
the teaching of science.

Prerequisite/Restriction: Minimum Level II GPA of 2.75; grade of B- or better in ELED 3000, ELED 3005, ELED 3100, SPED 4000, PSY 3660, and SPED 5530 or ITLS 4015. For Elementary Education program students not earning a dual certificate in Special Education, a B- or better is also required in ELED 4150.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $18.00

ELED 4005 - Intermediate Classroom Management
1 credit

Explores essential principles of classroom motivation and management. Focuses on facilitating a learning environment where children work well independently and collaboratively, are self-governing, and make socially appropriate decisions.

Prerequisite/Restriction: Minimum Level II GPA of 2.75; grade of B- or better in ELED 3000, ELED 3005, ELED 3100, SPED 4000, PSY 3660, and SPED 5530 or ITLS 4015. For Elementary Education program students not earning a dual certificate in Special Education, a B- or better is also required in ELED 4150.

Semester(s) Traditionally Offered: Fall, Spring

ELED 4010 - Practicum Remediation Level III
2-4 credits

Students work to develop defensible teaching ideas and to translate these ideas into practical experiences in elementary classroom settings. Specific arrangements for scheduling, placement with a cooperating teacher, and course requirements are handled by professors from the program level recommending remediation and the Elementary Education Advising Office.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $30.00 per credit

ELED 4030 - Teaching Language Arts and Practicum Level III (CI)
CI Communications Intensive
3 credits

Study of language development in children and its implications and application in a practicum setting.

Curriculum development, instructional methods, and assessment in the areas of writing and spelling.

Prerequisite/Restriction: Minimum Level II GPA of 2.75; grade of B- or better in ELED 3000, ELED 3005, ELED 3100, SPED 4000, PSY 3660, and SPED 5530 or ITLS 4015. For Elementary Education program students not earning a dual certificate in Special Education, a B- or better is also required in ELED 4150.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $70.00

ELED 4040 - Assessment and Instruction for Struggling Readers (CI)
CI Communications Intensive
3 credits

Prepares undergraduate students to use data from a variety of reading assessments to identify elementary students’ reading strengths and weaknesses and plan instruction. Special attention given to providing explicit differentiated reading instruction to meet the needs of students who struggle with learning to read.

Prerequisite/Restriction: Minimum Level II GPA of 2.75; grade of B- or better in ELED 3000, ELED 3005, ELED 3100, SPED 4000, PSY 3660, and SPED 5530 or ITLS 4015. For Elementary Education program students not earning a dual certificate in Special Education, a B- or better is also required in ELED 4150.

Semester(s) Traditionally Offered: Fall, Spring

ELED 4050 - Teaching Social Studies and Practicum Level III
3 credits

Students develop necessary knowledge and skills to plan and implement an appropriate social studies program consistent with the nature of the child and our democratic society. Includes practicum work.

Prerequisite/Restriction: Minimum Level II GPA of 2.75; grade of B- or better in ELED 3000, ELED 3005, ELED 3100, SPED 4000, PSY 3660, and SPED 5530 or ITLS 4015. For Elementary Education program students not earning a dual certificate in Special Education, a B- or better is also required in ELED 4150.

Semester(s) Traditionally Offered: Fall, Spring
ELED 4060 - Teaching Mathematics and Practicum Level III
3 credits

Relevant mathematics instruction in the elementary and middle-level curriculum; methods of instruction, evaluation, remediation, and enrichment.

Prerequisite/Restriction: Minimum Level II GPA of 2.75; grade of B- or better in ELED 3000, ELED 3005, ELED 3100, SPED 4000, PSY 3660, and SPED 5530 or ITLS 4015. For Elementary Education program students not earning a dual certificate in Special Education, a B- or better is also required in ELED 4150.

Semester(s) Traditionally Offered: Fall, Spring

ELED 4061 - Teaching Elementary School Mathematics I: Rational Numbers, Operations, and Proportional Reasoning
3 credits

Development of pedagogical content knowledge in rational number, operations, and proportional reasoning for teaching grades preschool through grade 6. Understanding characteristics of instruction, assessments, and intervention will be considered critically.

Prerequisite/Restriction: MATH 1050 or higher mathematics class or AP Calculus AB score of 3 or higher; plus MATH 2010 or MATH 2020

Semester(s) Traditionally Offered: Fall, Spring

ELED 4062 - Teaching Elementary School Mathematics II: Number, Operations, and Algebraic Reasoning
3 credits

Development of pedagogical content knowledge in number, operations, and algebraic reasoning for teaching grades preschool to grade 6. Methods for designing and implementing mathematics instruction, assessment, remediation, and intervention will be applied in a field-based placement.

Prerequisite/Restriction: MATH 1050 or higher mathematics class or AP Calculus AB score of 3 or higher; plus MATH 2010 or MATH 2020

Semester(s) Traditionally Offered: Fall, Spring

ELED 4150 - Assessment and Differentiation Across the Curriculum
2 credits

Explores the cyclical nature of assessment and instruction; provides students with knowledge, skills, tools, and dispositions necessary to effectively use assessment information to make differentiated instructional decisions.

Prerequisite/Restriction: Admission to an Elementary Education program; grade of B- or better in ELED 1010 and FCHD 1500

Semester(s) Traditionally Offered: Fall, Spring

ELED 4250 - Advanced Cooperative Work Experience
1-8 credits

Designed to integrate classroom study with career-related work experience. Students must work a minimum of 50 hours per credit hours and have a cleared background check.

Prerequisite/Restriction: Pre-Eled or ELED majors

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ELED 4410 - Gifted Education in the Regular Classroom
3 credits

Introduction to characteristics of gifted learners. Exploration of strategies for challenging gifted learners in regular classroom settings.

Semester(s) Traditionally Offered: Fall, Spring

ELED 4420 - Multiple Talent Approach to Thinking
2 credits

Explores one model for the teaching of creative and critical thinking embedded in regular curricula. Includes practical application requirements.

Cross-listed as: SCED 4420.

Semester(s) Traditionally Offered: As Needed
ELED 4480 - Early Childhood Education Kindergarten Through Grade 3
3 credits
Study of early childhood (K-3) curriculum, methodology, and learning environments.
Prerequisite/Restriction: Admission to an Elementary Education program; grade of B- or better in ELED 1010 and FCHD 1500
Semester(s) Traditionally Offered: Fall, Spring

ELED 4900 - Senior Project
1-5 credits
All honors students are required to submit a senior project for graduation from the Honors Program. Students work with a departmental advisor on a topic of their choice.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

ELED 4970 - Senior Thesis
1-5 credits
An in-depth paper or project culminating in a formal presentation. Required of all students for graduation from the Honors Program in Elementary Education.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

ELED 5050 - Student Teaching - Kindergarten
3-6 credits
Constitutes 6 semester credit hours of student teaching in a kindergarten classroom. Student teachers need to demonstrate competency and professionalism in teaching. An understanding of developmentally appropriate curriculum is necessary.
Prerequisite/Restriction: Minimum Level III GPA of 2.75; grade of B- or better in ELED 4000, ELED 4005, ELED 4030, ELED 4040, ELED 4050, and ELED 4060.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

ELED 5100 - Student Teaching - Primary (Grades 1-3)
6 credits
Constitutes 6 semester credit hours of student teaching in a primary grade (1-3). Student teachers will demonstrate competency in designing and implementing a developmentally appropriate learning environment.
Prerequisite/Restriction: Minimum Level III GPA of 2.75; grade of B- or better in ELED 4000, ELED 4005, ELED 4030, ELED 4040, ELED 4050, and ELED 4060.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

ELED 5150 - Student Teaching - Elementary (Grades 4-6)
6 credits
Constitutes 6 semester credit hours of student teaching at the upper elementary grade level. Student teachers need to demonstrate competency and professionalism in teaching. Students begin their transition from university student to professional teacher.
Prerequisite/Restriction: Minimum Level III GPA of 2.75; grade of B- or better in ELED 4000, ELED 4005, ELED 4030, ELED 4040, ELED 4050, and ELED 4060.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

ELED 5200 - Student Teaching - Middle Level (Grades 7-8)
6 credits
Constitutes 6 semester credits of student teaching at the middle school level. Student teachers need to demonstrate competency and professionalism in teaching. Students begin their transition from university student to professional teacher.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

ELED 5250 - Advanced Classroom Management and Student Teaching Seminar
3 credits
Provides opportunities for student teachers/interns to
learn about and practice skills in classroom management, curriculum development, instructional strategies, and lesson design and implementation in classroom contexts. Mentor teachers and University supervisors support context appropriate, effective teaching. Accompanies one of ELED 5050, ELED 5100, ELED 5150, or ELED 5200.

Prerequisite/Restriction: Minimum Level III GPA of 2.75; grade of B- or better in ELED 4000, ELED 4005, ELED 4030, ELED 4040, ELED 4050, and ELED 4060.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

ELED 5300 - Associate Teaching - Level V
3-6 credits

Designed to allow students who have completed student teaching to extend their teaching time in a classroom. In order to better prepare for their own classroom, students continue to develop individual teaching skills and competencies.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

ELED 5900 - Independent Study
0.5-2 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Elementary Mathematics

EMTH 5030 - Mathematics for Teaching K-8: Numbers and Operations
3 credits

This course, for K-8 teachers, will cover the content of Number and Operations to develop comprehensive understanding of our number system and relate its structure to computation, arithmetic, algebra, and problem solving.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or Equivalent

Cross-listed as: TEAL 6521 and TEPD 5521

Semester(s) Traditionally Offered: Fall

EMTH 5040 - Mathematics for Teaching K-8: Rational Numbers and Proportional Reasoning
3 credits

To provide practicing teachers a deeper understanding of rational numbers, operations with rational numbers, and proportionality, and instructional strategies to facilitate the instruction of this content for elementary students.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or equivalent

Cross-listed as: TEAL 6522 and TEPD 5522

Semester(s) Traditionally Offered: Spring

EMTH 5050 - Mathematics for Teaching K-8: Algebraic Reasoning
3 credits

To provide practicing teachers a deeper understanding of algebraic expressions, equations, functions, real numbers, and instructional strategies to facilitate the instruction of this content for elementary students.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or equivalent

Cross-listed as: TEAL 6523 and TEPD 5523

Semester(s) Traditionally Offered: Fall

EMTH 5060 - Mathematics for Teaching K-8: Geometry and Measurement
3 credits

To provide practicing teachers a deeper understanding of the geometry and measurement context that exists in the state core and instructional strategies to facilitate the instruction of this content.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or equivalent

Cross-listed as: TEAL 6524 and TEPD 5524

Semester(s) Traditionally Offered: Spring

EMTH 5070 - Mathematics for Teaching K-8: Data Analysis and Problem Solving
3 credits

Semester(s) Traditionally Offered: Fall
This course will provide practicing teachers a deeper understanding of probability and data representation and analysis.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or equivalent

Cross-listed as: TEAL 6525 and TEPD 5525

Semester(s) Traditionally Offered: Summer

Engineering

ENGR 1000 - Introduction to Engineering Design
2 credits

Introduction to engineering design, problem solving, and computer application skills. Orientes students to college programs, academic advising, student services, professional societies, ethics, and engineering careers. A background in trigonometry is strongly recommended.

Semester(s) Traditionally Offered: Fall
Course Fee: $20.00

ENGR 1005 - Introduction to Engineering Laboratory
1 credit

For students concurrently enrolled in ENGR 1000. Laboratory builds skills in using the HP48G/GX calculator to solve engineering problems; the use of word processors for report writing; spreadsheets to solve engineering problems; MathCAD for engineering problem solving; an introduction to Pro Engineer for engineering design; an introduction to Access for database management; and power point for engineering presentations. Mainly hands-on, team learning is emphasized as well as team writing and presentation skills. Students should gain an appreciation for the skills needed to solve engineering problems and prepare engineering communications.

Corequisite: ENGR 1000

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall and Spring (on demand only)

ENGR 1500 - Research Experience for Undergraduate Students
1 credit

Students work as undergraduate research assistants under a faculty mentor. Through the course, students will learn and apply data collection, analysis, synthesis, and presentation skills specific to the research project.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGR 1940 - Women in Engineering Seminar
1 credit

Designed for incoming female freshman engineering students. Speakers selected from practice share their knowledge and experience about the many career options available in engineering. Discussions center on ways in which women balance their professional and personal lives. Provides information and strategies for the academic and interpersonal skills needed for women to succeed in engineering.

Semester(s) Traditionally Offered: Fall

ENGR 2010 - Engineering Mechanics Statics
3 credits

Force and position vectors; equilibrium of particles; rigid bodies; equivalent system of forces; equilibrium; free body diagrams; static analysis of trusses, frames, and machines; centroids and centers of gravity; friction; and moments of inertia.

Prerequisite/Restriction: MATH 1210 and MATH 1220 and (PHYS 2210 or PHYS 2200)

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $45.00

ENGR 2030 - Engineering Mechanics Dynamics
3 credits

Equations of motion, kinetics of particles, kinetics of rigid bodies, work and energy, impulse and momentum, three-dimensional kinematics, and vibrations.

Prerequisite/Restriction: ENGR 2010, MATH 1210, MATH 1220

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $30.00

ENGR 2140 - Strength of Materials
3 credits
Stress, strain, and deflection due to axial loads; moment and torsion; shear and moment diagrams; and equations of equilibrium and compatibility.

Prerequisite/Restriction: ENGR 2010

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $30.00

ENGR 2210 - Fundamental Electronics for Engineers
3 credits

Study and application of DC and AC concepts. Includes circuit fundamentals, theorems, laws, analysis, components, equipment, and measuring devices. Laboratory will include circuit design, construction and analysis of AC/DC circuits, and the use of measuring instruments, power supplies, and signal generators. Not available to students majoring in Electrical Engineering or Computer Engineering.

Prerequisite/Restriction: MATH 1210 and MATH 1220

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $65.00

ENGR 2270 - Computer Engineering Drafting
2

Provides engineering students with introduction to computer-aided drafting environment. Explores AutoCAD and gives background in drafting theory and applications through use of hand CAD techniques. Students gain ability to contribute in the workplace using creative thinking skills and team environments.

Prerequisite/Restriction: Enrollment limited to only students having majors within the College of Engineering

Semester(s) Traditionally Offered: Fall, Spring Course Fee: $140.00

ENGR 2450 - Numerical Methods for Engineers
3 credits

Numerical analyses applied to engineering problems, including simultaneous solutions of linear and nonlinear equations, optimization, curve fitting, numerical differentiation and integration, and numerical solutions of differential equations.

Prerequisite/Restriction: A structured programming experience in MATLAB, C, FORTRAN, EXCEL-VBA, or similar language; MATH 1220 and (MATH 2250 or MATH 2280) MATH 2250 or MATH 2280 may be taken concurrently

Semester(s) Traditionally Offered: Spring
Course Fee: $30.00

ENGR 2455 - Numerical Methods for Engineers Laboratory
1 credit

Lab course covering more computer software and, Math, such as Linear Programming, Fourier Series, Eigenvalues and Non-Linear Optimization.

Corequisite: ENGR 2450

Campus: USU-Eastern
Semester(s) Traditionally Offered: Spring

ENGR 2930 - Special Problems
1-18 credits

Independent or group student study of engineering problems not covered in regular course offerings.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGR 2977 - Cooperative Education
1-3 credits

Provides on-the-job experience for students majoring in pre-engineering. Positions as surveyor aids, engineer aids, etc., may be available. Students meet with the instructor/coordinator and employer at the beginning and periodically during the course to determine and evaluate objectives, hours to be worked, and credit.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Eastern only

ENGR 2999 - Workshop
1-3 credits

Designed to meet the changing needs of students in Engineering.
Repeatable for credit
Campus: USU Eastern only

ENGR 3080 - Technical Communication for Engineers (CI)
CI Communications Intensive
3 credits

The goal of this course is to prepare engineering students with the foundational research, individual and collaborative technical writing, teamwork, and presentation skills necessary to be effective technical and professional communicators in academic and professional settings.

Prerequisite/Restriction: ENGL 2010 and admittance to the Professional Program in the College of Engineering

Semester(s) Traditionally Offered: Fall, Spring

ENGR 3500 - Research Experience for Undergraduate Students
1 credit

Students work as undergraduate research assistants under a faculty mentor. Through the course, students will learn and apply data collection, analysis, synthesis, and presentation skills specific to the research project.

Prerequisite/Restriction: Admission to the Professional Program

Repeatable for credit. Semester(s) Traditionally Offered: Fall, Spring, Summer

Engineering Education

EED 6090 - Developing an Online Educational Curriculum
3 credits

Reviews the basic principles and practices of curriculum development required for an online course in any educational program. Emphasis of this course is placed on the integration of research findings and best practices into online course design.

Semester(s) Traditionally Offered: Spring, Taught Alternate Years

EED 6910 - Special Topics in Engineering Education
1-3 credits

Graduate level independent or group study of engineering education related topics not covered in regular course offerings.

Repeatable for credit

EED 7010 - The Role of Cognition in Engineering Education
3 credits

Study of cognitive science and research relating to engineering education.

Semester(s) Traditionally Offered: Spring, Alternate Years

EED 7020 - Design Thinking in Engineering and Technology
3 credits

Engineering design as applied to technology education.

Semester(s) Traditionally Offered: Fall, Spring

EED 7030 - Engineering Design and Analysis for Technology Education
3 credits

Engineering design methodology for technology education teacher educators. Focuses on science principles and predictive mathematics comprising the engineering sciences needed to solve problems in a design framework that is analytical, predictive, and repeatable.

Semester(s) Traditionally Offered: Fall, Spring

EED 7040 - Qualitative Methods in Engineering Education
3 credits

Essential principles and practices of qualitative research methods typically used in engineering education research will be introduced. Emphasis of the course will be placed on the development and proposal design for a qualitative research project with an engineering education context.

Semester(s) Traditionally Offered: Spring, Alternate Years
EED 7230 - Foundations of Engineering Education
3 credits
Investigation of the history, philosophy, and foundations of engineering education within social, political, and economic contexts. Analysis of important works of historical and modern philosophers, educators, and leaders, to help students gain an understanding of the status of engineering education.

Semester(s) Traditionally Offered: Fall, Alternate Years

EED 7460 - Finance and Grant Writing
3 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

EED 7500 - Internationalizing Institutions of Higher Education
3 credits
Explores the need and methodology of internationalizing higher education institutions, with the purpose of understanding the global society and delivering education worldwide.

Semester(s) Traditionally Offered: Fall, Spring, Summer

EED 7810 - Research Seminar
1 credit
Identification of research problems, consideration of research strategies and methods, application of research and statistical concepts in departmental focus, and interaction with faculty.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

EED 7900 - Independent Study
1-3 credits
Individually directed reading and conference.

Prerequisite/Restriction: Approval of department
Semester(s) Traditionally Offered: Fall, Spring, Summer

EED 7970 - Dissertation Research
1-15 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

EED 7990 - Continuing Graduate Advisement
1-3 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

EDDT 0010 - Engineering Design
1-180 contact hours

Pass/Fail only
Effective Term
Spring

EDDT 0798 - Special Problems
1-360 contact hours
Individual work approved by the department instructor. Time and membership hours to be arranged.
Campus: USU Eastern only

EDDT 0799 - Special Problems
1-360 contact hours
Individual work approved by the department instructor.
Time and membership hours to be arranged.

Campus: USU Eastern only

EDDT 1010 - Technical Drafting  
5 credits

Beginning course stressing the fundamentals of mechanical drafting as related to industry. Students will gain a knowledge of drafting instruments and their use, lettering, geometric construction, orthographic projection, sectional views, auxiliary views, and dimensioning standards. Additional procedures in geometric dimensioning, developments, threads and fasteners will be studied. Applications will include working drawings and assembly drawings.

Campus: USU Eastern only  
Semester(s) Traditionally Offered: Fall, Spring

EDDT 1040 - CAD Level I: Intro to CAD
Computer and Information Literacy  
3 credits

Covers the fundamentals of computer-aided-drafting (AutoCAD). Students will train using the basic operating features, menus, commands, file management, drawing set up, and plotting. Applications will include, orthographic projection, sections, dimensioning techniques, tracing, pictorial drawing and coordinate features will be included.

Campus: USU Eastern only  
Semester(s) Traditionally Offered: Fall, Spring

EDDT 1070 - CAD Level II: Intro to 3-D  
3 credits

Continuation of EDDT 1040 with additional emphasis on drawing productivity. Students will utilize the advance features of AutoCAD to produce industry quality drawings. Students will use the customizing commands of AutoCAD to create custom symbols, line types, and hatch patterns, 3D modeling capabilities, third party software applications, inserting CAD drawings into work processing programs, scanning, and advance plotting techniques. Students should be prepared to spend additional time outside of class in the CAD Lab to complete their assignments.

Prerequisite/Restriction: EDDT 1040
work in an architectural design office.

Prerequisite/Restriction: EDDT 1100

Campus: USU Eastern only

EDDT 2500 - Introduction to Global Positioning Systems
3 credits

An overview to Global Positioning Systems (GPS) and emphasizes hands-on Trimble Resource and Mapping grade GPS experience. Covers general GPS technology, applications, research, field data collection techniques, differential correction and export to other computer softwares such as CAD and GIS. Class requires a computer lab experience. In-class discussion and lecture methods are interspersed with computer applications to achieve course goals and objectives. Course will be useful for teaching students methods to input data into GIS and CAD systems. It is useful preparation for careers in health care, business, agriculture, planning, law enforcement, transportation, engineering, surveying and natural resource development and conservation. GEOG 1010 or GEO 1110 or GEO 1115 are suggested prerequisites.

Prerequisite/Restriction: EDDT 1500 or GEOG 1800 or a basic CAD course

Campus: USU Eastern only

EDDT 2620 - 3-D Modeling Advanced
3 credits

Descriptive geometry and orthographic projection are the graphic tools of engineering. Students will learn to use the descriptive geometry to not only determine true size and shape, but also intersections, true distances, true distances of lines space, and exact piercing points. Students will solve practical problems applying the principles of descriptive geometry.

Prerequisite/Restriction: EDDT 1010

Campus: USU Eastern only

EDDT 2650 - Mechanical Blueprint Reading
2 credits

Support course to other departments. Designed to assist the technician in the interpretation of blueprints as they apply to industrial technology. Includes the introduction of technical drawing theory and practices. Students will be exposed to a wide variety of technical drawings in order to gain information about simple or complex parts, assemblies, systems, standards, and practices used in the world of manufacturing for precision and quality control.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

EDDT 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in engineering drafting and design technology areas. Students meet with the instructor/Coordinator periodically to determine and evaluate learning objectives, hours to be worked, and credit.

Prerequisite/Restriction: Instructor permission
Repeatable for credit

Campus: USU Eastern only

EDDT 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit

Campus: USU Eastern only

English

ENGL 0010 - Writing Tutorial
3 credits

Provides additional instruction for students whose score on the ACT is 16 or less, or who are advised into the course on the basis of writing diagnosis given the first day of class in ENGL 1010. Remedial class not carrying USU or transfer credit.

Remedial
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

ENGL 0900 - Developmental Language Arts
3 credits

Intensive practice in reading, writing, grammar, and analytical skills as preparation for composition courses.
Prerequisite/Restriction: English ACT score of 9-13 OR 0-59 Reading ACCUPLACER score

Remedial
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

ENGL 0950 - English Skills Lab
1-3 credits
Laboratory course in which the students will perform activities and assignments to help them understand and reinforce the material taught during their English or ESOL courses. Will focus on listening, speaking, reading, vocabulary, spelling, grammar, sentence, paragraph, and essay skills. Assignments will be individually tailored to meet the needs of each student.

Remedial
Campus: USU Eastern only

ENGL 0960 - Intermediate Integrated English Language Skills
5 credits
Integrated language skills course for English Speakers of Other Languages at the intermediate level. Concentrates on reading comprehension and analysis, on writing for different purposes and audiences, on syntax and mechanics of English grammar, and on building an academic vocabulary base. Active listening and speaking activities are also part of the course to help students prepare for participation in the college classroom.

Remedial
Campus: USU Eastern only

ENGL 0970 - Advanced Integrated English Language Skills
5 credits
Integrated language skills course for English Speakers of Other Languages at the advanced level. It concentrates on reading comprehension and analysis, on writing for different purposes and audiences, on syntax and mechanics of English grammar, and on building an academic vocabulary base. Active listening and speaking activities are also part of the course to help students prepare for participation in the college classroom.

Remedial
Campus: USU Eastern only

ENGL 0980 - College Preparation: Reading and Vocabulary
5 credits
Basic language skills class that concentrates on reading comprehension and analysis, vocabulary development, and writing fluency in response to various genres. In addition to these skills, the course is designed to help students develop the analytical thinking appropriate for success at the college level.

Remedial
Campus: USU Eastern only

ENGL 0985 - College Preparation: Writing and Grammar
5 credits
Basic language skills class that concentrates on reading comprehension and analysis, vocabulary development, and writing fluency in response to various genres. In addition to these skills, the course is designed to help students develop the analytical thinking appropriate for success at the college level.

Remedial
Campus: USU Eastern only

ENGL 0990 - Developmental Composition
3 credits
Emphasizes basic composition skills: generating ideas, developing unified, coherent paragraphs, writing and revising short essays, and editing for clarity and grammatical correctness. Includes reading and analysis of short essays. Instructors use a variety of instructional methods including group work, lecture, and tests. Students demonstrate their competence primarily by writing and revising short papers.

Prerequisite/Restriction: English ACT score of 14-16 OR 60 or higher Reading ACCUPLACER score OR 0-69 Sentence Skills ACCUPLACER score

Remedial
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 1010 - Introduction to Writing: Academic Prose (CL1)
CL1 Communications Literacy
3 credits

Students learn skills and strategies for becoming successful academic readers, writers, and speakers: how to read and write critically, generate and develop ideas, work through multiple drafts, collaborate with peers, present ideas orally, and use computers as writing tools.

Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $50.00

ENGL 1020 - Individualized Writing Instruction
1-3 credits

For students in Distance Education international programs who need further practice in specific areas of writing.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 1050 - Academic Reading
3 credits

Designed to provide general strategies for improving reading skills for academic course work. Includes critical reading, comprehension, analysis, synthesis and evaluation. Also encompasses skills in taking notes, preparing for exams, and interpreting visual aids.

Cross-listed as: ESOL 1050

Campus: USU Eastern only

ENGL 1055 - Vocabulary
2 credits

Emphasis is on academic vocabulary. Develops strategies for increasing vocabulary using context clues and word parts (root words, prefixes and suffixes). Class will prepare students for academic course work and standardized test taking.

Cross-listed as: ESOL 1055

Campus: USU Eastern only

ENGL 1070 - Introduction to Native American Literature and Philosophy (BHU)
BHU Breadth Humanities
3 credits

General education class intended for all students. Introduces general principles of Indian world view. The realm of mythology, legends and tales; trickster tales and religious drama; songs, poetry and figurative language; autobiography; contemporary Indian literature; and cross-cultural literary criticism.

Campus: USU Eastern only

ENGL 1410 - Elements of Grammar
3 credits

Introduction to the study of the English sentence. Discussion of punctuation and usage to facilitate editing, as well as clarity and precision in writing.

Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $50.00

ENGL 1600 - American Cultures in Film
3 credits

Introduction to major ethnic groups in America and their treatment in recent feature films.

Cross-listed as: HIST 1600.

Semester(s) Traditionally Offered: Fall

ENGL 2010 - Intermediate Writing: Research Writing in a Persuasive Mode (CL2)
CL2 Communications Literacy
3 credits

Writing of reasoned academic argument supported with appropriately documented sources. Focuses on library and Internet research, evaluating and citing sources, oral presentations based on research, and collaboration.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL1 requirement through coursework (C- or better in ENGL 1010) or examination

Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $50.00
ENGL 2030 - Great Books and Ideas
3 credits

Campus: USU Eastern only

ENGL 2040 - Introduction to Western American Literature (BHU)
BHU Breadth Humanities
3 credits

Offers students a comprehensive introduction to the literature of the American West including both historical and contemporary works of fiction, non-fiction, and poetry. Course material - ranging from literature that chronicles early explorations to Native American storytelling to the reality and myth of Hollywood’s vision of the “western” - will introduce students to the diversity and complexity that makes up Western American Literature. Instructional methods will include lecture, discussion, student presentations, and group projects.

Prerequisite/Restriction: Fulfillment of CL1 requirement through coursework or examination (ENGL 1010) recommended

Campus: USU Eastern only

ENGL 2050 - Literature by Women (BHU)
BHU Breadth Humanities
3 credits

Will focus on literature by primarily British and American women within the historical and cultural framework of their times. Lectures, videos, and class discussion, as well as some group work, will take place. Quizzes, examinations and at least one paper are required.

Prerequisite/Restriction: Fulfillment of CL1 requirement through coursework or examination (ENGL 1010) recommended

Campus: USU Eastern only

ENGL 2060 - Literature and Diversity (BHU)
BHU Breadth Humanities
3 credits

Open to all students. Gives students the opportunity to read literature representative of the diversity in America and world cultures, focusing on groups not usually covered in most traditional literature courses.

Campus: USU Eastern only

ENGL 2120 - Literary Magazine
1 credit

Course in which students work on the College's literary magazine, The Nighthawk Review. Student editors who enroll in the course will learn how to put together a manuscript with poems, stories, essays, and artwork provided by students. Annual journal shows off the excellent writing done by the USU-Eastern students who submit their work for publication.

Campus: USU Eastern only

ENGL 2130 - Literary Magazine
1 credit

Course in which students work on the College's literary magazine, The Nighthawk Review. Student editors who enroll in the course will learn how to put together a manuscript with poems, stories, essays, and artwork provided by students. Annual journal shows off the excellent writing done by the USU-Eastern students who submit their work for publication.

Campus: USU Eastern only

ENGL 2200 - Understanding Literature (BHU)
BHU Breadth Humanities
3 credits

Introduction to fiction, drama, and poetry of different periods and cultures.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 2210 - Introduction to Folklore (BHU)
BHU Breadth Humanities
3 credits

Introduction to major genres of folklore (folk narrative, custom, folk music and song, vernacular architecture and arts), folk groups (regional, ethnic, occupational, familial), and basic folklore research methods (collecting and archiving).

Cross-listed as: ANTH 2210 and HIST 2210.

Semester(s) Traditionally Offered: Fall, Spring
ENGL 2220 - Introduction to Fiction (BHU)
BHU Breadth Humanities
3 credits

Readings in fiction, including novels, novellas, and stories. The course will examine elements of the genre such as character, plot, theme, and style. Various critical approaches and contexts will be discussed, as well as the historical development of the form.

Campus: USU Eastern only

ENGL 2240 - Introduction to Poetry (BHU)
BHU Breadth Humanities
3 credits

Emphasizes analytical reading: considering a poem’s formal elements such as rhythm, diction, imagery, form and sound. Assuming that such understanding, assists students in forming their own critical approaches and responses to poems by exploring a variety of major critical theories. Instructors employ a lecture and discussion format. Students demonstrate their understanding of course material by writing papers and/or essay examinations.

Prerequisite/Restriction: Fulfillment of CL1 requirement through coursework or examination (ENGL 1010) is highly recommended

Campus: USU Eastern only

ENGL 2250 - Creative Writing
3 credits

Techniques for writing fiction and poetry through reading contemporary works and work shopping student writing.

Campus: USU Eastern only

ENGL 2251 - Poetry Writing
3 credits

Techniques for writing poetry through reading contemporary works and work shopping student writing.

Campus: USU Eastern only

ENGL 2200 - Introduction to Shakespeare (BHU)
BHU Breadth Humanities
3 credits

Introduction to comedies, histories, tragedies, and nondramatic poetry for nonmajors.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 2330 - Introduction to Children’s Literature
3 credits

Review of the development of children’s literature, past to present: types and characteristics of literature written for children; major award winners; practical uses within the classroom.

Campus: USU Eastern only

ENGL 2340 - Navajo Literature and Philosophy
3 credits

Survey course that examines Navajo literature in its many traditional and contemporary forms: mythology, tales, autobiography, fiction, and poetry. Lecture/discussion/reading/are the central activities of the course.

Campus: USU Eastern only

ENGL 2510 - Survey of American Literature I
3 credits

Materials covered in this course provide an overview of the major authors, works, and trends in American literature from the earliest narratives of encounter, through the colonial and national periods, to the end of the Civil War.

Campus: USU Eastern only

ENGL 2520 - Survey of American Literature II
3 credits

Materials covered in this course provide an overview of the major authors, works and trends in American literature from the Civil War period to the present.

Campus: USU Eastern only

ENGL 2600 - Literary Analysis
3 credits

Writing-intensive course in literary analysis and research. Introduces English majors to techniques and
problems of critical interpretation.

Prerequisite/Restriction: Enrollment limited to English majors and minors only

Semester(s) Traditionally Offered: Fall, Spring

ENGL 2610 - Survey of British Literature I
3 credits

Selected readings in British literature from Beowulf to the 18th century. Writers covered include Chaucer, Spenser, Jonson, Shakespeare, Milton, Swift and Pope. British literature I is a standard English major course at the sophomore level, as preparation for upper division, more specific, more intensive courses.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Once every two years

ENGL 2620 - Survey of British Literature II
3 credits

Selected readings in British literature from the early 19th century to the present. Writers covered include Blake, Wordsworth, Keats, Browning, Conrad, Joyce, Woolf and Orwell. British literature II is a standard English major course at the sophomore level, as preparation for upper division, more specific, more intensive courses.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Once every two years

ENGL 2630 - Survey of American Culture (BHU)
BHU Breadth Humanities
3 credits

Introduces students to American Studies methodology through a broad selection of American literary, historical, artistic, and cultural works, allowing them to examine the roots of American culture. Focuses on interdisciplinary research.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 2720 - Survey of American Folklore
3 credits

Principal ethnic, regional, and occupational folk groups in America. Relations between folklore and American history, literature, and society. Key genres in American folklore (narrative, art, song, etc.) and their role in American culture.

Cross-listed as: ANTH 2720 and HIST 2720.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in literature. The student meets with the instructor/Coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreements.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Eastern only

ENGL 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit will be arranged.
Repeatable for credit
Campus: USU Eastern only

ENGL 3020 - Perspectives in Linguistics (DHA)
DHA Depth Humanities and Creative Arts
3 credits

In-depth study of linguistics for nonmajors. Topics vary according to faculty expertise.

Semester(s) Traditionally Offered: Spring

ENGL 3030 - Perspectives in Literature (DHA)
DHA Depth Humanities and Creative Arts
3 credits

In-depth study of literature for nonmajors. Topics vary according to faculty expertise.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 3040 - Perspectives in Writing and Rhetoric (DHA)
DHA Depth Humanities and Creative Arts
3 credits

In-depth study of rhetoric and writing for nonmajors.
Topics vary according to faculty expertise.

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

ENGL 3050 - Masterpieces of World Literature (DHA)
DHA Depth Humanities and Creative Arts
3 credits

In-depth study of masterpieces of world literature from the earliest times to the present. For nonmajors.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 3070 - Folklore on the Internet (DHA)
DHA Depth Humanities
3 credits

In-depth consideration of a rapidly emerging area of folklore studies: digital culture. Explores folklore in a digital context, folk groups and communities developed via communication technologies, and virtual ethnography.

Cross-listed as: HIST 3070.

Semester(s) Traditionally Offered: Fall, Summer
Effective Term
Fall 2016

ENGL 3080 - Introduction to Technical Communication (CI)
CI Communications Intensive
3 credits

Introduces students to a variety of technical documents and improves their written and oral communication skills. Available to nonmajors as a technical communication service course.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 3300 - Period Studies in American Literature
3 credits

Exploration of single period or movement in literary history of the United States, or a comparative study of a topic during various periods. Periods and topics will vary.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 3305 - Medieval Literary History
3 credits

Covers a variety of literary genres and movements from the medieval era

ENGL 3310 - Period Studies in British Literature
3 credits

Exploration of single period or movement in British literary history, or a comparative study of a topic during various periods. Periods and topics will vary.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 3315 - Early Modern British Literary History
3 credits

Covers a variety of literary genres and movements from the early modern period (roughly the sixteenth and seventeenth centuries) in the British Isles

ENGL 3320 - Period Studies in World Literature
3 credits

Exploration of single period or movement in literary history outside the United States and Great Britain, or a comparative study of a topic during various periods. Periods and topics will vary.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 3325 - Eighteenth-Century British Literary History
3 credits

Covers a variety of literary genres and movements from the eighteenth century in the British Isles

ENGL 3335 - Nineteenth-Century British Literary History
3 credits

Covers a variety of literary genres and movements from the nineteenth century in the British Isles

ENGL 3345 - Literary History of the British Isles Since 1900
ENGL 3355 - Literary History of the Early Americas
3 credits
Covers a variety of literary genres and movements from the Americas before 1800

ENGL 3365 - Nineteenth-Century American Literary History
3 credits
Covers a variety of literary genres and movements from the nineteenth century in the Americas

ENGL 3375 - Literary History of the Americas Since 1900
3 credits
Covers a range of pre-twentieth century texts in a variety of genres from outside the United States and the British Isles. Specific subject matter varies according to faculty expertise.

ENGL 3385 - World Literary History Pre-1900
3 credits
Covers a range of texts in a variety of genres written since 1900 from outside the United States and the British Isles. Specific subject matter varies according to faculty expertise.

ENGL 3395 - World Literary History Since 1900
3 credits
Covers a variety of literary genres and movements from the Americas since 1900

ENGL 3400 - Professional Writing (CI)
CI Communications Intensive
3 credits
Introduces students to workplace writing as a profession, emphasizing transition from writing for academic audiences to writing for readers of workplace documents. Students learn to design and write professional documents for science, industry, business, and/or government, including print portfolios and other job search materials.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 3410 - Professional Writing Technology
3 credits
Introduces students to technologies of professional writing. Surveys software used in the Professional and Technical Writing emphasis curriculum. Students learn to design and implement electronic portfolios documenting their work in the program.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 3420 - Fiction Writing
3 credits
Covers basic elements of writing fiction: form, structure, plot, theme, characterization, dialogue, point of view, and imagery.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 3430 - Poetry Writing
3 credits
Covers basic elements of writing poetry: language, detail, voice, tone, literal and figurative imagery, rhythm, open and closed form, structure, and theme.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 3440 - Creative Nonfiction Writing
3 credits
Focuses on the essay as creative nonfiction, emphasizing persona, audience, purpose, tone, and style. Students study difference between fiction and nonfiction. Goal is to write publishable nonfiction.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 3450 - Methods and Research in Professional and Technical Communication
3 credits
Teaches students to conduct research using methods employed by professional and technical communicators in the workplace. Students learn to work with Subject Matter Experts, gather data in organizational contexts, and design user-centered documents.

Semester(s) Traditionally Offered: Spring

ENGL 3460 - Modern Rhetorical Theory
3 credits

Teaches students to analyze rhetoric as it is enacted in a variety of texts and contexts. Students learn to define and understand rhetorical situations and to evaluate rhetorical strategies chosen by other writers.

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

ENGL 3470 - Approaches to Research in English Studies
3 credits

This course for English majors introduces students to multiple methods of conducting research in English, drawing on both quantitative and qualitative tools. Understanding and using these complementary approaches are particularly appropriate to students in the English Teaching emphasis. The course examines current research, principles of research design, and instruments of data collection. Students will collect and analyze data using various tools and software, conduct an actual study, and present research findings orally and in writing. The course also explores the capacities and limitations of specific approaches and methods and gives attention to conducting research ethically.

Prerequisite/Restriction: Quantitative Literacy (QL)

Effective Term
Fall 2016

ENGL 3510 - Teaching Young Adult Literature
3 credits

Study of a variety of genres written specifically for adolescent audience. Intended for those interested in teaching secondary school English.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 3520 - Multicultural American Literature
3 credits

Introduction to study of diverse literatures of the United States, including Native American, Asian American, Hispanic/Latino, and African American.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 3530 - Children’s Literature
3 credits

Study of aesthetic merit of poetry and prose available for children, ages 1-12. Intended for those interested in teaching or writing for children.

Semester(s) Traditionally Offered: Spring

ENGL 3620 - Native American Studies
3 credits

Multidisciplinary introduction to study of Native Americans, emphasizing folklore, history, anthropology, literature, traditions, and contemporary issues such as the environment.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 3630 - The Farm in Literature and Culture
(CI/DHA)
CI/DHA Communications Intensive/Depth Humanities/Creative Arts
3 credits

The Farm in Literature and Culture explores the “culture of agriculture.” Students will read classical texts that provide a foundation to literature and other texts of the American farm as well as explore farming through the lens of art, architecture, folklore, popular culture, and
genre.

Semester(s) Traditionally Offered: Fall, Spring
ENGL 3700 - Regional Folklore (CI)
CI Communications Intensive
3 credits

Study of folklore and folklife as they relate to regional cultures.

Cross-listed as: HIST 3700.

Semester(s) Traditionally Offered: Fall, Spring
ENGL 3710 - Topics in Folklore (CI)
CI Communications Intensive
3 credits

Issues, problems, and methodologies in folklore study.
Focus and instructor variable.

Cross-listed as: HIST 3710 and RELS 3710
Repeatable

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017
ENGL 4200 - Linguistic Structures
3 credits

Introduction to linguistic science: phonetics, phonology, morphology, and syntax, especially as relating to English.
Exposure to other aspects of linguistic analysis, including language origins and linguistic diversity.

Semester(s) Traditionally Offered: Fall, Spring, Summer
ENGL 4210 - History of the English Language
3 credits

Introduction to linguistic history of English, beginning with its Indo-European roots and continuing through Old English and Middle English to Modern English. Covers sociolinguistic aspects of English use, as well as strict grammatical history.

Semester(s) Traditionally Offered: Spring
ENGL 4230 - Language and Society
3 credits

Covers sciences of sociolinguistics and anthropological linguistics. Introduces concepts dealing with relationship of language to society and culture, and interaction of language with society and culture.

Semester(s) Traditionally Offered: Fall
ENGL 4250 - Playwriting
3 credits

Study of dramatic theory and sample plays, combined with practice in writing short plays. Students must write a minimum of three plays.

Prerequisite/Restriction: THEA 1713
Cross-listed as: THEA 4760.

Semester(s) Traditionally Offered: Fall
ENGL 4300 - Shakespeare
3 credits

Selected works of William Shakespeare, with attention to biographical and cultural contexts.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring
ENGL 4310 - American Writers
3 credits

Selected works of either a single author or a closely related group of authors based in the United States, with attention to biographical and cultural contexts.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring
ENGL 4320 - British Writers
3 credits

Selected works of either a single author or a closely related group of authors based in Great Britain, with attention to biographical and cultural contexts.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring
ENGL 4330 - World Writers
3 credits
Selected works of either a single author or a closely related group of authors based outside the United States, with attention to biographical and cultural contexts.

Repeatable for credit
Semester(s) Traditionally Offered: Fall

ENGL 4340 - Studies in Prose
3 credits

Analysis of the genre of prose fiction and/or prose nonfiction, emphasizing nature and evolution of specific forms.

Repeatable
Semester(s) Traditionally Offered: Spring

ENGL 4350 - Studies in Poetry
3 credits

Analysis of the genre of poetry, emphasizing nature and evolution of specific forms.

Repeatable for credit
Semester(s) Traditionally Offered: Fall

ENGL 4360 - Studies in Drama/Film
3 credits

Analysis of dramatic and cinematic genres, emphasizing nature and evolution of specific forms.

Repeatable for credit
Semester(s) Traditionally Offered: Spring

ENGL 4400 - Professional Editing (CI)
CI Communications Intensive
3 credits

Editing of technical and scientific documents; working with deadlines, different levels of editing and editing marks; working with groups of editors and clients; and revising document design.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 4410 - Document Design and Graphics
3 credits

Students explore elements of page layout, graphic design, type fonts, and design of documents to suit client's needs for print (F) or digital (Sp) media.

Prerequisite/Restriction: ENGL 3410

This course is repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

Effective Term
Summer 2016

ENGL 4420 - Advanced Fiction Writing (CI)
CI Communications Intensive
3 credits

Offers advanced study in art and skill of writing publishable fiction. Relies on workshop method.

Prerequisite/Restriction: ENGL 3420 or equivalent

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

ENGL 4430 - Advanced Poetry Writing (CI)
CI Communications Intensive
3 credits

Provides course for undergraduate students desiring to write publishable poetry. Relies on workshop method.

Prerequisite/Restriction: ENGL 3430 or equivalent

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

ENGL 4440 - Advanced Nonfiction Writing (CI)
CI Communications Intensive
3 credits

Offers advanced study in the art and skill of writing publishable literary or creative nonfiction.

Prerequisite/Restriction: ENGL 3440

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00
ENGL 4500 - Teaching Writing (CI)
CI Communications Intensive
3 credits
Prepares students to teach writing at secondary level. Teaches appropriate pedagogical techniques for teaching writing for a variety of purposes and contexts to diverse students. Techniques taught include designing effective writing assignments, responding constructively to student writing, assessing student writing, and incorporating technology into writing courses.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 4510 - Teaching Literature (CI)
CI Communications Intensive
3 credits
Prepares students to teach literature through a variety of texts. Explores multiple pedagogical strategies for teaching diverse literary traditions to students of various backgrounds and developmental levels.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 4520 - Teaching Literacy in Diverse Classrooms
3 credits
Examines the diversity of literacy skills in American ethnic groups and explores appropriate teaching methods. Topics include effects of socio-economic status, child-rearing practices, first and second language acquisition, American dialects, etc.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

ENGL 4530 - English Clinical Experience
1 credit
In-school clinical observation experience (30 hours). Designed to provide familiarity with English/language arts classroom.

Course Fee: $50.00
Effective Term
Spring 2017

ENGL 4540 - Teaching Creative Writing
3 credits
This course will familiarize students with many aspects of designing and implementing multigenre creative writing workshops at the middle school, high school, and community-education levels. To that end, the course will address two topics: subject matter (principles of effective fiction, poetry, creative nonfiction, and dramatic writing) and pedagogy (principles of good teaching).

Effective Term
Spring 2017

ENGL 4610 - Western American Literature (CI/DHU)
CI/DHU
3 credits
Examines major themes and important writers (both “popular” and “literary”) in western regional writing. Investigation of significance of environment, history, gender, and ethnicity in a variety of genres. Appropriate for American Studies majors and minors.

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring 2016

ENGL 4620 - Advanced Seminar in American Studies (CI)
CI Communications Intensive
3 credits
Practical introduction to theories and methods of American Studies, utilizing interdisciplinary research around a central theme, subject, or text(s). Strongly recommended for American Studies majors and American Studies minors. Open to students who have taken three courses in literature and/or history.

Cross-listed as: HIST 4620.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 4630 - American Nature Writers
3 credits
Interdisciplinary study of historical, social, literary, and environmental contexts of nature writing. Examines key authors, major theories, enduring concerns (e.g., conservation, preservation, and management), and current issues (including gender and ethnicity). Appropriate for American Studies majors and minors.

Semester(s) Traditionally Offered: Fall, Spring
ENGL 4640 - Studies in the American West (CI)
CI Communications Intensive
3 credits
Interdisciplinary course in American Studies, exploring the region of the West through the analysis of literary texts, historical sources, and socio-cultural materials.
Semester(s) Traditionally Offered: Fall, Spring

ENGL 4700 - Folk Material Culture
3 credits
Study of folk objects and their connections with culture and history.
Cross-listed as: HIST 4700.
Semester(s) Traditionally Offered: Spring

ENGL 4750 - Advanced Folklore Workshop: Fife Conference
3 credits
Focuses on a theme or topic in folklore, and offers lectures from nationally prominent scholars in the area. Taught during one week, every day and all day.
Cross-listed as: HIST 4750
Repeatable
Semester(s) Traditionally Offered: Summer
Effective Term
Summer 2016

ENGL 4900 - Internship/Cooperative Work Experience
1-15 credits
Offers credit for professional experience obtained outside the classroom, prior to graduation. Requires statement of professional goals and summary report following the experience.
Prerequisite/Restriction: Permission of department
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 4910 - Tutoring Practicum
1 credit
Inservice training class for first-semester Writing Center staff members. Repeatable for up to 2 credits.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

ENGL 5210 - Topics in Linguistics
3 credits
Provides students with opportunity to study topics which are not regularly taught, but which are designed to enrich understanding of linguistics. Typical topics include Old English, roots of English in Germanic, discourse analysis, and English as a world language.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall

ENGL 5300 - Special Topics in Literature (CI)
CI Communications Intensive
3
Interdisciplinary questions and advanced methods in literary studies. Topics vary.
Prerequisite/Restriction: ENGL 2600 and at least one literature course at the 3000 or 4000 level, or instructor permission
Repeatable
Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

ENGL 5310 - Contemporary Literature (CI)
CI Communications Intensive
3 credits
Studies in recently published fiction, poetry, drama, and/or nonfiction. Topics vary according to faculty expertise.
Repeatable
Effective Term
Spring 2017

ENGL 5400 - Social Justice in Technical Communication
3 credits
Students examine the role of ethics and social justice in technical communication, learning to connect theory and
heuristics with applied expertise and decision making.

Prerequisite/Restriction: Admittance to program and completion of ENGL 3400 and ENGL 3410 with grades of B- or better

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00
Effective Term
Fall 2016

ENGL 5410 - Studies in Writing for Digital Media Production
3 credits

Students in the Professional and Technical Writing emphasis examine process of publishing online documents, studying digital media and genres. Topics vary and include building complex CD-ROM environments, help files, websites, interactive animations, and games.

Prerequisite/Restriction: Admittance to program and completion of ENGL 3400 and ENGL 3410 with grades of B- or better

Repeatable for credit
Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

ENGL 5420 - Project Management in Technical Communication
3

Students study project management strategies involving and affecting diverse groups of stakeholders. Students learn how gender, race, culture, age, ideology, and socioeconomic class influence the design, execution, and outcomes of projects.

Prerequisite/Restriction: Admittance to program and completion of ENGL 3400 and ENGL 3410 with grades of B- or better

Repeatable
Semester(s) Traditionally Offered: Spring
Course Fee: $50.00
Effective Term
Spring

ENGL 5430 - Professional Writing Capstone (CI)
CI Communications Intensive
3 credits

Capstone course for students in Professional and Technical Writing emphasis, in which students develop a professional portfolio of their own writing. Should be taken during the senior year.

Prerequisite/Restriction: Admittance to program and completion of ENGL 3400 and ENGL 3410 with grades of B- or better

Repeatable
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 5490 - Topics in Technical Communication and Rhetoric
3

Provides students with opportunity to study topics designed to enrich their understanding of technical communication and rhetoric. Typical topics include crisis communication, accessibility, marketing and public relations, or user experience design and testing.

Prerequisite/Restriction: Admittance to program and completion of ENGL 3400 and ENGL 3410 with grades of B- or better

Repeatable
Semester(s) Traditionally Offered: Fall and Spring
Course Fee (additional): $50.00
Effective Term
Spring

ENGL 5690 - American Studies Capstone Seminar (CI)
CI Communications Intensive
3 credits

Required for students majoring in American Studies. Enables students to synthesize American Studies theory and methods with interdisciplinary cognate courses. Supports senior thesis design and writing, allowing
topics to reflect individual programs of study.

Cross-listed as: HIST 5690.

Semester(s) Traditionally Offered: Spring

ENGL 5700 - Folk Narrative
3 credits

Forms and functions of folk narrative genres: myth, legend, folktale, memorate, and ballad.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement and completion of a 3000-level course having an ANTH, ENGL, or HIST prefix

Cross-listed as: ANTH 5700 and HIST 5700.

Semester(s) Traditionally Offered: Spring

ENGL 5900 - Senior Honors Seminar
1-3 credits

Capstone course for students enrolled in English Honors Program.

Prerequisite/Restriction: Enrollment in English Honors Program

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 5910 - Senior Honors Thesis (CI)
CI Communications Intensive
1-6 credits

Students work in conjunction with English faculty member to write a thesis.

Prerequisite/Restriction: Enrollment in English Honors Program

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 5920 - Directed Study
1-3 credits

Provides students with opportunity to work individually with faculty member. Contract for work to be completed must be signed by faculty member and student, then filed with English Department.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 6320 - Literary Theory
3 credits

Introduces students to advanced literary theories and provides training in sophisticated critical method.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 6330 - Topics in Literary Studies
3 credits

Allows in-depth study of specific literary topics and theoretical questions.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 6340 - British Literature and Culture
3 credits

Explores British literature and provides training in literary and cultural criticism. Promotes research and writing skills.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 6350 - American Literature and Culture
3 credits

Explores American literature and provides training in literary and cultural criticism. Promotes research and writing skills.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 6360 - World Literature and Culture
3 credits

Explores world literature and provides training in literary and cultural criticism. Promotes research and writing skills.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring
ENGL 6400 - Advanced Editing
3 credits

Examines complex roles editors assume in creating technical and nontechnical documents. Principal components include working with substance of documents, mediating the writer-reader relationship, and exemplifying the application of rhetorical theory in editing.

Cross-listed as: ENGL 7400.

Semester(s) Traditionally Offered: Spring, even years only
Course Fee: $50.00

ENGL 6410 - Theory and Research in Professional Communication
3 credits

Introduction to contemporary theories of written discourse. Emphasizes the implications of these theories for research in professional communication.

Cross-listed as: ENGL 7410.

Semester(s) Traditionally Offered: Fall, even years only
Course Fee: $50.00

ENGL 6420 - Usability Studies and Human Factors in Professional Communication
3 credits

Examines concepts and practices of usability studies and human factors in the design and production of print and online documents. Emphasizes developing objectives, criteria, and measures for conducting tests in the lab and field.

Cross-listed as: ENGL 7420.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 6430 - Publications Management
3 credits

Covers processes for developing and producing publications, including information development cycles, supervision, and budgets.

Cross-listed as: ENGL 7430.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 6440 - Studies in Culture and Professional Communication
3 credits

Covers topics in rhetorical, critical, and cultural theory, emphasizing their application to contemporary practices in professional communication.

Cross-listed as: ENGL 7440.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, even years only
Course Fee: $50.00

ENGL 6450 - Reading Theory and Document Design
3 credits

Examines how reading theory interacts with rhetoric of graphics, layout, and type to influence the way documents are designed for maximum information and readability.

Cross-listed as: ENGL 7450.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

ENGL 6460 - Studies in Digital Media
3 credits

Focuses on the production of advanced digital media documents. Examination of theories underlying such publications, plus the related hardware and software. Topics vary.

Cross-listed as: ENGL 7460.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, odd years only
Course Fee: $50.00

ENGL 6470 - Studies in Specialized Documents
3 credits

Focuses on writing and design of specific genres in professional communication. Genres include environmental impact statements, software
ENGL 6480 - Studies in Technology and Writing
3 credits
Study of theoretical aspects of technologies affecting writing in professional contexts. Course topics may include an examination of the history of computing, rhetorics of hypertext, or theories of communication in virtual space. Topics vary.

Cross-listed as: ENGL 7480.
Repeatable for credit.
Semester(s) Traditionally Offered: Spring, even years only
Course Fee: $50.00

ENGL 6600 - American Studies Theory and Method
3 credits
Provides students with theory and method of graduate-level research in American Studies.

Cross-listed as: HIST 6600.

ENGL 6610 - Seminar on the American West
3-4 credits
Readings and research on topics in the American West. Interdisciplinary focus suitable for graduate students in History and American Studies.

Cross-listed as: HIST 6610.
Repeatable for credit.

ENGL 6620 - Seminar in Native American Studies
3-4 credits
Readings and research on topics in Native American history and culture. Interdisciplinary focus suitable for graduate students in History and American Studies.

Cross-listed as: HIST 6620.

ENGL 6630 - Studies in Film and Popular Culture
3 credits
Offered annually on a rotating basis by professors in folklore and English (Cultural Studies, Literature, British and Commonwealth). Topics and theoretical approaches vary, but the primary focus is on feature films.

Cross-listed as: HIST 6630.
Repeatable for credit.

ENGL 6700 - Folklore Theory and Method
3 credits
Serves as orientation for new graduate students in folklore. Introduces students to comparative annotation, folklore indices, oral-formulaic theory, performance theory, contextual analysis, and other approaches.

Cross-listed as: HIST 6700.

ENGL 6710 - Space, Place and Folklore
3 credits
Study of expressive culture in relation to space and place in social theory. Perspectives range from ideas about landscape and region to globalization.

Cross-listed as: HIST 6710.

ENGL 6720 - Folklore Fieldwork
3 credits
Basic methodology class for folklorists and oral historians. Students learn interviewing techniques and other methods for observing and recording the performance of tradition and traditional history.

Cross-listed as: HIST 6720.
Semester(s) Traditionally Offered: Spring
ENGL 6730 - Public Folklore
3 credits
Provides history and analysis of governmental involvement in protecting, promoting, and otherwise manipulating and utilizing cultural heritage.
Cross-listed as: HIST 6730.

Semester(s) Traditionally Offered: Fall
ENGL 6740 - Folk Narrative
3 credits
Covers principal narrative genres in folk tradition (myth, tale, legend, ballad) and the basic theories for their analysis and discussion.
Cross-listed as: HIST 6740.

Semester(s) Traditionally Offered: Spring
ENGL 6750 - Advanced Folklore Workshop: Fife Conference
3 credits
Intensive workshop focusing on a topic in folklore. Brings in nationally known experts as lecturers and discussants. Taught during one week, every day and all day.
Cross-listed as: HIST 6750

Repeatable for credit
Semester(s) Traditionally Offered: Summer Effective Term Summer 2016
ENGL 6760 - Folk Art, Traditional Art, and Material Culture
3 credits
This course is a graduate level seminar. Course of study includes the history of the idea of folk art, contemporary and established questions pertaining to vernacular production, and an exploration and analysis of actual objects in relation to theory.
Cross-listed as: HIST 6760.

Semester(s) Traditionally Offered: Spring
ENGL 6770 - Seminar in Folklore and Folklife
3 credits
Conducts close, professional-level study of major areas of folklore and folklife research.
Cross-listed as: HIST 6770.
Repeatable for credit

Semester(s) Traditionally Offered: Fall
ENGL 6800 - Theory and Practice of Online Education in Writing
3 credits
Examination of principles and their implementation in online writing instruction. Emphasis placed on writing instruction within English departments.
Cross-listed as: ENGL 7800.
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, odd years only
Course Fee: $50.00
ENGL 6810 - Introduction to Composition Studies
3 credits
Introduces students to scholarship in the field of composition studies. Students become acquainted with scholars, forums, themes, and methods of the field.

Semester(s) Traditionally Offered: Fall, Spring
ENGL 6820 - Practicum in Teaching English
3 credits
Introduction to teaching writing, designed specifically for graduate instructors teaching in the English Department writing program. Focuses on theory and practice of teaching writing, specifically ENGL 1010, but also prepares graduate instructors for further teaching responsibilities.

Semester(s) Traditionally Offered: Fall
ENGL 6830 - Rhetorical Theory
3 credits
Covers intellectual traditions of rhetoric from classical times to the present. As students study major theories, theoreticians, and controversies in the field, they come to understand rhetoric as the study of relations between discourse, knowledge, and power.

Cross-listed as: ENGL 7830.

Semester(s) Traditionally Offered: Spring, odd years only

ENGL 6860 - Teaching Technical Writing
3 credits

Prepares students to teach general purpose technical writing courses at the undergraduate level. Students read and discuss articles on technical writing and practice writing a series of technical documents.

Cross-listed as: ENGL 7860.

Semester(s) Traditionally Offered: Spring, odd years only

ENGL 6880 - Topics in Creative Writing
3 credits

Examines field of creative writing as an art, concentrating on issues of craft and creation. May study the fundamentals of a particular genre, the history of a genre, theories of form, how writers work, how they approach their genre, etc., all with an eye toward craft and examined from a writer's perspective.

Prerequisite/Restriction: Enrollment limited to graduate students only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 6883 - Poetry Writing Workshop
3 credits

Students write poetry and participate in writing workshops, where their work is critiqued by the class. Course also involves study of the art and craft of poetry, its history, form, and content, especially that of contemporary poetry examined from a writer's perspective.

Prerequisite/Restriction: Enrollment limited to graduate students only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 6884 - Creative Nonfiction Writing Workshop
3 credits

Students write creative nonfiction and participate in writing workshops, where their work is critiqued by the class. Course also involves study of the art and craft of creative nonfiction, its history, form, and content, especially that of contemporary creative nonfiction examined from a writer's perspective.

Prerequisite/Restriction: Enrollment limited to graduate students only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 6890 - Studies in Writing and Rhetoric
3 credits

Allows in-depth study of specific rhetorical topics and theoretical questions.

Cross-listed as: ENGL 7890.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 6900 - Graduate Internship
1-15 credits

Format and credit limit vary for different programs in the department. See program advisor for details and approval to enroll in this course.
ENGL 6920 - Directed Study
1-6 credits
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 6970 - Thesis
1-6 credits
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 6990 - Continuing Graduate Registration
1-6 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 7000 - Advanced Research Methods in Professional Communication
3 credits
Survey of major research methods (qualitative and quantitative) for conducting professional communication research in academic and nonacademic settings. Coursework will culminate in a formal proposal to conduct a discipline-appropriate study in the workplace.
Semester(s) Traditionally Offered: Spring, even years only

ENGL 7400 - Advanced Editing
3 credits
Examines complex roles editors assume in creating technical and nontechnical documents. Principal components include working with substance of documents, mediating the writer-reader relationship, and exemplifying the application of rhetorical theory in editing.
Cross-listed as: ENGL 6400.
Semester(s) Traditionally Offered: Spring, even years only
Course Fee: $50.00

ENGL 7410 - Theory and Research in Professional Communication
3 credits
Introduction to contemporary theories of written discourse. Emphasizes the implications of these theories for research in professional communication.
Cross-listed as: ENGL 6410.
Semester(s) Traditionally Offered: Fall, even years only
Course Fee: $50.00

ENGL 7420 - Usability Studies and Human Factors in Professional Communication
3 credits
Examines concepts and practices of usability studies and human factors in the design and production of print and online documents. Emphasizes developing objectives, criteria, and measures for conducting tests in the lab and field.
Cross-listed as: ENGL 6420.
Repeatable for credit.

ENGL 7430 - Publications Management
3 credits
Covers processes for developing and producing publications, including information development cycles, supervision, and budgets.
Cross-listed as: ENGL 6430.

ENGL 7440 - Studies in Culture and Professional Communication
3 credits
Covers topics in rhetorical, critical, and cultural theory, emphasizing their application to contemporary practices in professional communication.
Cross-listed as: ENGL 6440.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, even years only
Course Fee: $50.00
ENGL 7450 - Reading Theory and Document Design
3 credits
Examines how reading theory interacts with rhetoric of graphics, layout, and type to influence the way documents are designed for maximum information and readability.

Cross-listed as: ENGL 6450.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00
ENGL 7460 - Studies in Digital Media
3 credits
Focuses on the production of advanced digital media documents. Examination of theories underlying such publications, plus the related hardware and software. Topics vary.

Cross-listed as: ENGL 6460.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, odd years only
Course Fee: $50.00
ENGL 7470 - Studies in Specialized Documents
3 credits
Focuses on writing and design of specific genres in professional communication. Genres include environmental impact statements, software documentation, proposals, manuals, annual reports, newsletters, and fact sheets. Topics vary.

Cross-listed as: ENGL 6470.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring, even years only
Course Fee: $50.00
ENGL 7800 - Theory and Practice of Online Education in Writing
3 credits
Examination of principles and their implementation in online writing instruction. Emphasis placed on writing instruction within English departments.

Cross-listed as: ENGL 6800.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, odd years only
Course Fee: $50.00
ENGL 7830 - Rhetorical Theory
3 credits
Covers intellectual traditions of rhetoric from classical times to the present. As students study major theories, theoreticians, and controversies in the field, they come to understand rhetoric as the study of relations between discourse, knowledge, and power.

Cross-listed as: ENGL 6830.

Semester(s) Traditionally Offered: Spring, odd years only
ENGL 7860 - Teaching Technical Writing
3 credits
Prepares students to teach general purpose technical writing courses at the undergraduate level. Students read and discuss articles on technical writing and practice writing a series of technical documents.

Cross-listed as: ENGL 6860.

Semester(s) Traditionally Offered: Spring, odd years only
Course Fee: $50.00
ENGL 7890 - Studies in Writing and Rhetoric
3 credits
Allows in-depth study of specific rhetorical topics and theoretical questions.

Cross-listed as: ENGL 6890.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

ENGL 7900 - Research Internship
6 credits

Application of workplace field research and methods in an actual workplace setting.

Prerequisite/Restriction: ENGL 7000

Semester(s) Traditionally Offered: Fall

ENGL 7920 - Directed Study
3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 7970 - Dissertation Research
1-12 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENGL 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ESOL 1030 - International Student Orientation
1 credit

Provides first-semester students with knowledge of the services and regulations governing international students while attending USU Eastern. Course will aid in the student’s cultural transition to U.S. education and will provide particulars of complying with BCIS (Bureau of Citizenship and Immigration Service) rules and regulations governing F-1 visa holders. Course will include an overview of academic regulations, graduation requirements, USU Eastern policies and procedures. Class meets daily for the first three weeks of each semester. Course is required of all new F-1 international students at USU Eastern.

Campus: USU Eastern only

Semester(s) Traditionally Offered: Fall, Spring, Summer

ESOL 1040 - Listening/Speaking
3 credits

Prepares non-native speakers of English to participate confidently in academic and social situations. Emphasizes activities in critical thinking, interactive listening, and pronunciation skills. Includes lectures, oral presentations and small group activities. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

Campus: USU Eastern only

Semester(s) Traditionally Offered: Fall, Spring

ESOL 1050 - Academic Reading
3 credits

Designed to provide general strategies for improving reading skills for academic course work. Includes critical reading, comprehension, analysis, synthesis, and evaluation. Also encompasses skills in taking notes, preparing for exams, and interpreting visual aids. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

Cross-listed as: ENGL 1050

Campus: USU Eastern only

ESOL 1055 - Vocabulary
2 credits

Emphasis is on academic content vocabulary. Develops strategies for increasing vocabulary using context clues and word parts. Root words, prefixes and suffixes will be examined in detail. Class will prepare students for academic course work and standardized test taking. Also includes some idioms and metaphors. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.
ESOL 1060 - Academic Writing
3 credits

Perfecting sentences, paragraphs, and essays will be emphasized. Offers students writing practice strategies in responding to academic assignments. Basics of research and documentation are also presented. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

ESOL 1065 - Grammar
2 credits

Basic review of English grammar, including mechanics and usage. Studies types of sentences, phases, clauses, modifiers, punctuation and other mechanics. Course is appropriate for any student wanting to improve their grammar skills. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

ESOL 1140 - Listening/Speaking
3 credits

Prepares non-native speakers of English to participate confidently in academic and social situations. Emphasizes activities in critical thinking, interactive listening, and pronunciation skills. Includes lectures, oral presentations and small group activities. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

ESOL 1150 - Academic Reading
3 credits

Designed to provide general strategies for improving reading skills for academic course work. Includes critical reading, comprehension, analysis, synthesis, and evaluation. Also encompasses skills in taking notes, preparing for exams, and interpreting visual aids. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

ESOL 1155 - Vocabulary
2 credits

Emphasis is on academic content vocabulary. Develops strategies for increasing vocabulary using context clues and word parts. Root words, prefixes and suffixes will be examined in detail. Class will prepare students for academic course work and standardized test taking. Also includes some idioms and metaphors. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

ESOL 1160 - Academic Writing
3 credits

Perfecting sentences, paragraphs, and essays will be emphasized. Offers students writing practice strategies in responding to academic assignments. Basics of research and documentation are also presented. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

ESOL 1165 - Grammar
2 credits

Basic review of English grammar, including mechanics
and usage. Studies types of sentences, phases, clauses, modifiers, punctuation and other mechanics. Course is appropriate for any student wanting to improve their grammar skills. International students who transfer to Logan before receiving an associate’s degree are required to take the IELI Placement Exam and begin courses as indicated by exam results.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring
ESOL 2410 - Comprehending Lecture Discourse
3
Develops techniques for understanding the planned and spontaneous academic discourse of university classrooms. Focuses on information processing.

Effective Term
Fall 2016
ESOL 2420 - Writing from Academic Sources
4
Introduces students to academic writing demands. Students gather information from various sources, such as interviews, surveys, and academic texts; analyze and summarize the information; and write documented essays and reports.

Effective Term
Fall 2016
ESOL 2440 - Academic Discourse
3
Designed to assist students in developing oral competency, with emphasis on comprehensibility in academic presentations.

Effective Term
Fall 2016
ESOL 2460 - Reading from Academic Sources
4
Focuses on processes and strategies for a variety of academic and disciplinary genres, with a special emphasis on the basic university textbook; strategies for learning from textbooks and other materials relevant to reading for academic purposes; and vocabulary study.

Effective Term
Fall 2016
ESOL 2470 - Cross-Cultural Perspectives
4
This course brings together students from a variety of ethnic backgrounds for the purpose of cultural exploration. Students examine the influence of culture on beliefs, behaviors, and values.

Effective Term
Fall 2016
Environment and Society
ENVS 1200 - Native Americans and the Environment
3 credits
Examines historical and contemporary issues of Native American land use. Explores opposing views with information allowing critical assessment of issues. Folk and scientific resources will be used.

Campus: USU Eastern only
ENVS 1350 - Introduction to Environmental Science (BLS)
BLS Breadth Life Sciences
3 credits
An integrated science course emphasizing life sciences in addressing 21st century environmental challenges affecting human and ecosystem health. Using sustainability and systems thinking as integrating themes, students explore environmental, economic, and social frameworks within which environmental problems and solutions occur.

Semester(s) Traditionally Offered: Spring
ENVS 1990 - Professional Orientation for Environment and Society
1 credit
Introduces new students to university scholarship and citizenship, careers in environmental and natural resources science and management, development of leadership and team skills, and analysis of issues relating to the diverse relationships between society and the natural environment.
Semester(s) Traditionally Offered: Fall, Spring

ENVS 2000 - Natural Resources Professional Orientation
1 credit

Through a combination of in- and out-of-classroom activities, students develop an understanding of curriculum requirements and career opportunities associated with the Natural Resources majors. Students will also be introduced to natural resource management issues and research involving multiple disciplines.

Cross-listed as: WATS 2000 and WILD 2000

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $17.00

ENVS 2100 - Western Culture and Heritage Tourism
2 credits

Designed to help students understand the importance of western culture and heritage. Tourism in a rapidly growing recreation industry. May be a transfer credit depending on major. Students will investigate how to transform underdeveloped western culture and historic sites into value added enterprises. Business and marketing skills will be blended with recreation site development skills resulting in a comprehensive recreation enterprise. Class includes lecture, lab and field trip.

Prerequisite/Restriction: PRP 1100

Campus: USU Eastern only

ENVS 2250 - Introductory Internship/Co-op
1-3 credits

Introductory-level educational experience in internship/cooperative education position approved by department.

Prerequisite/Restriction: Permission of department

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 2340 - Natural Resources and Society (BSS)
BSS Breadth Social Sciences
3 credits

Examines human values, uses, and management of natural settings at the individual, community, and societal levels. Topics include: psychological responses to nature, history of U.S. park and natural resource management, environmental sociology and politics, and nature in non-Western cultures.

Semester(s) Traditionally Offered: Fall

ENVS 3010 - Fundamentals of Natural Resource and Environmental Policy
3 credits

Examines policymaking for natural resources management and environmental protection, focusing on how issues are addressed among different stakeholders. Topics include policy development, policymaking, participants, and policy instruments. Analyses of specific laws and regulations demonstrate the importance and complexity of policymaking.

Semester(s) Traditionally Offered: Fall

ENVS 3300 - Fundamentals of Recreation Resources Management
3 credits

Principles of wildland recreation management including: characteristics of recreation use and users, introduction to planning concepts, management of wildland recreation facilities and infrastructure, and integration with other natural resource uses.

Semester(s) Traditionally Offered: Fall

ENVS 3330 - Environment and Society
3 credits

Emphasizes how human actions modify the physical environment and how physical systems affect human systems and the changes occurring in the meaning, use, and importance of resources at a global and regional scale.

Semester(s) Traditionally Offered: Spring

ENVS 3400 - Fundamentals of Tourism
3 credits

Examines foundational concepts of the tourism and hospitality industry, emphasizing the significance, contexts, benefits, costs and other considerations related
to tourism in Utah and the Intermountain West. Applies theory and research in planning, marketing, management, entrepreneurship and sustainable tourism development.

Semester(s) Traditionally Offered: Fall

ENVS 3500 - Quantitative Assessment of Environmental and Natural Resource Problems (QI)
QI Quantitative Intensive
3 credits

Overview of analytical and sampling methods used for collecting, organizing, and interpreting numeric data to evaluate problems and monitor conditions relating to relationships between environment and society.

Prerequisite/Restriction: STAT 2000 or STAT 2300 or STAT 3000; MATH 1050 or higher mathematics class or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall

ENVS 3600 - Living with Wildlife (DSC)
DSC Depth Life and Physical Sciences
3 credits

Reviews history and development of wildlife management programs in the United States. Explores diversity of attitudes toward wildlife, which affect development and evolution of wildlife management programs. Development and analysis of case histories of contemporary and controversial wildlife management decisions.

Semester(s) Traditionally Offered: Spring
Course Fee: $10.00

ENVS 4000 - Human Dimensions of Natural Resource Management (DSS)
DSS Depth Social Sciences
3 credits

Focuses on balancing science and social values in ecosystem management and decision-making. Topics include environmental justice, communication and behavior change strategies, landscape perception and attitudes, resource-dependent communities, public involvement, and conflict management.

Semester(s) Traditionally Offered: Fall

ENVS 4030 - Contemporary Tribal Natural Resource Management
3 credits

Designed to acquaint students with contemporary tribal resource management and environmental policies. As sovereign nations, tribal resource issues focus on sustainable and non-sustainable resources including timber, oil, coal, water, wildlife, and land. Emphasis placed on practical application and conflict resolution.

Corequisite: ENVS 6030

Semester(s) Traditionally Offered: Fall

ENVS 4100 - Introduction to Modeling Human-Environment Systems
3

Introduces modeling of human-environment systems. The course focuses on understanding the importance of complexity, system thinking, interdependencies, and feedbacks in HES. It also aims at developing basic skills needed to build and analyze simple computational models.

Prerequisite/Restriction: ENVS 2340 and ENVS 3500

Semester(s) Traditionally Offered: Even-numbered Springs
Effective Term
Spring

ENVS 4110 - Human Dimensions of Wildlife Management
3 credits

Human Dimensions of Wildlife focuses on the human element of wildlife management, especially through the concept of stakeholder identification and involvement. This course explores HD in the context of social science and utilizes contemporary case studies to demonstrate its applicability.

Cross-listed as: ENVS 6110.

Semester(s) Traditionally Offered: Fall

ENVS 4130 - Recreation Policy and Planning
3 credits

Examines the historical, legal, and political context of outdoor recreation policy on public lands; government
agency culture, regulation, and partnering; relationship of outdoor recreation to tourism; and theory and application of principal planning tools for outdoor recreation settings.

Semester(s) Traditionally Offered: Spring

ENVS 4250 - Advanced Internship/Co-op
1-9 credits

Directed and evaluated cooperative education or work experience for undergraduates in public and private organizations.

Prerequisite/Restriction: Permission of department

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 4440 - Stegner Center Annual Symposium
1 credit

Offered through the University of Utah College of Law. Topics vary each year, but always focus on natural resource policy-related issues.

Cross-listed as: ENVS 6440.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

ENVS 4500 - Wildland Recreation Behavior (CI)
CI Communications Intensive
3 credits

Social, psychological, and geographic influences on human behaviors in wildland recreation settings. Emphasis on critical problems affecting public land recreation management.

Prerequisite/Restriction: ENVS 3300

Semester(s) Traditionally Offered: Fall

Course Fee: $15.00

Effective Term

Fall 2016

ENVS 4550 - Recreation Use Monitoring and Assessment
3 credits

Intensive, one-week course taught primarily in field settings. Emphasizes quantification of recreation use and impacts, including research approaches, measurement, methods, sampling, and data analysis techniques for managing outdoor recreation settings.

Prerequisite/Restriction: ENVS 4500, STAT 2000 or STAT 2300 or instructor permission

Semester(s) Traditionally Offered: Summer

ENVS 4600 - Natural Resource Interpretation
3 credits

Planning processes and techniques for providing interpretive programs developed for wildland recreation areas and visitor centers. Evaluation and planning of visitor information efforts.

Semester(s) Traditionally Offered: Fall

Course Fee: $60.00

ENVS 4610 - Foundations of Environmental Education
3 credits

Offers foundational knowledge of environmental education for persons working in education and public outreach settings who wish to incorporate environmental education into their activities. Covers history and goals, professional roles and instructional methods of environmental education.

Corequisite: ENVS 6610

Semester(s) Traditionally Offered: Spring

ENVS 4620 - Applications of Environmental Education
4 credits

Understanding and facilitating environmental education programming for persons working in education and public outreach settings. Students develop, evaluate, and improve environmental education programs and practices.

Cross-listed as: ENVS 6620

Semester(s) Traditionally Offered: Fall, Summer
ENVS 4700 - Communicating Sustainability (CI)
CI Communications Intensive
3 credits

Explores theoretical foundations and methods for using education and communication strategies to encourage adoption of sustainable behaviors. Students work with various stakeholders and the public in formal and non-formal settings to develop programs with goals relating to sustainability.

Semester(s) Traditionally Offered: Spring

ENVS 4920 - Special Projects in Recreation Management
3 credits

Participation in special projects to assist public recreation agencies or nonprofit organizations, while gaining hands-on experience in recreation management, planning, and monitoring. Many experiences entail intensive, short-duration efforts away from campus. Prerequisite: Permission of department.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

ENVS 4950 - Special Topics
1-3 credits

Individual study and research upon selected environmental and societal problems.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 4960 - Directed Readings
1-3 credits

Individual reading research on selected environmental and societal readings.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 4970 - Undergraduate Research
1-3 credits

Individual or team research.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 4980 - Undergraduate Seminar
1 credit

Intended to bring upperclassmen up-to-date on environmental and societal topics.

Pass/Fail only.
Semester(s) Traditionally Offered: Spring

ENVS 5000 - Environmental Nonprofit and Volunteer Management
3 credits

Introduction to the activities, legal and political contexts, organizational structures, challenges and opportunities of working with nonprofit and voluntary organizations in support of environmental and recreational goals. Requires participation in volunteer activities as part of an Academic Service-Learning experience.

Semester(s) Traditionally Offered: Spring

ENVS 5300 - Natural Resources Law and Policy
2 credits

Legal and administrative regulation of forests and associated resources (water, air, fish, wildlife, and scenery). Emphasis on agency organizational culture, federal legislation, court cases, administrative procedures, and federal natural resources agencies’ interactions with tribal, state, and local governments.

Semester(s) Traditionally Offered: Spring

ENVS 5550 - Sustainability: Concepts and Measurement
3 credits

Examines the challenges and opportunities of sustaining resources and ways of life. Develops a global and long-term perspective on concepts of sustainability, challenges, resources, courses of action to become sustainable, and how to measure progress toward sustainability goals.
Cross-listed as: ENVS 6550.

Semester(s) Traditionally Offered: Spring

ENVS 5570 - Sustainable Living
3 credits

Theories and techniques for decision-making about environmental impacts of consumer decision-making, and about alternatives for a sustainable future. Incorporates meanings of sustainable living, relationships between lifestyle choices and the environment, and feasible steps toward ecological sustainability.

Semester(s) Traditionally Offered: Spring

ENVS 5640 - Conflict Management in Natural Resources (CI)
CI Communications Intensive
3 credits

Introduction to conflict management techniques for those involved in natural resource management.

Cross-listed as: ENVS 6640 and SOC 5640/SOC 4640.

Semester(s) Traditionally Offered: Spring

ENVS 5800 - Field Studies in Collaborative Natural Resource Stewardship
3 credits

Two-week field course introduces students to methods and philosophical approaches incorporated in Tehabi, a summer-long internship program focusing on collaborative stewardship of natural resources. Enrollment limited to students accepted into the Tehabi program.

Semester(s) Traditionally Offered: Summer

ENVS 5820 - Field Studies in Environmental Conservation and Sustainability
3 credits

Allows Utah Conservation Corps members to explore land management issues and sustainability while engaging in service. Sessions during pre-service training focus on contextual factors defining environmental issues. During weekly field sessions, students focus on personally relevant aspects of sustainability.

Semester(s) Traditionally Offered: Summer

ENVS 5810 - Internship in Collaborative Natural Resource Stewardship
3 credits

Mentored internship involving participation in the Tehabi program, which teaches collaborative stewardship of natural resources within a federal, state, or nonprofit agency. Enrollment limited to students accepted into the Tehabi program.

Semester(s) Traditionally Offered: Fall

ENVS 6000 - Theoretical Foundations in Human Dimensions of Ecosystem Science and Management
3 credits

Overview of interdisciplinary theories and frameworks concerning how human societies affect, and are affected by, ecosystem processes at local, regional, and global scales. Focuses on systems theory, social and environmental sustainability, and scientific integration for ecosystem planning, policy, and management.

Cross-listed as: ENVS 7000.

Semester(s) Traditionally Offered: Spring

ENVS 6010 - Applying Human Dimensions Concepts to Natural Resource Management
3 credits

Review key concepts regarding the human dimensions of natural resources and environment, with applications to land and resource management. Topics include: attitudes and perceptions, behavior-change strategies, user-group conflict, visitor use impacts/capacity, environmental justice, and local community impacts.

Semester(s) Traditionally Offered: Spring

ENVS 6030 - Contemporary Tribal Natural Resource Management
3 credits

Designed to acquaint students with contemporary tribal resource management and environmental policies. As sovereign nations, tribal resource issues focus on sustainable and non-sustainable resources including
timber, oil, coal, water, wildlife, and land. Emphasis placed on practical application and conflict resolution.

Cross-listed as: ENVS 4030

Semester(s) Traditionally Offered: Fall

ENVS 6050 - Best Research Practices in the Natural Resources and Environmental Sciences
3 credits

Explores best research practices from top scientific articles for planning and carrying out reliable experiments in the natural resources and environmental sciences, conceiving and testing research hypotheses, establishing cause and effect, deducing new knowledge from existing knowledge, and more.

Semester(s) Traditionally Offered: Spring

ENVS 6100 - Introduction to Modeling Human-Environment Systems
3 credits

Introduces modeling of human-environment systems. The course focuses on understanding the importance of complexity, system thinking, interdependencies, and feedbacks in HES. It also aims at developing basic skills needed to build and analyze simple computational models.

Semester(s) Traditionally Offered: Even-numbered Springs
Effective Term
Spring

ENVS 6110 - Human Dimensions of Wildlife Management
3 credits

Human Dimensions of Wildlife focuses on the human element of wildlife management, especially through the concept of stakeholder identification and involvement. This course explores HD in the context of social science and utilizes contemporary case studies to demonstrate its applicability.

Cross-listed as: ENVS 4110.

Semester(s) Traditionally Offered: Fall

ENVS 6130 - Policy Aspects of Wildland Recreation
3 credits

Political, legal, and economic bases for wildland recreation management. Relationship between outdoor recreation and tourism. Lectures concurrent with ENVS 4130. Also includes weekly discussion session focusing on relevant scientific research and policy analyses.

Semester(s) Traditionally Offered: Spring

ENVS 6150 - Conservation Policy for Private Lands
3 credits

This discussion-based course covers a variety of topics related to policy issues involving the management and conservation of private lands and associated natural resources, and examines social science research methods as applied to policy analysis and development.

Semester(s) Traditionally Offered: Fall

ENVS 6200 - Bioregional Analysis and Planning
5 credits

Compilation and analysis of data for assessing biophysical and socio-economic features of landscapes, and for evaluating impacts of land-use policies across both landscapes and time. Provides real-world learning experience in working with stakeholders and agency decision-makers.

Prerequisite/Restriction: LAEP 3300 or equivalent

Semester(s) Traditionally Offered: Fall
Course Fee: $395.00
Effective Term
Fall 2015

ENVS 6210 - Bioregional Management and Policy
5 credits

Continuation of ENVS 6200. Assessment of land-use policies across landscapes and time, with an emphasis on evaluating consequences of community growth via the generation and analysis of future development and management alternatives.

Prerequisite/Restriction: ENVS 6200

Semester(s) Traditionally Offered: Spring
Course Fee: $325.00
Effective Term
Spring 2016
ENVS 6240 - Graduate Internship/Co-op  
1-9 credits  
Graduate-level educational experience in internships/cooperative education position approved by department.  
Prerequisite/Restriction: Approval of department  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 6300 - Social and Environmental Psychology of Natural Resources  
3 credits  
Examines how people respond as individuals to nature and environmental phenomena, drawing on theory and research from social psychology, environmental psychology, and behavior analysis. Emphasizes applications to knowledge, attitude, and behavior change strategies for improving environmental sustainability.  
Cross-listed as: ENVS 7300.  
Semester(s) Traditionally Offered: Spring

ENVS 6310 - Introduction to Environmental Laws and Policy  
3 credits  
The course will focus on 16 Federal laws and policies protecting both our natural and cultural resources. These laws and policies were selected because they are most frequently encountered by natural resource managers and specialists.  
Semester(s) Traditionally Offered: Fall

ENVS 6320 - Water Law and Policy in the United States  
3 credits  
Introduction to policies, laws, institutions, and practices guiding western water allocation, emphasizing how to efficiently and equitably allocate increasingly scarce supplies. Explores reserved water rights, water markets, stream adjudication, public trust doctrine, basinwide management, and riparian management.  
Cross-listed as: ENVS 7320

ENVS 6330 - Natural Resources Administration  
3 credits  

ENVS 6400 - Ecological Aspects of Wildland Recreation  
3 credits  
Assessment of current knowledge and knowledge gaps concerning impacts of wildland recreation on wildlife, plants, soil and water resources, and processes. Strategies for coexistence of recreation visitors and nonhuman ecosystem elements.  
Semester(s) Traditionally Offered: Spring

ENVS 6410 - Translational Ecology  
3 credits  
Introduces beginning scientists to principles and skills for connecting their research to non-scientists who will use it. Topics include: science communication and new media, public understanding of science, advocacy and policy-making, citizen science, participatory research approaches.  
Semester(s) Traditionally Offered: Spring

ENVS 6440 - Stegner Center Annual Symposium  
1 credit  
Offered through the University of Utah College of Law. Topics vary each year, but always focus on natural resource policy-related issues.  
Cross-listed as: ENVS 4440.  
Repeatable for credit.  
Semester(s) Traditionally Offered: Spring

ENVS 6500 - Behavior Aspects of Wildland Recreation  
3 credits  
Social and psychological analysis of visitor behavior in outdoor recreation settings. Sources of recreation management problems and practical and theoretical basis for management practices. Lectures concurrent with ENVS 4500. Separate discussion sessions focus on research concerning recreation behavior.  
Semester(s) Traditionally Offered: Fall

ENVS 6530 - Natural Resources Administration  
3 credits
Master of Natural Resources (MNR) degree requires students to complete courses in seven core areas. This course will satisfy the MNR's Administration requirement. Develops knowledge of issues, techniques, and practices for collaborative natural resource administration through assigned readings and discussions.

Semester(s) Traditionally Offered: Spring

ENVS 6550 - Sustainability: Concepts and Measurement
3 credits

Examines the challenges and opportunities of sustaining resources and ways of life. Develops a global and long-term perspective on concepts of sustainability, challenges, resources, courses of action to become sustainable, and how to measure progress toward sustainability goals.

Cross-listed as: ENVS 5550.

Semester(s) Traditionally Offered: Spring

ENVS 6580 - Sustainable Nature-Based Tourism
3 credits

Explores how sustainable nature-based tourism can fit into natural resource management with benefits to individuals, communities, economies, society, and the environment. Includes study of definitions and concepts, ecological and social impacts of nature-based tourism, and planning and management tools.

Semester(s) Traditionally Offered: Summer

ENVS 6600 - Advanced Natural Resource Interpretation
3 credits

Planning processes, techniques, and evaluation procedures for using information and education to influence human behavior and increase benefits to visitors in natural settings. Leadership of teams involved in producing interpretive plans and materials.

Semester(s) Traditionally Offered: Fall

Course Fee: $60.00

ENVS 6610 - Foundations of Environmental Education
3 credits

Offers foundational knowledge of environmental education for persons working in education and public outreach settings who wish to incorporate environmental education into their activities. Covers history and goals, professional roles and instructional methods of environmental education.

Cross-listed as: ENVS 4610

Semester(s) Traditionally Offered: Spring

ENVS 6620 - Environmental Education Practicum
4 credits

Hands-on practicum for persons working in education and public outreach settings. Students develop, evaluate, and improve environmental education programs.

Prerequisite/Restriction: ENVS 4610/ENVS 6610 or instructor permission

Corequisite: ENVS 4620

Semester(s) Traditionally Offered: Fall, Summer

ENVS 6640 - Conflict Management in Natural Resources
3 credits

Introduction to conflict management techniques for those involved in natural resource management.

Cross-listed as: ENVS 5640 and SOC 4640/SOC 5640.

Semester(s) Traditionally Offered: Spring

ENVS 6700 - Research Approaches in Human Dimensions of Ecosystem Science and Management
3 credits

Experience conceptualizing and prioritizing research problems involving human societies and ecosystems. Reviews approaches for creating and testing interdisciplinary hypotheses pertaining to human-ecosystem interactions. Explores methods for integrating social and biophysical data.

Cross-listed as: ENVS 7700.

Semester(s) Traditionally Offered: Spring

ENVS 6800 - Environment and Society Departmental Seminar
ENVS 6810 - Research Techniques in Human Dimensions of Ecosystem Science and Management
3 credits
Experience using various quantitative and qualitative techniques and tools to collect and analyze data in research projects focused on human-ecosystem interactions. Topics range from survey sampling to use of simulation models and spatial statistics involving Geographic Information Systems (GIS).
Cross-listed as: ENVS 7810.
Semester(s) Traditionally Offered: Fall

ENVS 6840 - Graduate Introductory Seminar for Environment and Society
1 credit
Each faculty member meets with first-year graduate students in a seminar format to review and discuss in depth the faculty member's area of academic specialization.
Cross-listed as: ENVS 7840.

ENVS 6870 - Ecology Seminar
1 credit
The Ecology Center schedules regular seminars throughout the school year with ecological scientists from other institutions participating. Ecology majors are required to attend a minimum of 10 such lectures. Students should register for fall semester, but attend through spring semester.
Cross-listed as: BIOL 6870, PSC 6870, WATS 6870, and WILD 6870.

ENVS 6900 - Graduate Special Topics
1-6 credits
Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 6910 - Directed Study
1-6 credits
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 6960 - Graduate General Ecology
4 credits
General concepts, history, and issues in all major areas of the science of ecology including: environmental biophysics; and physiological, behavioral, evolutionary, community, ecosystem, and applied ecology in both terrestrial and aquatic environments.
Cross-listed as: BIOL 6960, PSC 6960, WATS 6960, and WILD 6960.
Semester(s) Traditionally Offered: Fall

ENVS 6970 - Thesis Research
1-12 credits
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 6990 - Continuing Graduate Advisement
1-9 credits
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 7000 - Theoretical Foundations in Human Dimensions of Ecosystem Science and Management
3 credits
Overview of interdisciplinary theories and frameworks concerning how human societies affect, and are affected by, ecosystem processes at local, regional, and global
Focuses on systems theory, social and environmental sustainability, and scientific integration for ecosystem planning, policy, and management.

Cross-listed as: ENVS 6000.

Semester(s) Traditionally Offered: Fall

ENVS 7300 - Social and Environmental Psychology of Natural Resources
3 credits

Examines how people respond as individuals to nature and environmental phenomena, drawing on theory and research from social psychology, environmental psychology, and behavior analysis. Emphasizes applications to knowledge, attitude, and behavior change strategies for improving environmental sustainability.

Cross-listed as: ENVS 6300.

Semester(s) Traditionally Offered: Spring

ENVS 7320 - Water Law and Policy in the United States
3 credits

Introduction to policies, laws, institutions, and practices guiding western water allocation, emphasizing how to efficiently and equitably allocate increasingly scarce supplies. Explores reserved water rights, water markets, stream adjudication, public trust doctrine, basinwide management, and riparian management.

Cross-listed as: ENVS 6320

Course Fee: $30.00

ENVS 7700 - Research Approaches in Human Dimensions of Ecosystem Science and Management
3 credits

Experience conceptualizing and prioritizing research problems involving human societies and ecosystems. Reviews approaches for creating and testing interdisciplinary hypotheses pertaining to human-ecosystem interactions. Explores methods for integrating social and biophysical data.

Cross-listed as: ENVS 6700.

Semester(s) Traditionally Offered: Spring

ENVS 7700 - Environment and Society Departmental Seminar
1 credit

Cross-listed as: ENVS 6800

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

ENVS 7810 - Research Techniques in Human Dimensions of Ecosystem Science and Management
3 credits

Experience using various quantitative and qualitative techniques and tools to collect and analyze data in research projects focused on human-ecosystem interactions. Topics range from survey sampling to use of simulation models and spatial statistics involving Geographic Information Systems (GIS).

Cross-listed as: ENVS 6810.

Semester(s) Traditionally Offered: Fall

ENVS 7840 - Graduate Introductory Seminar for Environment and Society
1 credit

Each faculty member meets with first-year graduate students in a seminar format to review and discuss in depth the faculty member's area of academic specialization.

Cross-listed as: ENVS 6840.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

ENVS 7900 - Graduate Special Topics
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 7910 - Directed Study
1-6 credits

Offers credit for special assignments, reading, and
seminars beyond regularly scheduled courses.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 7970 - Dissertation Research
1-12 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ENVS 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.

Family, Consumer, and Human Development

FCHD 1010 - Balancing Work and Family (BSS)
BSS Breadth Social Sciences
3 credits

Introduces students to issues facing families trying to balance work with family responsibilities. Examines integration of work and family across areas of marriage and family relationships, financial management, and child development and parenting.

Semester(s) Traditionally Offered: Fall, Spring

FCHD 1500 - Human Development Across the Lifespan (BSS)
BSS Breadth Social Sciences
3 credits

Overview of human development across the lifespan, from conception to death.

Semester(s) Traditionally Offered: Fall, Spring

FCHD 2000 - Careers and Life Planning in FCHD
3 credits

Career planning specific to FCHD including Human Development, Family Relations, and Family Finance. Career options from faculty and recent graduates along with creating a plan to maximize college experience.

Semester(s) Traditionally Offered: Fall, Spring

FCHD 2030 - PE for Young Children
2 credits

A course for early childhood and elementary students which combines the philosophy of physical education with the practical planning and implementing of physical education experiences for children in the primary and elementary.

Campus: USU Eastern only

FCHD 2100 - Family Resource Management
3 credits

Explores the significance of values, goals, planning, and decision-making strategies in the development, management, and allocation of human, economic, and environmental resources.

Semester(s) Traditionally Offered: Fall, Spring

FCHD 2200 - Introductory Workshop in Family, Consumer, and Human Development
1-12 credits

Introductory workshop. Topics of discussion vary each semester.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

FCHD 2400 - Marriage and Family Relationships (BSS)
BSS Breadth Social Sciences
3 credits

Overview of couple and family relationships, including marriage, child bearing and rearing, intergenerational relationships, and alternative family forms.

Semester(s) Traditionally Offered: Fall, Spring

FCHD 2450 - Consumer and Family Economic Issues (BSS)
BSS Breadth Social Sciences
3 credits

Content will cover issues that are related to the economic well-being of individuals, families, and consumers in the marketplace. Students will gain the knowledge and skills necessary to be an effective consumer in marketplace transactions.
Semester(s) Traditionally Offered: Fall, Spring

FCHD 2510 - Child Development Birth to Eight
3 credits

A required course for all early childhood and elementary education students which focuses on developmental characteristics, developmental processes, events and circumstances that influence the young child from birth through eight years of age. Special emphasis is on research that stresses the importance of development in the guidance and education of infants and young children.

Campus: USU Eastern only

FCHD 2600 - Seminar in Early Childhood Education
2 credits

Orientation to the profession of early childhood education, current philosophies, teaching techniques, and approaches to curricula found in programs for young children.

Prerequisite/Restriction: Admission to teacher education or instructor’s permission

Corequisite: FCHD 2630

Semester(s) Traditionally Offered: Fall, Spring

FCHD 2625 - Administration of Early Childhood Programs
2 credits

A required course for students seeking a certificate in early childhood development. Basic management principles in directing a preschool or child care program will be covered, including budgeting, personnel, building and equipment, licensing and health and safety as they pertain to early childhood programs.

Prerequisite/Restriction: FCHD 1500 and FCHD 2510 and FCHD 2600

Campus: USU Eastern only

FCHD 2627 - Storytelling
3 credits

Required by all early childhood students. Introduces students to the selection of literature for young children, and the telling of children’s stories in a classroom setting. Emphasis is on the developmental needs of children and teaching opportunities afforded the teacher.

FCHD 2630 - Practicum in Early Childhood Education
2-5 credits

Students participate in developmentally appropriate preschool programs as classroom aides.

Prerequisite/Restriction: Admission to teacher education or instructor’s permission

Corequisite: FCHD 2600.

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $50.00

FCHD 2631 - Teaching Seminar
1 credit

A seminar for education students in the practicum teaching laboratory experience. The seminar format is used to discuss the strengths and challenges associated with teaching. Individualized training plans are developed, along with their application to the teaching of young children.

Prerequisite/Restriction: FCHD 2510 and FCHD 2600 and FCHD 2660

Corequisite: FCHD 2630

Campus: USU Eastern only

FCHD 2660 - Parenting and Child Guidance (HR)
HR Human Relations
3 credits

Review of parenting styles and child guidance philosophies with emphasis on principles and techniques. Child abuse will also be reviewed.

Semester(s) Traditionally Offered: Fall, Spring

FCHD 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in family life
studies. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements.

Prerequisite/Restriction: Permission of instructor

Repeatable for credit

Campus: USU Eastern only

FCHD 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit will be arranged.

Repeatable for credit

Campus: USU Eastern only

FCHD 2999 - Workshop
1-3 credits

Designed to meet the changing needs of the student in Family Life

Repeatable for credit

Campus: USU Eastern only

FCHD 3100 - Abuse and Neglect in Family Context
3 credits

Causes, treatment, and laws regarding family violence, including child abuse and neglect, partner abuse, and elder abuse.

Prerequisite/Restriction: Sophomore standing, FCHD 1500, FCHD 2400

Semester(s) Traditionally Offered: Fall, Spring

FCHD 3110 - Human Sexuality
3 credits

Development and expression of human sexual values, attitudes, and behaviors in family and cultural contexts.

Prerequisite/Restriction: FCHD 1500, FCHD 2400; fulfillment of Communications Literacy CL2 requirement; and junior standing

Semester(s) Traditionally Offered: Fall

FCHD 3130 - Research Methods (QI)
QI Quantitative Intensive
3 credits

Common methodologies used in current family and human development research. Emphasis on becoming a knowledgeable and informed consumer of research.

Prerequisite/Restriction: STAT 1040 or STAT 1045

Enrollment limited to FCS and FCHD majors only

Semester(s) Traditionally Offered: Fall, Spring

FCHD 3210 - Families and Cultural Diversity (CI)
CI Communications Intensive
3 credits

Similarities and differences in family patterns and functions in terms of race and ethnicity, gender, social class, and international development.

Prerequisite/Restriction: FCHD 1500, FCHD 2400, and fulfillment of Communications Literacy CL2 requirement

Enrollment limited to FCHD and Family and Consumer Sciences majors only

Semester(s) Traditionally Offered: Fall, Spring

FCHD 3280 - Economic Issues for Individuals and Families
3 credits

Focuses on issues related to economic well-being of individuals and families, with special emphasis on income and wealth, poverty, consumption and saving, work and leisure, human capital investment, and aging.

Semester(s) Traditionally Offered: Spring

Effective Term

Spring

FCHD 3340 - Housing: Societal and Environmental Issues
3 credits

Studies housing in the contemporary U.S., including affordability, access, expectations, aesthetic considerations, and effects of public and private policies on housing choices.

Semester(s) Traditionally Offered: Fall
FCHD 3350 - Family Finance (DSS)
DSS Depth Social Sciences
3 credits

Overview of financial topics including financial goals, record keeping, budgeting, saving, insurance, taxes, use of credit, credit reports, mortgages, investments, retirement, fraud and financial planning.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $2.00

FCHD 3450 - Consumer Credit Problems
3 credits

Consumer credit problems, debt reduction strategies, credit collection policies and practices, bankruptcy, and government assistance programs.

Prerequisite/Restriction: FCHD 3350
Semester(s) Traditionally Offered: Fall

FCHD 3500 - Infancy and Childhood
3 credits

Development and growth of the child from conception to eight years. Physical, social, cognitive, and emotional growth; and parenting skills.

Prerequisite/Restriction: FCHD 1500, FCHD 2660 and junior standing
Semester(s) Traditionally Offered: Fall, Spring

FCHD 3540 - Adult Development and Aging
3 credits

Interdisciplinary perspective on developmental issues in adulthood and old age. Biosocial, cognitive, and psychosocial changes in older adults in family, community, cultural, and socio-political contexts.

Prerequisite/Restriction: Junior standing and FCHD 1500
Semester(s) Traditionally Offered: Spring

FCHD 3550 - Infant Lab
1 credit

Practical experience in laboratory setting with children birth through 2 years. Lab supplements/complements course content of FCHD 3500.

FCHD 3560 - Middle Childhood Lab
1 credit

Practical experience in laboratory setting with children in the middle years. Lab supplements/complements course content of FCHD 3570.

FCHD 3570 - Youth and Adolescence
3 credits

Social, psychological, and physical aspects of childhood and adolescence in modern societies. Social and cultural expectations and influences on childhood and adolescents stemming from the family, peers, school, and the community.

Prerequisite/Restriction: FCHD 1500 and junior standing
Semester(s) Traditionally Offered: Fall, Spring

FCHD 4220 - Family Crises and Interventions
3 credits

Normative and nonnormative stressors provoking individual and family crises with emphasis on domestic violence. Principles and techniques for family interventions.

Prerequisite/Restriction: Junior standing, FCHD 2400
Semester(s) Traditionally Offered: Fall

FCHD 4230 - Family and Social Policy
3 credits
Local, state, and federal policies with implications for individuals and families across the lifespan.

Prerequisite/Restriction: Junior standing, FCHD 2400

Semester(s) Traditionally Offered: Fall, Spring

FCHD 4240 - Social and Family Gerontology
3 credits

Social, cultural, and family contexts of aging. Intergenerational family relations in later life. Social policies and services affecting older adults and their families.

Prerequisite/Restriction: Junior standing and FCHD 1500

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

FCHD 4330 - Family Finance Career Seminar
1 credit

Exploration of career options through readings, guest lecturers, interviews of practitioners, and development of an internship and career plan.

Prerequisite/Restriction: FCHD 3350

Semester(s) Traditionally Offered: Fall

FCHD 4350 - Advanced Family Finance
3 credits

Managing personal and family financial resources to achieve goals relating to investments, retirement, and estate planning.

Prerequisite/Restriction: FCHD 3350

Semester(s) Traditionally Offered: Fall

FCHD 4460 - Financial Counseling
3 credits

Development and application of financial counseling and presentation skills. Analysis of various financial problems and development of appropriate solutions and resources.

Prerequisite/Restriction: FCHD 3350, FCHD 3450
Enrollment limited to FCHD majors with a Family Finance Emphasis

Semester(s) Traditionally Offered: Spring

FCHD 4550 - Preschool Methods and Curriculum
3 credits

Use of materials, equipment, and activities in planning and implementing curricula for preschool children.

Prerequisite/Restriction: Junior standing and FCHD 1500

Semester(s) Traditionally Offered: Fall, Spring

FCHD 4800 - Senior Project
3 credits

Project in area of student’s choice, selected and prepared in conjunction with an advisor from the FCHD faculty.

Prerequisite/Restriction: Senior standing and enrollment in FCHD major

Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 4820 - Methods for Family Life Educators
3 credits

Course focused on theory, principles, and skills necessary to prepare, present, and evaluate family life education programs and workshops.

Prerequisite/Restriction: Enrollment limited to Family Life Studies majors

Campus: Online.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

FCHD 4830 - Senior Capstone Project
3 credits

Capstone course for the family life studies format. Prepares students as professionals, while providing professional development through research, teaching, and outreach. Development documented in portfolio, which is submitted and graded as the final senior project.

Prerequisite/Restriction: Approval of advisor and instructor Enrollment limited to Family Life Studies, Interdisciplinary Studies (FCHD) and General Studies (FCHD) majors

Campus: Online.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

FCHD 4900 - Pre-Practicum Skills (CI)
CI Communications Intensive
1 credit

Acquisition and integration of interpersonal skills, conflict resolution, domestic violence reporting laws, and ethical decision-making.

Prerequisite/Restriction: Enrollment limited to FCHD and Family Consumer Sciences majors only Junior standing and fulfillment of Communications Literacy CL2 requirement

Semester(s) Traditionally Offered: Fall, Spring

FCHD 4940 - Gerontology Integration
1 credit

Integration of gerontology coursework and practicum. Written paper requires approval by FCHD Gerontology Coordinator.

Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 4950 - Practicum: Consumer Science
1-12 credits

Placement experience in applying skills and knowledge in community agencies. The application deadlines are: February 15 for fall semester, June 15 for spring semester, and October 15 for summer semester.

Prerequisite/Restriction: Junior standing, completion of 24 credits in major Enrollment limited to Family and Consumer Sciences majors who have at least junior standing, or to FCHD majors with a Family Finance Emphasis, who have completed at least 30 credits in the major

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

FCHD 4960 - Practice Teaching in Child Development Laboratories
3 or 6 credits

Intensive teaching practicum in the Child Development Lab program. Students must sign up at least three full semesters in advance in FL 205.

Prerequisite/Restriction: Junior standing, FCHD 4550, and permission of department

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $89.00

FCHD 4970 - Gerontology Practicum
3 credits

Placement experience in gerontology settings. Practical opportunities to apply theory, knowledge, and skills. Apply one semester in advance. The application deadlines are: February 15 for fall semester, June 15 for spring semester, and October 15 for summer semester.

Prerequisite/Restriction: Senior standing and FCHD 3540, FCHD 4240
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

FCHD 4980 - Practicum
1-12 credits

Placement experience in applying skills and knowledge in community agencies. The application deadlines are: February 15 for fall semester, August 15 for spring semester, and October 15 for summer semester.

Prerequisite/Restriction: Junior standing and FCHD
4900; must have completed a total of 30 FCHD credits and the practicum application. Enrollment limited to FCHD majors only.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $100.00

FCHD 4990 - Readings and Conference
1-6 credits

Directed independent study of topics preselected by faculty and student.

Prerequisite/Restriction: Instructor permission required before registration.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 5250 - Addictions and the Family
3 credits

Addictions have a broad impact on the family functioning, interpersonal relationships, and domestic violence. This course will cover a number of addictions as well as the specific impact on the marital and parent-child relationships.

Semester(s) Traditionally Offered: Fall

FCHD 5340 - Housing Finance and Regulations
3 credits

Exploration of mortgage loan industry, with in-depth examination of various lending products and procedures. Study of regulations affecting housing, including Fair Housing, predatory lending, and mortgage default.

Prerequisite/Restriction: FCHD 3340, FCHD 3350
Enrollment limited to Family, Consumer, and Human Development majors and Family and Consumer Sciences majors.

Semester(s) Traditionally Offered: Spring

FCHD 5350 - Financial Coaching
3 credits

Financial coaching is an intermediate step between family financial counseling and financial advisor. This course will provide students with information on motivation, stages of change, and appropriate goal setting in the process of establishing personal and family finance plans.

FCHD 5540 - Family Life Education Methods
3 credits

Introductory course focused on theory, principles, and skills necessary to prepare, present, and evaluate family life education programs and workshops.

Prerequisite/Restriction: Junior standing, FCHD 1500 and FCHD 2400
Enrollment limited to FCHD majors only.

Semester(s) Traditionally Offered: Fall, Spring

FCHD 5550 - Interdisciplinary Workshop
1-3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 5950 - Financial Counseling Practicum
3 credits

Students apply knowledge by conducting one-on-one counseling sessions, observing other session, and teaching workshops. Students develop management, communication, and counseling skills. Students should sign upon being admitted to the Family Finance Emphasis. The application deadlines are April 15 for fall, August 15 for spring, and January 15 for summer.

Prerequisite/Restriction: FCHD 4460, FCHD 5340
Enrollment limited to FCHD majors with a Family Finance Emphasis.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 6010 - Survey: Family Relations
3 credits

Overview and critique of substantive areas of research in marriage and the family.

Prerequisite/Restriction: FCHD 2400 or equivalent

Semester(s) Traditionally Offered: Spring

FCHD 6020 - Survey of Human Development Research
3 credits
Examines contemporary research and developmental issues. Highlights social development from social-historical and social change framework.

Prerequisite/Restriction: FCHD 1500 or equivalent

Semester(s) Traditionally Offered: Spring

FCHD 6031 - Research Methods I
3 credits

Overview of methods for studying family relations and human development, including sampling, measurement, research design, and data analyses/interpretations.

Prerequisite/Restriction: FCHD 3130 or equivalent
Research proposal required

Semester(s) Traditionally Offered: Spring

FCHD 6032 - Research Methods II: Measurement in Family Studies and Human Development
3 credits

Provide an overview of methods and statistical tools for establishing psychometric properties and for presenting and interpreting psychometric information. This course will also explore the essentials of measurement.

Prerequisite/Restriction: FCHD 6031

Semester(s) Traditionally Offered: Fall

FCHD 6040 - Family Economics
3 credits

Examination of contemporary research and current issues in family economics.

Semester(s) Traditionally Offered: Spring

FCHD 6045 - Family Finance for Practitioners
3 credits

Provide students in Family Relations and Human Development with an understanding of the relational aspect of money within families from a systemic approach. Content will cover how individuals and families communicate about money, cognitive and emotional biases in financial decision making and/or money scripts/financial socialization affect individual’s behaviors.

Cross-listed as: FCHD 7045

Semester(s) Traditionally Offered: Spring, Even Years

FCHD 6050 - Consumer Science Theories
3 credits

Critical review and assessment of theories in consumer science.

Semester(s) Traditionally Offered: Fall

FCHD 6060 - Human Development Theories
3 credits

Overview of major developmental theories, including contributions from philosophical, personality, and learning theories. Explores epistemology, ethology, and systems theories relating to human development.

Prerequisite/Restriction: FCHD 1500 or equivalent

Semester(s) Traditionally Offered: Fall

FCHD 6070 - Family Theories
3 credits

Critical review and assessment of theories in family research, along with construction and application of family theory.

Prerequisite/Restriction: FCHD 2400 or equivalent

Semester(s) Traditionally Offered: Fall

FCHD 6080 - Professional Development
3 credits

Capstone course for graduate students, emphasizing issues related to professional development (e.g., grant writing, publishing, vitae development, interview skills, developing a research agenda, networking, ethics, professional conduct, teaching, etc.).

Cross-listed as: FCHD 7080.

Semester(s) Traditionally Offered: Spring

FCHD 6200 - Topical Seminar in Family Relations
3 credits
Selected issues in family relations.
Repeatable for credit.
Semester(s) Traditionally Offered: Will vary

FCHD 6210 - Cultural Diversity in Families
3 credits
Covers selected issues related to family patterns and functions associated with ethnicity, gender, and social class, as well as additional topics related to expertise of instructor.
Cross-listed as: FCHD 7210.

Semester(s) Traditionally Offered: Fall

FCHD 6220 - Interpersonal Family Relationships
3 credits
In accordance with expertise of instructor, covers selected interpersonal issues in intimate and family relations.
Cross-listed as: FCHD 7220.

Semester(s) Traditionally Offered: Fall

FCHD 6230 - Family and Social Policy
3 credits
In accordance with expertise of instructor, covers issues and implications of local, state, and federal policies relating to individuals and families across the lifespan.
Cross-listed as: FCHD 7230.

Semester(s) Traditionally Offered: Spring

FCHD 6310 - Survey of Marriage and Family Therapy
3 credits
Overview of marriage and family therapy models. Historical development of marriage and family therapy as a profession and a practice.
Prerequisite/Restriction: Enrollment limited to FCHD Marriage and Family Therapy master's students only
Semester(s) Traditionally Offered: Fall

FCHD 6320 - Foundations of Marriage and Family Therapy
3 credits
Epistemological and philosophical directions of marriage and family therapy, beginning with early applications of General Systems theories and cybernetics through constructivist and postmodern frameworks.
Semester(s) Traditionally Offered: Fall

FCHD 6325 - Gender and Diversity in Family Therapy
3 credits
This course is designed to examine issues of gender, ethnicity, culture, sexual orientation and other contextual factors as they relate to marriage and family therapy. A major goal will help students respond in a culturally sensitive, non-sexist and non-prejudicial manner to the families and individuals that they serve professionally, especially those who have been marginalized in the past.
Semester(s) Traditionally Offered: Spring

FCHD 6330 - Traditional Marriage and Family Therapy Practice
3 credits
Traditional approaches to marriage and family therapy, with a focus on individual and couple issues, including sexuality and personality issues within a systems framework.
Prerequisite/Restriction: FCHD 3110 or equivalent
Semester(s) Traditionally Offered: Spring

FCHD 6340 - Marriage and Family Therapy Practice II: Contemporary Approaches
3 credits
Contemporary approaches to marriage and family therapy. Focuses on couple and family interaction issues, including conflict, parenting, and other common family problems.
Semester(s) Traditionally Offered: Spring

FCHD 6350 - Clinical Practice in Marriage and Family Therapy
3 credits
Selected clinical issues in marriage and family therapy.

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

FCHD 6355 - Play Therapy in the Practice of Family Therapy
3 credits

This course will familiarize therapists with the theories and concepts behind play therapy and provide several developmentally appropriate methods for working with children both individually and within families. The overall objective to help therapists integrate play therapy methods into their existing frameworks of family therapy.

Semester(s) Traditionally Offered: Fall

FCHD 6360 - Ethical and Professional Development
3 credits

Ethical, legal, and professional issues in marriage and family therapy.

Semester(s) Traditionally Offered: Fall

FCHD 6370 - Assessment in Marriage and Family Therapy
3 credits

Development, application, and interpretation of major individual and family assessment techniques used in marriage and family therapy practice and research.

Semester(s) Traditionally Offered: Spring
Course Fee: $10.00

FCHD 6380 - Survey of Marital and Family Therapy Research
3 credits

Examines contemporary research issues in marriage and family therapy.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall

FCHD 6390 - Practicum in Marriage and Family Therapy
1-6 credits

Supervised clinical experience in marriage and family therapy. May be graded Pass/Fail, as determined by instructor or section.

Prerequisite/Restriction: Admission to Marriage and Family Therapy specialization and instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 6400 - Topical Seminar in Consumer Science
3 credits

Selected issues in consumer science.

Cross-listed as: FCHD 7400.

Repeatable for credit.
Semester(s) Traditionally Offered: Will vary

FCHD 6410 - Family Financial Problems
3 credits

Review of research on family financial problems, including bankruptcy and related public policies.

Semester(s) Traditionally Offered: Spring

FCHD 6420 - Housing Policy and Issues
3 credits

Housing market forces and housing policies at the local, state, national, and international levels. Additional assignments required for FCHD 7420.

Cross-listed as: FCHD 7420.

Semester(s) Traditionally Offered: Fall

FCHD 6430 - Economics of Aging
3 credits

Explores economic behavior of the elderly, including financial preparation and security, health-wealth connection, labor force behavior, intergenerational transfers and supports, and living arrangements. Additional assignments required for FCHD 7430.

Cross-listed as: FCHD 7430

Semester(s) Traditionally Offered: Fall
FCHD 6500 - Topical Seminar: Human Development
3 credits
Selected issues in human development.
Repeatable for credit.
Semester(s) Traditionally Offered: Will vary

FCHD 6510 - Development in Infancy
3 credits
Covers developmental period from birth to age three and the major developmental domains of physical, neurological, perception, cognition, language, emotion, and social development. Additional topics discussed relating to expertise of instructor. To receive credit for FCHD 7510, students must fulfill additional requirements.
Cross-listed as: FCHD 7510.
Semester(s) Traditionally Offered: Fall

FCHD 6520 - Development in Childhood
3 credits
Covers developmental period from age 3 to about age 12. Focuses on major developmental domains of physical, cognitive, and emotional/social development across context related to expertise of instructor. To receive credit for FCHD 7520, students must fulfill additional requirements.
Cross-listed as: FCHD 7520.
Semester(s) Traditionally Offered: Fall

FCHD 6530 - Development in Adolescence
3 credits
Covers developmental period from age 12 to about age 20. Focuses on major developmental domains associated with adolescence, including physical, cognitive, and emotional/social development across context related to expertise of instructor. To receive credit for FCHD 7530, students must fulfill additional requirements.
Cross-listed as: FCHD 7530.
Semester(s) Traditionally Offered: Spring

FCHD 6540 - Adulthood and Aging
3 credits
This is a graduate seminar exploring various theories and empirical applications in young adulthood, middle adulthood, and late life. Classic studies, as well as cutting-edge research span topics and developmental methodology central to the study of adulthood.
Cross-listed as: FCHD 7540
Semester(s) Traditionally Offered: Spring, Even Years

FCHD 6900 - Topical Seminar in Family, Consumer, and Human Development
1-3 credits
Selected issues in family, consumer, and human development.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 6910 - Parenting
3 credits
Covers topic of parenting from perspectives of human development, family relations, and consumer science. Specific topics selected within each of these perspectives. To receive credit for FCHD 7910, students must fulfill additional requirements.
Cross-listed as: FCHD 7910.
Semester(s) Traditionally Offered: Spring

FCHD 6920 - Aging
3 credits
Explores research on aging from three perspectives: (1) individual, (2) marital/family relations, and (3) family financial/economic issues. Applies gerontology research to solve problems from each perspective.
Cross-listed as: FCHD 7920.
Semester(s) Traditionally Offered: Fall

FCHD 6960 - Readings/Conference
1-6 credits
Directed independent study of topics preselected by
faculty and student.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s)Traditionally Offered: Fall, Spring, Summer
FCHD 6961 - FCHD Teaching Assistantship Orientation
1 credit
This course provides students with an introduction to becoming a teaching assistant in a university classroom. Specifically, it focuses on students developing an understanding of the roles, expectations, responsibilities, strategies, and ethics associated with effective instruction in the university setting.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall
FCHD 6970 - Thesis Research
1-6 credits
Prerequisite/Restriction: Permission of advisor
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
FCHD 6980 - Graduate Practicum
1-9 credits
Application of family and human development skills and knowledge in a supervised setting, as arranged by advisor.
Prerequisite/Restriction: Permission of advisor
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
FCHD 6990 - Continuing Graduate Advisement
1-9 credits
Continuing registration to complete thesis requirements.
Prerequisite/Restriction: Six credits of FCHD 6970
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
FCHD 7033 - Research Methods III: Dyadic and Longitudinal Data
3 credits
Understand the concepts related to Structural Equation Modeling (SEM), and Hierarchical Linear Modeling (HLM). There will be a specific emphasis on understanding and applying methods of working with dyadic and longitudinal data. Students will specify their own models and analyze the data using related software.
Prerequisite/Restriction: EDUC 6600, EDUC 7610 and FCHD 6032
Semester(s) Traditionally Offered: Fall, Odd Years
FCHD 7034 - Research Methods IV: Extant/Secondary Data Analysis
3 credits
The following skills will be covered: locate and download secondary data sets, learn to use codebooks to identify variables, select subpopulations of participants from extant data sets, and learning how to select variables from extant data.
Prerequisite/Restriction: EDUC 6600 and FCHD 6032
Semester(s) Traditionally Offered: Fall, Spring, Even Years
FCHD 7045 - Family Finance for Practitioners
3 credits
Provide students in Family Relations and Human Development with an understanding of the relational aspect of money within families from a systemic approach. Content will cover how individuals and families communicate about money, cognitive and emotional biases in financial decision making and/or money scripts/financial socialization affect individual’s behaviors.
Cross-listed as: FCHD 6045
Semester(s) Traditionally Offered: Spring, Even Years
FCHD 7050 - Advanced Research and Theory in Consumer Science
Critical review of research and theories in consumer science.

Prerequisite/Restriction: FCHD 6050

Semester(s) Traditionally Offered: Fall

FCHD 7060 - Advanced Research and Theory in Human Development
3 credits

Critical review of research and theories in human development.

Prerequisite/Restriction: FCHD 6060 or equivalent

Semester(s) Traditionally Offered: Spring

FCHD 7070 - Advanced Research/Theory in Family Relations
3 credits

Critical review of research and theories in marriage and family relationships.

Prerequisite/Restriction: FCHD 6070 or equivalent

Semester(s) Traditionally Offered: Spring

FCHD 7080 - Professional Development
3 credits

Capstone course for graduate students, emphasizing issues related to professional development (e.g., grant writing, publishing, vitae development, interview skills, developing a research agenda, networking, ethics, professional conduct, teaching, etc.).

Cross-listed as: FCHD 6080.

Semester(s) Traditionally Offered: Spring

FCHD 7200 - Topical Seminar in Family Relations
3 credits

Selected issues for advanced professionals in family relations.

Repeatable for credit.

Semester(s) Traditionally Offered: Will vary

FCHD 7210 - Cultural Diversity in Families
3 credits

Covers selected issues related to family patterns and functions associated with ethnicity, gender, and social class, as well as additional topics related to expertise of instructor.

Cross-listed as: FCHD 6210.

Semester(s) Traditionally Offered: Fall

FCHD 7220 - Interpersonal Family Relationships
3 credits

In accordance with expertise of instructor, covers selected interpersonal issues in intimate and family relations.

Cross-listed as: FCHD 6220.

Semester(s) Traditionally Offered: Fall

FCHD 7230 - Family and Social Policy
3 credits

In accordance with expertise of instructor, covers issues and implications of local, state, and federal policies relating to individuals and families across the lifespan.

Cross-listed as: FCHD 6230.

Semester(s) Traditionally Offered: Spring

FCHD 7400 - Topical Seminar in Consumer Science
3 credits

Selected issues for advanced professionals in consumer science.

Prerequisite/Restriction: FCHD 6400

Cross-listed as: FCHD 6400.

Repeatable for credit.

Semester(s) Traditionally Offered: Will vary

FCHD 7420 - Housing Policy and Issues
3 credits

Housing market forces and housing policies at the local, state, national, and international levels. Additional
Assignments required for FCHD 7420.

Cross-listed as: FCHD 6420.

Semester(s) Traditionally Offered: Fall

FCHD 7430 - Economics of Aging
3 credits

Explores economic behavior of the elderly, including financial preparation and security, health-wealth connection, labor force behavior, intergenerational transfers and supports, and living arrangements. Additional assignments required for FCHD 7430.

Cross-listed as: FCHD 6430.

Semester(s) Traditionally Offered: Fall

FCHD 7500 - Topical Seminar in Human Development
3 credits

Selected issues for advanced professionals in human development.

Repeatable for credit.

Semester(s) Traditionally Offered: Will vary

FCHD 7510 - Development in Infancy
3 credits

Covers developmental period from birth to age three and the major developmental domains of physical, neurological, perception, cognition, language, emotion, and social development. Additional topics discussed relating to expertise of instructor. To receive credit for 7510, students must fulfill additional requirements.

Cross-listed as: FCHD 6510.

Semester(s) Traditionally Offered: Fall

FCHD 7520 - Development in Childhood
3 credits

Covers developmental period from age 3 to about age 12. Focuses on major developmental domains of physical, cognitive, and emotional/social development across context related to expertise of instructor. To receive credit for 7520, students must fulfill additional requirements.

Cross-listed as: FCHD 6520.

FCHD 7530 - Development in Adolescence
3 credits

Covers developmental period from age 12 to about age 20. Focuses on major developmental domains associated with adolescence, including physical, cognitive, and emotional/social development across context related to expertise of instructor. To receive credit for 7530, students must fulfill additional requirements.

Cross-listed as: FCHD 6530.

Semester(s) Traditionally Offered: Spring

FCHD 7540 - Adulthood and Aging
3 credits

This is a graduate seminar exploring various theories and empirical applications in young adulthood, middle adulthood, and late life. Classic studies, as well as cutting-edge research span topics and developmental methodology central to the study of adulthood.

Cross-listed as: FCHD 6540

Semester(s) Traditionally Offered: Spring, Even Years

FCHD 7900 - Topical Seminar in Family, Consumer, and Human Development
1-3 credits

Selected issues for advanced professionals in family, consumer, and human development.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 7910 - Parenting
3 credits

Covers topic of parenting from perspectives of human development, family relations, and consumer science. Specific topics selected within each of these perspectives. To receive credit for 7910, students must fulfill additional requirements.

Cross-listed as: FCHD 6910.
Semester(s) Traditionally Offered: Spring
FCHD 7920 - Aging
3 credits
Explores research on aging from three perspectives: (1) individual, (2) marital/family relations, and (3) family financial/economic issues. Applies gerontology research to solve problems from each perspective.
Cross-listed as: FCHD 6920.

Semester(s) Traditionally Offered: Fall
FCHD 7960 - Readings/Conference
1-6 credits
Directed independent study of topics preselected by faculty and student.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
FCHD 7970 - Dissertation Research
1-9 credits
Research for dissertation, as arranged with advisor.
Prerequisite/Restriction: Permission of advisor
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
FCHD 7980 - Advanced Graduate Practicum
1-9 credits
Professional supervision of doctoral students, applying general principles from the study of research in family and human development.
Prerequisite/Restriction: Permission of advisor
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
FCHD 7990 - Continuing Graduate Advisement
1-9 credits
Continuing registration to complete dissertation requirements.
Prerequisite/Restriction: Twenty credits of FCHD 7970
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Family and Consumer Sciences Education
FCSE 1140 - Introductory Sewing
2 credits
Introductory-level sewing techniques geared toward beginning sewing students. Includes use of sewing machines and Sergers. No previous sewing experience needed.
Prerequisite/Restriction: FCSE major or instructor permission
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00
FCSE 2040 - Intermediate Clothing Construction Skills, Principles and Alterations
3 credits
Intermediate-level sewing techniques, construction of clothing and accessories. Pattern alteration and fitting, and use of the sewing machine and serger.
Prerequisite/Restriction: FCSE 1140 or equivalent sewing skills and instructor permission
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $100.00
FCSE 2510 - Orientation to Family and Consumer Sciences Education
3 credits
Overview of the integrated Family and Consumer Sciences Education system. Students learn how family and human development, nutrition, finance, clothing production, and consumerism is planned, implemented, and evaluated through FCSE programs in the public schools.
Prerequisite/Restriction: Enrollment limited to FCSE majors only

Semester(s) Traditionally Offered: Spring
Course Fee: $40.00

FCSE 2520 - Managing FCCLA
2

This course is designed to teach students how to establish and operate an FCCLA Chapter in a secondary setting.

Semester(s) Traditionally Offered: Spring
Course Fee: $35.00
Effective Term
Spring 2016

FCSE 3030 - Textile Science (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
4 credits

Study of fibers, yarns, fabric constructions, and finishes related to suitability for desired end uses. Use of mathematics and descriptive statistics for reporting and interpreting data collected from lab experiments. Lectures and laboratory.

Prerequisite/Restriction: Must be an FCSE major and have completed at least 30 credits and C- or better in a QL course or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

FCSE 3040 - Advanced Clothing Studies: Patternmaking
3 credits

Flat pattern design, basic drafting and basic draping.

Prerequisite/Restriction: FCSE 2040

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

FCSE 3080 - Dress and Humanity (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Explores relationship of dress and humanity. Collaborative group assignments, discussions of history related to dress, cultures as related to dress, and the influence dress has in today's society.

Prerequisite/Restriction: Completion of course having University Studies Breadth Humanities (BHU) designation

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $5.00

FCSE 3300 - Family and Consumer Sciences Education Clinical Experience I
1 credit

Provides on-site experience for students to model a secondary family and consumer sciences education teacher. Students are expected to learn teaching and classroom management principles.

Prerequisite/Restriction: Admission to Secondary Education Professional Education Component

Corequisite: FCSE 3400.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

FCSE 3400 - Family and Consumer Sciences Education Methods I
3 credits

Methods of successfully planning and maintaining family and consumer sciences work education programs in secondary schools. History and philosophy of applied technology education.

Prerequisite/Restriction: Admission to Secondary Education

Corequisite: FCSE 3300 and 3400.

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

FCSE 3700 - FCSE Housing and Interiors
3 credits

This course teaches the basic principles associated with housing and interior design principles as they relate to associated high school courses.
Course Fee: $150.00
Effective Term
Fall 2016

FCSE 3790 - Housing and Interior Design Teaching Methods
3 credits

Online course mirroring Utah’s state standards for housing and interior design. Students review housing and interior design content, and then generate teaching strategies appropriate for teaching that content at the high school level.

Prerequisite/Restriction: ID 1750 and FCSE 3400
Enrollment limited to FCSE majors only

Semester(s) Traditionally Offered: Fall, Spring

FCSE 4000 - Early Childhood Education Internship
2

This internship will be completed at a licensed early childhood education facility. The student will act as a teacher at the center, while completing assignments that correspond with this experience.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring 2016

FCSE 4040 - Advanced Clothing Studies: Couture and Tailoring Skills, Principles and Techniques
3 credits

Couture and tailoring skills, principles and techniques applied to the construction of clothing.

Prerequisite/Restriction: FCSE 2040, FCSE 3030 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall
Course Fee: $100.00

Overview of the various methods used to measure and evaluate student achievement, within the cognitive, affective, and psychomotor domains with emphasis on performance based and authentic assessment specific to the Career and Technical Education classroom.

Prerequisite/Restriction: Admission to Secondary Teacher Education Program

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

FCSE 4250 - Internship in Family and Consumer Sciences Education
1-12 credits

Midmanagement-level experience in a position approved by the department. One credit earned for each 60 hours of experience.

Prerequisite/Restriction: Junior standing
Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

FCSE 4300 - Family and Consumer Sciences Education Clinical Experience II
1 credit

Provides on-site experience for students to model a secondary family and consumer sciences education teacher. Students expected to learn teaching and classroom management principles.

Prerequisite/Restriction: FCSE 3300, FCSE 3400 and Admission into Teacher Education
Pass/Fail only.

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

FCSE 4400 - Family and Consumer Sciences Education Methods II
3 credits

Development of competency in curriculum planning, and skill and sensitivity in the use of various teaching-learning strategies and resources. Includes assessment
for vocational education.

Prerequisite/Restriction: FCSE 3300, FCSE 3400

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00

FCSE 4900 - Independent Study in Family and Consumer Sciences Education
1-5 credits

Prior to registration, students must identify a project of interest and discuss the project with instructor.

Prerequisite/Restriction: Junior standing and approval of faculty

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FCSE 5500 - Student Teaching Seminar
2 credits

Taken during student teaching in secondary schools to complement school experience. Focuses upon problems arising during student teaching. Includes teaching plans, procedures, adaptive classroom practices, and evaluation.

Prerequisite/Restriction: FCSE 4300, FCSE 4400

Corequisite: FCSE 5500.

Pass/Fail only.
Semester(s) Traditionally Offered: Summer

FCSE 5550 - Continuing Education in Family and Consumer Sciences Education
0.5-3 credits

Concentrated offerings to increase knowledge, skills, or creative expression in current Family and Consumer Sciences Education topics or curriculum areas.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FIN 3200 - Financial Management
3 credits

This course concentrates on developing tools that will be necessary for financial managers. It covers various topics such as time value of money, risk analysis, asset valuations, financial statement analysis, and financial markets and institutions.

Prerequisite/Restriction: MATH 1050 or higher mathematics class or AP Calculus AB score of 3 or higher; choose one statistics course from STAT 1040, STAT 2000, STAT 2300, STAT 3000, or PSY 3010, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer
FIN 3400 - Corporate Finance (QI)
QI Quantitative Intensive
3 credits

This course concentrates on decision making of financial managers and other professionals required to make finance-related decisions in a contemporary business environment. Capital budgeting, firm valuation, capital structure and working capital management will be covered.

Prerequisite/Restriction: FIN 3200, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

FIN 4250 - Finance Internship
1-9 credits

Provides finance internship experience in a career related position approved by the Department of Economics and Finance. Course will not qualify as upper division FIN elective.

Prerequisite/Restriction: Grade of C or better in FIN 3200 and advisor approval; admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring, Summer

FIN 4300 - International Finance
3 credits

Overview of international financial management, including international financial markets, exchange rate behavior, and financing international trade.

Prerequisite/Restriction: Grade of B- (2.67) or better in FIN 3200; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

FIN 4410 - Financial Institutions
3 credits

Role of domestic and international financial institutions in supplying services to consumers, businessmen, and government.

Prerequisite/Restriction: Grade of B- (2.67) or better in FIN 3200; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

FIN 4420 - Insurance
3 credits

Studied from the standpoint of insurance services consumers, course explores types of life, property, and casualty insurance contracts; nature and uses of life and property insurance; and the organization, management, and government supervision of insurance companies.

Prerequisite/Restriction: Grade of B- (2.67) or better in FIN 3200; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

FIN 4430 - Real Estate Finance
3 credits

Covers theory, principles, and techniques of real estate investment, emphasizing present value and cash-flow approaches to real estate investment decisions.

Prerequisite/Restriction: Grade of B- (2.67) or better in FIN 3200; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

FIN 4450 - Advanced Corporate Finance
3 credits

Effective Term
Fall 2016
Augments and extends the basic equity valuation material in corporate finance to the specific and complex setting of valuing equity securities. Covers valuation models (i.e., dividend discount model) as well as multiples and technical approaches.

Prerequisite/Restriction: Grade of B- (2.67) or better in FIN 3400; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

FIN 4460 - Investments
3 credits

Provides an understanding of security analysis and portfolio management. Market operations; risk and return; stock, bond, and option analysis; and portfolio theory and creation.

Prerequisite/Restriction: Grade of B- (2.67) or better in FIN 3200; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

Effective Term

FIN 4470 - Investing Practicum I
1.5 credits

Students manage an actual portfolio. Topics include portfolio management and security analysis within the current macroeconomic context.

Prerequisite/Restriction: FIN 3200

Pass/Fail only

Semester(s) Traditionally Offered: Fall

Effective Term

FIN 4475 - Investing Practicum II
1.5 credits

Students manage an actual portfolio. Topics include portfolio management and security analysis within the current macroeconomic context.

Prerequisite/Restriction: FIN 3200, FIN 4470

FIN 4480 - Derivatives Market
3 credits

An introduction to derivative securities, the markets in which they trade, theoretical models for arbitrage-free pricing, and applications in hedging and speculation.

Prerequisite/Restriction: FIN 3200

Semester(s) Traditionally Offered: Fall

Effective Term

FIN 4490 - Hedge Funds and Private Equity
3 credits

Focuses on the activities of hedge funds and private equity, their influence on corporate decision-making, and corporate measures taken to counter threats and exploit opportunities represented by these investors. Also analyzes competition and cooperation between investment banks and private equity and hedge funds.

Prerequisite/Restriction: FIN 3200

Semester(s) Traditionally Offered: Fall

Effective Term

FIN 4495 - Investment Banking
3 credits

Focuses on the organizational structure of investment banking firms, products, risks, earnings, regulations, innovations, and competition. Analyzes banking, sales, and trading, along with other investment banking activities. Reviews innovative Wall Street securities and advisory products.

Prerequisite/Restriction: FIN 3200

Semester(s) Traditionally Offered: Spring

Effective Term

FIN 4540 - Real Estate Valuation
3 credits
Valuation of income producing properties through income capitalization techniques of direct capitalization, yield capitalization and discounted cash flow analysis.

Prerequisite/Restriction: FIN 3200, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

FIN 4550 - Real Estate Development
3 credits

This course will introduce students to the broad aspects of real estate development from an operations perspective. Topics include the development of residential, hotel, office, land and industrial properties.

Prerequisite/Restriction: FIN 3200, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits.

Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2016

FIN 4900 - Independent Research and Reading
1-3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FIN 4950 - Senior Honors Thesis/Project
3 credits

Creative project that will then be written up, and presented, as a Senior Thesis as required for an Honors Plan.

Semester(s) Traditionally Offered: Spring

FIN 5000 - Advanced Investment Analysis
3 credits

Advanced analysis of equity investments. Traditional methods of analysis as well as various asset pricing strategies are covered. Also includes fundamental and statistical analyses used by industry professionals and topics in portfolio theory.

Prerequisite/Restriction: FIN 4460; Grade of B-(2.67) or better in FIN 3400; cumulative GPA of 2.67 or higher, completion of at least 40 credits.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

FIN 5100 - Financial Markets and Trading
3 credits

Focuses on functionality of financial markets: how financial markets are structured, the externalities associated with speculation and liquidity provision within these markets, measurement of transaction costs, and the origin of liquidity and volatility.

Prerequisite/Restriction: Grade of B-(2.67) or better in FIN 3400; cumulative GPA of 2.67 or higher, completion of at least 40 credits.

Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2016

FIN 5250 - Banking Administration & Regulation
3 credits

Covers the administration, operations, and regulation of banks, bank holding companies, thrifts, and other government-insured financial institutions. Specific topics covered are banking regulation, the lending function of banks, investments available to banks, and the financial decision-making process in a bank setting.

Prerequisite/Restriction: Grade of B-(2.67) or better in FIN 3400 and FIN 4410; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits.

Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2016

FIN 5300 - Fixed Income
3 credits

Fixed income expertise is a crucial skill set for success in a financial career. Course topics include interest rates, term structure, risk, valuation, and credit analysis of the major market segments (treasuries, corporates, asset-
FIN 5350 - Financial Modeling
3 credits

Introduction to quantitative methods and computer applications applicable in financial modeling. Covers financial statement modeling, asset allocation, risk analysis, scenario generation, and option pricing through the introduction and use of econometric modeling, decision analysis, simulation, and optimization techniques using modern software.

Prerequisite/Restriction: Grade of B- (2.67) or better in FIN 3400; cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Spring

FIN 5440 - Cases in Finance
3 credits

This course focuses on transactions that investment banks, private equity funds and hedge funds complete for corporations in the M&A, financing and investing markets, and complications that sometimes arise from these transactions, including regulatory actions and litigation. The principal purpose of the class is to help students understand the strategic rationale, technical considerations, financial models and competing institutions that drive corporate M&A and financing transactions and the impact of these transactions on shareholders, employees and other stakeholders.

Prerequisite/Restriction: Grade of B- (2.67) or better in FIN 3400; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall 2016

FIN 5470 - Investing Practicum I
1.5 credits

Students manage an actual portfolio. Topics include portfolio management and security analysis with the current macroeconomic context

Prerequisite/Restriction: FIN 3400

Letter Grade

Semester(s) Traditionally Offered: Spring

FIN 5475 - Investing Practicum II
1.5 credits

Students manage an actual portfolio. Topics include portfolio management and security analysis within the current macroeconomic context.

Prerequisite/Restriction: FIN 3400 and FIN 5470

Letter Grade

Semester(s) Traditionally Offered: Spring

FIN 5800 - Financial Analysis
3 credits

Topics include ethical and professional standards, quantitative methods, economics, financial reporting and analysis, corporate finance, portfolio management, equity, fixed income, derivatives and alternative investments.

Semester(s) Traditionally Offered: Summer

FIN 6320 - Computational Methods in Finance
3 credits

This course is an introduction to the use of computational tools that are useful in the implementation of quantitative financial theories. As such, it's very applied in nature. The focus will be on the implementation of ideas that you have learned in your courses such as econometrics, investments, and derivatives.

Semester(s) Traditionally Offered: Spring

FIN 6410 - Corporate Finance
3 credits

Among other financial principles, this course covers
multiperiod capital budgeting under uncertainty, real options analysis, optimal capital structures, acquisition valuation, and optimal dividend policy.

Prerequisite/Restriction: Acceptance into a Huntsman School of Business master's degree program

Semester(s) Traditionally Offered: Fall

FIN 6415 - Fundamentals of Corporate Finance
1.5 credits

Introduction of corporate finance principles for students entering a master's of science in human resources (MSHR) degree program in the Huntsman School of Business.

Prerequisite/Restriction: Acceptance into a Huntsman School of Business masters degree program

Semester(s) Traditionally Offered: Fall, Spring, Summer

FIN 6420 - Solving Financial Problems
3 credits

Corporate finance case course, dealing with problems in working capital management, capital budgeting, cost of capital problems, and corporate restructuring.

Prerequisite/Restriction: Grade of C or better in FIN 3400 or equivalent

Semester(s) Traditionally Offered: Fall, Spring, Summer

FIN 6440 - Financial Decision Making
3 credits

Presentation of financial modeling techniques impacting firm decisions.

Semester(s) Traditionally Offered: Spring

FIN 6460 - Investment Analysis
3 credits

This course presents analytical tools for quantitative investment analysis. Using SAS, we examine topics including fundamental analysis, return predictability, portfolio theory, and implications from market efficiency.

Semester(s) Traditionally Offered: Spring

FIN 6470 - Derivative Markets
3 credits

This course covers forwards, futures, swaps and options. By the end of the course, students will have a solid understanding of how these products work, how they are used, how they are priced and how financial institutions trade them for the purposes of speculation and hedging.

Semester(s) Traditionally Offered: Spring

French

FREN 1010 - French First Year I
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: Not open to those with more than one year high school French or equivalent

Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

FREN 1020 - French First Year II
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: FREN 1010 or equivalent

Semester(s) Traditionally Offered: Spring
Course Fee: $24.00

FREN 1030 - Beginning French for Everyday Communication
3 credits

Development of basic conversational skills, communication strategies, and cultural knowledge through immersion in a French-speaking environment. Cannot be substituted for FREN 1010 or FREN 1020.

Pass/Fail only.
Campus: Offered only through USU's study abroad program in France.
Semester(s) Traditionally Offered: Summer
FREN 1050 - French First Year I Study Abroad
4 credits

Intensive first-year language course designed to increase proficiency in the four language skills and in intercultural knowledge.

Prerequisite/Restriction: Not open to those with more than one year high school French or equivalent

Campus: Offered only through USU's study abroad program in France. Semester(s) Traditionally Offered: Summer

FREN 1150 - French First Year II Study Abroad
4 credits

Intensive first-year language course designed to increase proficiency in the four language skills and in intercultural knowledge.

Prerequisite/Restriction: FREN 1010 or FREN 1050

Campus: Offered only through USU's study abroad program in France. Semester(s) Traditionally Offered: Summer

FREN 1820 - Beginning Independent Study: Experiencing Paris
2 credits

Beginning-level independent study project focusing on the city of Paris, its history, culture, and patterns of life.

Campus: Offered only through USU's summer study abroad program in France. Semester(s) Traditionally Offered: Summer

FREN 2010 - French Second Year I
4 credits

Continued development of communicative competencies in the four language skills, with more emphasis on communication through reading and writing and continued exposure to cultures and customs.

Prerequisite/Restriction: FREN 1020 or equivalent

Semester(s) Traditionally Offered: Fall Course Fee: $24.00

FREN 2050 - French Second Year I Study Abroad
4 credits

Intensive second-year language course designed to increase proficiency in the four language skills and in intercultural knowledge, with more emphasis on communication through reading and writing.

Prerequisite/Restriction: FREN 1020 or equivalent

Campus: Offered only through USU's summer study abroad program in France. Semester(s) Traditionally Offered: Summer

FREN 2020 - French Second Year II
4 credits

Continued development of communicative competencies in the four language skills, with more emphasis on communication through reading and writing and continued exposure to cultures and customs.

Prerequisite/Restriction: FREN 2010 or equivalent

Semester(s) Traditionally Offered: Spring Course Fee: $24.00

FREN 2030 - Intermediate French for Everyday Communication
3 credits

Development of intermediate-level conversational skills, communication strategies, and cultural knowledge through immersion in a French-speaking environment. Cannot be substituted for FREN 2010 or FREN 2020.

Pass/Fail only. Campus: Offered only through USU's study abroad program in France. Semester(s) Traditionally Offered: Summer

FREN 2050 - French Second Year I Study Abroad
4 credits

Intensive second-year language course designed to increase proficiency in the four language skills and in intercultural knowledge, with more emphasis on communication through reading and writing.

Prerequisite/Restriction: FREN 1020 or equivalent

Campus: Offered only through USU's summer study abroad program in France. Semester(s) Traditionally Offered: Summer

FREN 2150 - French Second Year II Study Abroad
4 credits

Intensive second-year language course designed to increase proficiency in the four language skills and in intercultural knowledge, with more emphasis on communication through reading and writing. O.

Prerequisite/Restriction: FREN 2010 or FREN 2050 or equivalent
Campus: Offered only through USU's summer study abroad program in France.
Semester(s) Traditionally Offered: Summer

FREN 2820 - Intermediate Independent Study: Experiencing Paris
2 credits

Intermediate-level independent study project focusing on the city of Paris, its history, culture and patterns of life.

Campus: Offered only through USU's summer study abroad program in France.
Semester(s) Traditionally Offered: Summer

FREN 2880 - Individual Readings
3 credits

Individual study of selected readings in French. Cannot be substituted for FREN 2010 or FREN 2020.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Summer

FREN 2988 - Special Problems
1-3 credits

An elective course intended for advanced students. Students will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Francophone culture will also be emphasized. Significant reading and work outside of class are required.

Prerequisite/Restriction: Instructor permission
Repeatable for credit

Campus: USU Eastern only

FREN 3030 - Advanced French for Everyday Communication
3 credits

Development of advanced conversational skills, communication strategies, and cultural knowledge through immersion in a French-speaking environment. Cannot be applied to requirements for the major or minor in French.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

FREN 3060 - French Conversation (CI)
CI Communications Intensive
3 credits

Designed to develop effective communication skills, to increase vocabulary, and to teach students to express and justify facts, opinions, ideas, and emotions in French. Not open to students with foreign experience. Designed for students who have not had extended residence in a francophone country or extended exposure to a francophone environment.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

FREN 3070 - Advanced French Study Abroad I
4 credits

Intensive upper-division language course combining grammar review, phonetics, advanced conversation and composition, and the study of culture, with an emphasis on current affairs.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

FREN 3080 - Advanced French Study Abroad II
4 credits

Intensive upper-division language course combining grammar review, phonetics, advanced conversation and composition, and the study of culture, with an emphasis on current affairs.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

Campus: Offered only through USU's summer study abroad program in France.
Semester(s) Traditionally Offered: Summer

FREN 3090 Eastern only

FREN 3090 - Advanced French for Everyday Communication
3 credits

Development of advanced conversational skills, communication strategies, and cultural knowledge through immersion in a French-speaking environment. Cannot be applied to requirements for the major or minor in French.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing
abroad program in France.
Semester(s) Traditionally Offered: Summer

FREN 3090 - French Intermediate Written Communication (CI)
CI Communications Intensive
3 credits

Provides students with intensive practice in various types of writing (e.g., summary, description, narration, letter-writing, etc.) based on a process approach. Involves discussion, writing, and revising. Stresses grammar review.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

FREN 3500 - Topics in French Literature in Translation (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Reading, analysis, and discussion of important French literature in English translation. Topics and texts may vary. Course may be repeated for credit with different content.

Repeatable for credit.

FREN 3510 - Business French (CI)
CI Communications Intensive
3 credits

Study of vocabulary, idioms, and expressions used in French business communications and an introduction to French business practices.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

FREN 3550 - French Civilization (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Study of historical, social, political, economic, and cultural conditions and institutions of France from early to modern times.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

FREN 3570 - France Today
3 credits

Study of contemporary life in France, the French people, their daily habits, and their surroundings. What makes the French, French. Extensive use of videos, films, and slides.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

FREN 3600 - Textual Analysis
3 credits

Introduction to the methods, terminology, and practice of textual analysis. Development of critical thinking and writing skills through the analysis of selected literary and nonliterary texts from different periods and genres, ranging from poetry, novels, and plays to film, painting, music, and art. Course may be repeated once for credit with different content.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

Repeatable for credit.

FREN 3820 - Advanced Independent Study: Experiencing Paris
2 credits

Advanced-level independent study project focusing on the city of Paris, its history, culture, and patterns of life.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

Campus: Offered only through USU's summer study abroad program in France.
Semester(s) Traditionally Offered: Summer

FREN 3880 - Individual Readings
1-4 credits

Individual study of selected readings in French.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
FREN 3900 - Topics in French and Francophone Studies
3 credits

Studies through literature, media, and film on specific topics or themes. Discussion, analysis, and interpretation of selected literary and/or nonliterary works. Occasionally taught in English.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing
Repeatable for credit.

FREN 4060 - Advanced French Conversation (CI)
CI Communications Intensive
3 credits

Designed for students who have already reached advanced proficiency in speaking through foreign experience, but need to continue the development of their conversational skills.

Prerequisite/Restriction: FREN 3060 or instructor’s permission

FREN 4090 - Advanced Written Communication (CI)
CI Communications Intensive
3 credits

Continued development of French written communication skills based on a process approach. Includes the more advanced concepts of French grammar and extensive writing practice in variety of genres.

Prerequisite/Restriction: FREN 3090 or instructor permission

FREN 4200 - Applied French Linguistics and Phonetics
3 credits

First part analyzes phonological and phonetic patterns of French. Second part deals with selected morphological and syntactic features of French.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

FREN 4520 - Information Technologies in French
3 credits

Practices, theoretical issues, and policy concerns of information technologies resulting from computers, networking, and videodisk. Use of computer with French programs. Taught in French.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

Semester(s) Traditionally Offered: Fall

FREN 4610 - Period Studies in French Literature (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Examination of a particular period or century. Involves close reading, discussion, analysis, and interpretation of selected literary and nonliterary texts. Sample topics include: The Medieval Period, The Renaissance, Classicism, Baroque, Romanticism, Naturalism, and Contemporary French Literature.

Prerequisite/Restriction: FREN 3600 or instructor’s permission

FREN 4620 - Genre Studies in French Literature (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Examination of a particular genre or body of works from a variety of periods and authors (e.g., novel, play, poetry, short story, film). Involves close reading, discussion, analysis, and interpretation of selected literary and nonliterary texts. Sample topics include: Romance Novels from the Middle Ages to the Present, From Classical to Contemporary French Theatre, French poetry from Baudelaire to Ponge, The Nouveau Roman, New Wave French Cinema, and The Negritude Movement.

Prerequisite/Restriction: FREN 3600 or instructor’s permission

FREN 4880 - Individual Readings
1-4 credits

Readings in scientific, technical, or literary French.

Prerequisite/Restriction: Instructor permission
Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

FREN 4900 - Seminar in French and Francophone Studies
3 credits
In-depth exploration of issues central to understanding language, literature, and culture. Critical reading and viewing of written and nonwritten texts with emphasis on student presentations, independent research, and the completion of extended projects. Seminar topics may focus on authors, literary periods, important historical events and social movements, and aspects of francophone cultures. Used periodically for literature in translation.

Prerequisite/Restriction: FREN 2020 or demonstrate equivalent proficiency through testing

Repeatable for credit.

FREN 4920 - French Language Tutoring
1 credit

Allows students to develop tutoring skills by assisting professors in lower-division courses or fulfilling instructional duties for a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated to a maximum of 3 credits.

Prerequisite/Restriction: FREN 2020 or instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

FREN 6200 - French Linguistics and Phonetics
3 credits

Analysis of selected phonological, morphological, syntactic, and semantic features of contemporary French, including a study of colloquial French, comparing pronunciation, vocabulary, and grammar with standard forms.

Prerequisite/Restriction: FREN 2020, another 3000-level or higher FREN course, or demonstrated proficiency through testing

Geography

GEOG 1000 - Physical Geography (BPS)
BPS Breadth Physical Sciences
3 credits

Geographic analysis of physical processes and spatial distribution of natural elements (i.e., the atmosphere, hydrosphere, lithosphere, and biosphere).

Semester(s) Traditionally Offered: Fall

GEOG 1005 - Physical Geography Lab
1 credit

Laboratory exercises in natural physical geography. Provides initial field and laboratory experiences in the earth system. Required for all geography majors.

Prerequisite/Restriction: GEOG 1000 (may be taken concurrently

Semester(s) Traditionally Offered: Fall

Course Fee: $44.00

GEOG 1300 - World Regional Geography (BSS)
BSS Breadth Social Sciences
3 credits

Survey of world cultural regions, with an analysis of political, economic, and resource patterns in their physical setting.

Semester(s) Traditionally Offered: Fall

GEOG 1400 - Human Geography (BSS)
BSS Breadth Social Sciences
3 credits

Spatial study within selected socio-cultural settings, including cultural landscapes, rural-urban linkages, languages, religions, politics, and economic activities.

Semester(s) Traditionally Offered: Spring

GEOG 1800 - Introduction to Geographic Information Sciences
3 credits

Introduces students to background and theory behind geographic information systems and spatial analysis. Students learn to integrate and analyze spatial information from different geographic sources. Includes a weekly laboratory section.

Cross-listed as: WILD 1800

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $75.00
**GEOG 1990** - Professional Orientation for Geography
1 credit

Introduction and orientation to careers in geography, geographic education, and related fields. Discussion of education, curricula, faculty, professional societies, and employment opportunities.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall

**GEOG 2130** - Population Geography
3 credits

Spatial analysis of demographic data emphasizing global distribution, population growth, measures of density, migration, settlement, and economic development.

Semester(s) Traditionally Offered: Spring

**GEOG 3430** - Political Geography
3 credits

Study of relationship between Earth, people, and the state. Global political phenomena studied from a geographic perspective. Explores impact of natural resources territorial seas and the nature of the state.

Prerequisite/Restriction: POLS 2100 or POLS 2200 or POLS 2300 or POLS 2400

Cross-listed as: POLS 3430

**GEOG 3610** - Geography of Rural/Urban Planning
3 credits

Analysis of the organization and interrelationships of urban-city and rural space. Emphasizes spatial planning of rural-urban environments to improve quality of life, internal structure of cities, and applied principles and practices of community planning. Field trips and applied class projects integrated into lectures and demonstrations.

Semester(s) Traditionally Offered: Fall

**GEOG 4100** - Geographic Approaches to the Human-Environmental Relationship
3 credits

Introduces students to the study of human-environmental interactions from a geographic perspective, with special emphasis on the social and political dynamics of selected environmental problems and how these dynamics interrelate across different spatial and temporal scales.

Cross-listed as: GEOG 6100

Semester(s) Traditionally Offered: Spring

**GEOG 4120** - Environment and Development in Latin America (CI)
CI Communications Intensive
3 credits

Examines the changing environment and developmental geography of Latin America. Focuses on globalization throughout history, along with its impact on lives and environments in the region, varied and changing human-environment relationships, and processes of economic and social inequality.

Cross-listed as: GEOG 6120.

Semester(s) Traditionally Offered: Fall

**GEOG 4140** - Violent Environments: Linking Ecology and Conflict in Sub-Saharan Africa
3 credits

Examines the relationship between violent conflict and natural resources, with particular attention given to human rights and political ecology perspectives. Through specific cases, conflict resources are explored, along with the threat they pose to national, regional, and global security. Also includes discussion of the diverse actors that profit from the persistence of conflict and civil unrest.

Cross-listed as: GEOG 6140.

Semester(s) Traditionally Offered: Spring

**GEOG 4210** - Geography of Utah
3 credits

Applies principles and methods of physical, cultural, and human-environment geography to the study of Utah's people, places, and environments. Includes opportunities to build skills in GIS mapping, field studies of biophysical and social phenomena, and other forms of geographic inquiry.
Semester(s) Traditionally Offered: On campus:
Spring/Online: Spring, Summer, Fall
Course Fee: $35.00

GEOG 4220 - International Regional Geography
3 credits

Critical analysis and synthesis of demographic, environmental, political, economic, and cultural characteristics of world regions, as viewed in the context of human and physical processes at continental to global scales. Can be repeated for credit as different regions are covered.

Repeatable for credit.
Semester(s) Traditionally Offered: Summer

GEOG 4300 - Geography Education Classroom Practicum
1-3 credits

Allows geography education students to participate in actual geography classroom teaching with experienced geography teachers. Students observe, work with individuals and groups of students, team-teach lesson(s) with the teacher, and self-teach individual lesson(s).

Cross-listed as: GEOG 6300.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEOG 4400 - Natural Hazards and Society
3 credits

Examines how social and environmental factors work together to shape the risks posed by natural hazards to human society. Surveys different types of natural hazards and integrates perspectives on geospatial risk assessment, vulnerability, resilience, and mitigation planning.

Cross-listed as: GEOG 6400

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

GEOG 4800 - Teaching Geography
3 credits

Designed specifically for geography education/social studies education students preparing to teach grades K-

GEOG 4850 - Cartographic Design
3 credits

Techniques used in design and construction of maps, charts, and map projections.

Semester(s) Traditionally Offered: Spring

GEOG 4950 - Special Topics
1-4 credits

Individual study and research upon selected geographical and societal problems.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEOG 5130 - Geography Education Field Practicum
1-6 credits

Specifically designed for undergraduate students and graduate students (teachers) who need specific classroom teaching experience in order to improve their quality of teaching and/or to carry out special classroom curriculum research as part of their geography education degrees.

Cross-listed as: GEOG 6130.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEOG 5600 - Theory and Practice of Development
3 credits

This advanced seminar class critically examines the
theory, history and practice of international development. We concentrate on understanding the structures and processes that promote uneven geographical development and social inequalities between “developed” and “underdeveloped” societies.

Cross-listed as: GEOG 6600

Semester(s) Traditionally Offered: Fall

GEOG 5650 - Developing Societies (DSS)
DSS Depth Social Sciences
3 credits

Reviews how sociology, cultural geography, and economic anthropology analyze processes of globalization in postcolonial societies. Examines changing livelihoods, patterns of spatial incorporation and societal evolution, and emergent policy problems associated with rapid socioeconomic change.

Cross-listed as: GEOG 6650 and ANTH 5650/ANTH 6650 and SOC 5650/SOC 6650.

Semester(s) Traditionally Offered: Fall

GEOG 5810 - Geography Education Inservice Workshop
3 credits

Assists classroom teachers in broadening their perspective of Geography Education through increased knowledge, improving their geographic techniques, methods, and teaching resources for their classrooms.

Cross-listed as: GEOG 6810.

Semester(s) Traditionally Offered: Fall, Spring, Summer

GEOG 5970 - Classroom Technology in Geography Education
3 credits

Design, development, and application of contemporary technologies and multimedia classroom teaching resources for preservice and inservice geography education teachers.

Semester(s) Traditionally Offered: Fall, Summer

GEOG 6100 - Geographic Approaches to the Human-Environmental Relationship
3 credits

Introduces students to the study of human-environmental interactions from a geographic perspective, with special emphasis on the social and political dynamics of selected environmental problems and how these dynamics interrelate across different spatial and temporal scales.

Cross-listed as: GEOG 4100.

Semester(s) Traditionally Offered: Spring

GEOG 6120 - Environment and Development in Latin America
3 credits

Examines the changing environment and developmental geography of Latin America. Focuses on globalization throughout history, along with its impact on lives and environments in the region, varied and changing human-environment relationships, and processes of economic and social inequality.

Cross-listed as: GEOG 4120.

Semester(s) Traditionally Offered: Fall

GEOG 6130 - Geography Education Field Practicum
1-6 credits

Specifically designed for undergraduate students and graduate students (teachers) who need specific classroom teaching experience in order to improve their quality of teaching and/or to carry out special classroom curriculum research as part of their geography education degrees.

Cross-listed as: GEOG 5130.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

GEOG 6140 - Violent Environments: Linking Ecology and Conflict in Sub-Saharan Africa
3 credits

Examines the relationship between violent conflict and natural resources, with particular attention given to human rights and political ecology perspectives. Through specific cases, conflict resources are explored, along with the threat they pose to national, regional, and global security. Also includes discussion of the diverse actors
that profit from the persistence of conflict and civil unrest.

Cross-listed as: GEOG 4140.

Semester(s) Traditionally Offered: Spring

GEOG 6200 - Advanced Regional Geography
3 credits

Critical analysis of world’s regions, focusing on analysis and synthesis of a region’s economic, political, population, and cultural themes in the context of physical environment and global processes. Repeatable for different regions.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEOG 6300 - Geography Education Classroom Practicum
1-3 credits

Allows geography education students to participate in actual geography classroom teaching with experienced geography teachers. Students observe, work with individuals and groups of students, team-teach lesson(s) with the teacher, and self-teach individual lesson(s).

Cross-listed as: GEOG 4300.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEOG 6400 - Natural Hazards and Society
3 credits

Examines how social and environmental factors work together to shape the risks posed by natural hazards to human society. Surveys different types of natural hazards and integrates perspectives on geospatial risk assessment, vulnerability, resilience, and mitigation planning.

Semester(s) Traditionally Offered: Spring

Effective Term
Spring

GEOG 6600 - Theory and Practice of Development
3 credits

This advanced seminar class critically examines the theory, history and practice of international development. We concentrate on understanding the structures and processes that promote uneven geographical development and social inequalities between “developed” and “underdeveloped” societies.

Cross-listed as: GEOG 5600

Semester(s) Traditionally Offered: Fall

GEOG 6650 - Developing Societies
3 credits

Reviews how sociology, cultural geography, and economic anthropology analyze processes of globalization in postcolonial societies. Examines changing livelihoods, patterns of spatial incorporation and societal evolution, and emergent policy problems associated with rapid socioeconomic change.

Cross-listed as: GEOG 5650 and ANTH 6650/ANTH 5650 and SOC 6650/SOC 5650.

Semester(s) Traditionally Offered: Fall

GEOG 6800 - Teaching Geography
3 credits

Designed specifically for geography education/social studies education students preparing to teach grades K-12. Exploration of national and state standards and core curriculum, as well as state-of-the-art geography education technology and teaching resources. Students develop teaching lessons, and gain classroom teaching experience with local geography teachers.

Cross-listed as: GEOG 4800.

Semester(s) Traditionally Offered: Fall

GEOG 6810 - Geography Education Inservice Workshop
3 credits

Assists classroom teachers in broadening their perspective of Geography Education through increased knowledge, improving their geographic techniques, methods, and teaching resources for their classrooms.

Cross-listed as: GEOG 5810.

Semester(s) Traditionally Offered: Fall, Spring, Summer
GEOG 6900 - Graduate Special Topics
1-4 credits
Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEOG 6920 - Field Experiences in Development Geography
1-6 credits
Allows graduate students to carry out geography fieldwork in a developing country context, in consultation with departmental faculty.
Prerequisite/Restriction: Instructor permission
Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

Geology
GEO 1010 - Introduction to Geology (BPS)
BPS Breadth Physical Sciences
3 credits
Introduces plate tectonics, minerals, rocks, water resources, geological hazards, internal and external geologic processes, and a geologic history of the earth.
Semester(s) Traditionally Offered: Fall, Summer

GEO 1020 - Prehistoric Life
3 credits
Emphasizes the evolution and history of life on earth. Introduces the geologic time scale, the basics of minerals and rocks, and the tectonic history of the earth. Stresses methods of fossilization, interpretation of basic sedimentary environments, and examples of the major types of animal and plant fossils from each of the geologic eras.
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

GEO 1060 - Introduction to Environmental Geoscience (BPS)
BPS Breadth Physical Sciences
3 credits
Explores the earth’s internal and external processes. Interprets the roles these processes play in human habitation of the planet. Evaluates the interplay occurring between humans and the earth, as in the distribution of resources and the development of civilization.
Semester(s) Traditionally Offered: Spring

GEO 1110 - Physical Geology (BPS)
BPS Breadth Physical Sciences
3 credits
Covers both the internal and external processes shaping the earth. Major topics covered include plate tectonics, minerals, volcanism, igneous, sedimentary and metamorphic rocks, earthquakes, mass wasting, and landforms associated with streams, ground water, glaciation, deserts and coastal processes.
Corequisite: GEO 1115
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEO 1115 - Physical Geology Laboratory
1 credit
Laboratory course designed to complement introductory earth science courses. Students will study minerals, rocks, topographic and geologic maps, and aerial photographs.
Prerequisite/Restriction: GEO 1010 or GEO 1060 or GEO 1360 (all may be taken concurrently)
Corequisite: GEO 1110
Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $50.00

GEO 1220 - Historical Geology
3 credits
A study of the earth’s tectonic and life history as inferred from the examination of rocks and fossils. Concerned with the origin and development of the earth’s atmosphere, oceans, and life.
Prerequisite/Restriction: GEO 1010 or GEO 1110 and GEO 1115 (preferred)
Corequisite: GEO 1225

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

GEO 1225 - Historical Geology Laboratory
1 credit

Accompanying laboratory course for GEO 1220.

Corequisite: GEO 1220

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

GEO 1360 - Planet Earth (BPS)
BPS Breadth Physical Sciences
3 credits

Planet Earth is a one-semester course designed to expose and familiarize students with the basic concepts and principles of earth science. The course approaches the earth as a whole, encompassing geologic, hydrologic, biologic and atmospheric processes. In addition, students gain an understanding of the scientific process, and skills to think critically about scientific knowledge and research.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10.00
Effective Term
Summer 2016

GEO 1380 - Where Science and Society Meet
3

This course explores various ways to counter the myth that science operates independently from society. Not only do the results of science – knowledge and technology – affect our social, cultural, and economic lives, but the practice of science is shaped by its social, cultural, and economic context. This course will build student's scientific literacy and evaluation skills. Through the use of current issues in society and science, students will examine, analyze and evaluate the impact of the scientific issue on society (and vice versa).

Campus: Online
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

GEO 1650 - Fossil Preparation
2 credits

Designed to familiarize students with a paleontological laboratory and teach them basic techniques of fossil preservation. Covers procedures, vocabulary, and includes hands-on experience. Students are introduced to fossil care, identification, preservation techniques, molding and casting, basic osteology, and collection laws.

Campus: USU Eastern only

GEO 2250 - Introductory Internship/Co-op
1-4 credits

Educational work experience
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEO 2500 - Geology Field Excursions
1 credit

Geologic features and processes observed in the field.
Prerequisite/Restriction: GEO 1010 or GEO 1060 or GEO 1110 or GEO 1360 (may be taken concurrently) or instructor permission
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $100.00

GEO 2700 - Science Excursion
1 credit

Students will study the geology, geography, plant and animal life, astronomy, and historical aspects of the areas visited on a field trip. Students will be expected to attend one or more lectures preceding or following the trip. Assignments, reports and/or exams may be required. Variable fees will be charged, which may include transportation, food, course handouts, and rental fees for some of the necessary equipment. Participation will be up to the discretion of the instructor.

Campus: USU Eastern only

GEO 2988 - Special Problems
1-4 credits
Directed study of selected topics.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

GEO 3100 - Natural Disasters (DSC)
DSC Depth Life and Physical Sciences
3 credits

Hazardous geologic processes affecting humans. Cause, prediction, avoidance, and frequency of natural disasters, including earthquakes, volcanic eruptions, tsunamis, landslides, floods, subsidence, meteorite impacts, and global changes. Topics discussed in the context of earth systems and cycles. Three lectures per week.

Prerequisite/Restriction: One Breadth Physical Sciences (BPS) course

Semester(s) Traditionally Offered: Spring
Course Fee: $5.00

GEO 3150 - Energy in the Twenty-first Century (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 credits

Provides science-based overview of energy resources. Compares and analyzes energy budgets and energy resources, including solar energy, fossil fuels, nuclear energy, and renewable sources. For the different energy sources, contrasts carbon emissions and potential impacts on climate change.

Prerequisite/Restriction: GEO 1360 and Quantitative Literacy (QL) course or equivalent

Cross-listed as: PHYS 3150

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

GEO 3200 - The Earth Through Time (DSC)
DSC Depth Life and Physical Sciences
3 credits

Investigates dynamic nature of Earth’s physical and biological processes, and how these processes have shaped Earth’s 4.5 billion-year history. Emphasis on interpretation of the story of the geologic record (rocks and landforms) and Earth’s sequential physical and biological changes.

Prerequisite/Restriction: GEO 1010 or GEO 1110

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

GEO 3205 - Earth Through Time Laboratory
1 credit

Laboratory course designed to complement Earth Through Time. Examines the sequential physical and biological changes throughout Earth’s 4.5-billion year history. Emphasis on the interpretation of the geologic record from rocks and fossils.

Corequisite: GEO 3200

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

GEO 3250 - Natural History of Dinosaurs (DSC)
DSC Depth Life and Physical Sciences
3 credits

Dinosaurs are fascinating, amazing, bizarre, gigantic and tiny, and despite being extinct for millions of years they are the subject of this course, which emphasizes the scientific methodologies used in reconstructing these ancient creatures.

Prerequisite/Restriction: BPS or BLS general education course

Semester(s) Traditionally Offered: Spring

GEO 3300 - Geology of the World’s Oceans (DSC)
DSC Depth Life and Physical Sciences
3 credits

Geologic evidence for the development of ocean basins and continental margins through plate tectonic processes. Also, the interaction of the geo- and biospheres and their effect on the evolution of the oceans and atmosphere. Discussion of shoreline and marine environments, the organisms inhabiting them, and the physical and chemical processes in operation therein. Three lectures per week.

Prerequisite/Restriction: One University Studies Breadth
Physical Sciences (BPS) course

Semester(s) Traditionally Offered: Spring

GEO 3400 - Communicating Geoscience (CI)
CI Communications Intensive
3

Build a foundation in geoscience writing, critical thinking, data processing and presentation, and oral presentation. Collectively, these skills facilitate communication and understanding of Earth science. Basic skills developed in this course are utilized in upper-division Geology major courses.

Prerequisite/Restriction: GEO 1110; GEO 3200 (corequisite)

Corequisite: GEO 3200

Semester(s) Traditionally Offered: Spring

GEO 3500 - Minerals and Rocks
4 credits

Introduction to minerals and the principles of crystallography, focusing on rock-forming and ore minerals. Provides overview of petrology and introduction to igneous, sedimentary, and metamorphic rocks, including X-ray and optical identification techniques. Three lectures and one three-hour lab per week.

Prerequisite/Restriction: GEO 1110; MATH 1060 or MATH 1210 or AP Calculus AB score of 3 or higher

Corequisite: CHEM 1210

Semester(s) Traditionally Offered: Spring

GEO 3550 - Sedimentation and Stratigraphy
4 credits

Classification and analysis of sedimentary rocks and structures, with an emphasis on the interpretation of ancient sedimentary environments. Controls on sedimentary processes over time. Principles of stratigraphic correlation. Three lectures and one lab per week.

Prerequisite/Restriction: GEO 3200 and GEO 3500; MATH 1060 or MATH 1210 or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall

Course Fee: $75.00

GEO 3600 - Geomorphology
4 credits

Geomorphic processes, origin of landforms and surficial deposits. Emphasizes fluvial and hillslope landscape elements, and surficial geologic mapping. Three one-hour lectures and one three-hour lab per week. PHYS 2210 recommended.

Prerequisite/Restriction: GEO 3200; MATH 1060 or MATH 1210 or AP Calculus AB score of 3 or higher

Cross-listed as: WATS 3600

Semester(s) Traditionally Offered: Fall

Course Fee: $90.00

GEO 3700 - Structural Geology
4 credits

Examination of the geometries, mechanisms, and mechanics of rock deformation, including stress and strain relationships, fault and fold classification and description. Labs present techniques to interpret deformed rocks in map, cross section, and three-dimensional views. Three lectures and one lab per week.

Prerequisite/Restriction: PHYS 2210 and PHYS 2215 and GEO 3550

Semester(s) Traditionally Offered: Spring

Course Fee: $60.00

Effective Term

Spring 2017

GEO 4250 - Advanced Internship/Co-op
1-4 credits

Advanced educational work experience.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer
GEO 4500 - Igneous and Metamorphic Petrology
4 credits
Origin, processes of formation, classification, and identification of igneous and metamorphic rocks. Study of igneous and metamorphic rocks in hand specimens and thin sections. Three lectures and one three-hour lab per week.

Prerequisite/Restriction: GEO 3500
Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

GEO 4520 - Ore Deposits
3
This course is designed as an introduction to ore deposits and ore-forming processes. The chief objectives are (1) a basic understanding of how ore deposits form, (2) to learn how ore deposits are classified, and (3) to understand the origins of different types of ore deposits. The primary focus is on metallic mineral deposits, but some of the more important non-metallic deposits will also be covered, excluding hydrocarbons. Graduate students will write an additional research proposal.

Prerequisite/Restriction: GEO 3500; GEO 4500 recommended
Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

GEO 4700 - Geologic Field Methods (CI)
CI Communications Intensive
3 credits
Collection, recording, and interpretation of geologic deposits and processes in the field. Written reports with geologic maps, cross-sections, and graphs are required. Two extended lab periods per week, weekend day trips, and one lecture per week. Fieldwork will end early.

Prerequisite/Restriction: GEO 3600 (may be taken concurrently), GEO 3700, or instructor permission
Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

GEO 4800 - Senior Seminar
1 credit

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

GEO 4900 - Special Problems
1-4 credits
Advanced directed study of selected topics. Written report required.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

GEO 5150 - Fluvial Geomorphology
3 credits
Focuses on physical processes in streams that control their shape, plan form, slope, bed material, and distribution of channel bars. Emphasizes field analysis of these topics, and application of geomorphology to aquatic ecology and environmental restoration.

Cross-listed as: GEO 6150 and WATS 5150/WATS 6150.
Semester(s) Traditionally Offered: Fall

GEO 5170 - Fluvial Geomorphology Lab
2 credits
Field analysis focuses on physical processes in streams which control their shape, plan form, slope, bed material, and distribution of channel bars. Application of geomorphology to aquatic ecology and environmental restoration.

Cross-listed as: GEO 6170 and WATS 5170/WATS 6170.
Semester(s) Traditionally Offered: Fall
Course Fee: $150.00

GEO 5200 - Geology Field Camp
5 credits
Integrative approach to examining geologic relationships in the field, deciphering geologic evolution of map regions, and interpreting the structure and distribution of rocks. Results presented in reports, maps, cross-
sections, and graphical formats. Requires 40-45 hours of lab per week for 3.5-4.0 weeks.

**Prerequisite/Restriction:** GEO 3500, GEO 3550, GEO 3600, GEO 3700, GEO 4700

**Semester(s) Traditionally Offered:** Summer (even years)
**Course Fee:** $1,000.00

GEO 5360 - Volcanology
3 credits

Provides students with a basic understanding of volcanic processes. Students gain an understanding of the range and scope of volcanoes and volcanic eruptions. Prehistoric volcanic eruptions reconstructed from their deposits. To receive graduate credit, student must write student grant proposal to do research in some area of volcanology relevant to hazards assessment.

Cross-listed as: GEO 6360.

**Semester(s) Traditionally Offered:** Fall
**Course Fee:** $60.00

GEO 5430 - Paleontology
2 credits

Survey of prominent microfossil, invertebrate, and vertebrate groups, including their diagnostic morphologic features, stratigraphic ranges, and environmental tolerances. Equips students with the necessary information and techniques to enable them to recognize and utilize fossils in stratigraphic and paleoenvironmental interpretation. Three lectures and one lab per week. Half semester; may be paired with GEO 5440.

**Prerequisite/Restriction:** GEO 3200

**Semester(s) Traditionally Offered:** Fall
**Course Fee:** $40.00

GEO 5460 - Advanced Physical Sedimentology
3 credits

Detailed interpretation of sedimentary rocks, based on petrography and sedimentary characteristics. Source terranes, tectonic settings, depositional environments, and diagenetic changes during burial. Three lectures and two labs per week. Half semester.

**Prerequisite/Restriction:** GEO 3500 and GEO 3550

Cross-listed as: GEO 6460.

**Semester(s) Traditionally Offered:** Spring
**Course Fee:** $40.00

GEO 5480 - Sedimentary Basin Analysis
2 credits

Detailed coverage of techniques of sedimentary basin analysis, including depositional systems, provenance, basin modeling, and fluid and heat flow history. Survey of types of sedimentary basins worldwide.

**Prerequisite/Restriction:** GEO 3500 and GEO 3550
Semester(s) Traditionally Offered: Spring, Odd Years
Course Fee: $50.00
GEO 5490 - Facies Analysis of Sedimentary Rocks
3 credits

This course will cover topics including sedimentary processes and results, contacts, facies analysis, sequence stratigraphy, and implications of sedimentologic studies. Lectures, field trips, literature review, and geologic writing will be emphasized, with 6000 level credit earned through student presentations and a semester projects.

Prerequisite/Restriction: GEO 3550

Cross-listed as: GEO 6490

Semester(s) Traditionally Offered: Spring, Taught Alternate Years
Course Fee: $100.00
GEO 5500 - Advanced Igneous Petrology
4 credits

Advanced concepts in the origin and evolution of magmatic systems, effects of different tectono thermal regimes on magma genesis, magma dynamics, and phase equilibria in magmatic systems. Concepts illustrated by rock suites from classic locations. Three lectures and three laboratory hours each week.

Prerequisite/Restriction: GEO 4500 or equivalent

Cross-listed as: GEO 6500.

Semester(s) Traditionally Offered: Fall
Course Fee: $45.00
GEO 5520 - Techniques of Groundwater Investigations (CI)
CI Communications Intensive
3 credits

Survey of techniques used in groundwater investigations for collecting physical and chemical data. Includes well drilling and construction; water level, flow rate, and discharge measurements; hydraulic and tracer tests; and groundwater sampling.

Prerequisite/Restriction: GEO 5510 or instructor permission

Cross-listed as: GEO 6520.

Semester(s) Traditionally Offered: Spring (even years)
Course Fee: $50.00
GEO 5530 - Petroleum Systems: Principles of Exploration and Development (QI)
QI Quantitative Intensive
3 credits

Analysis of the petroleum system from source to trap. Examines processes of generation, migration, and accumulation of oil and gas. Overview of petroleum economics and technology.

Prerequisite/Restriction: GEO 3550 and GEO 3700; or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00
GEO 5540 - Quantitative Methods in Geology (QI)
QI Quantitative Intensive
3 credits

Application of various quantitative methodologies to geologic problems. Two lectures and one lab per week. GEO 6540 requires student presentation on thesis research methodology.

Prerequisite/Restriction: GEO 3500 or GEO 3550 or GEO 3600 or GEO 3700

Cross-listed as: GEO 6540.
Semester(s) Traditionally Offered: Fall  
Course Fee: $60.00  
GEO 5550 - Geochemical Application of Electron Microprobe and X-Ray Fluorescence Analysis  
4 credits  
Theory and application of X-ray fluorescence spectrometry and the electron microprobe to problems in geochemistry and materials analysis. Two hours lecture and six hours laboratory per week.  
Prerequisite/Restriction: CHEM 1210 or equivalent, or instructor permission  
Cross-listed as: GEO 6550.

Semester(s) Traditionally Offered: Spring  
GEO 5560 - Subsurface Analyses: Principles and Techniques  
2 credits  
Survey of techniques to characterize subsurface geologic environments. Survey of three-dimensional analyses, deep drilling, coring, well-log analyses, subsurface geophysical methods, fluid and stress measurements, and petrophysical properties. Graduate students examine and interpret data sets related to research projects.  
Prerequisite/Restriction: GEO 3550, GEO 3700, or instructor permission  
Cross-listed as: GEO 6560.

Semester(s) Traditionally Offered: Spring  
Course Fee: $50.00  
GEO 5600 - Geochemistry  
3 credits  
Application of thermodynamics, solution chemistry, phase diagrams, and both radioactive and stable isotopes to the understanding of earth processes. Three lectures per week.  
Prerequisite/Restriction: CHEM 1210, CHEM 1220, GEO 3500 and MATH 1210

Semester(s) Traditionally Offered: Spring  
Course Fee: $45.00  
GEO 5620 - Global Geophysics (QI)  
QI Quantitative Intensive  
3 credits  
Application of physics to understanding geologic processes, the earth’s interior, and the theory of plate tectonics. Two lectures and one two-hour lab per week.  
Prerequisite/Restriction: GEO 3700 and PHYS 2220  
Cross-listed as: GEO 6620.

Semester(s) Traditionally Offered: Fall (even years)  
Course Fee: $50.00  
GEO 5630 - Geologic Image Analysis  
3 credits  
Interpretation of geologic features on aerial photographs, satellite imagery, and digital elevation models. Three two-hour labs per week.  
Prerequisite/Restriction: GEO 3600, GEO 3700

Semester(s) Traditionally Offered: Taught Alternate Years  
Course Fee: $55.00  
GEO 5640 - Introduction to Seismology  
3 credits  
This course introduces the mathematical fundamentals of the elastic wave equation, and some basic tools for characterizing seismic sources and imaging variations of material properties in the Earth’s interior. For 6000-level graduate credit, students must complete a semester project and additional problem set assignments.
Cross-listed as: GEO 6640

Semester(s) Traditionally Offered: Spring Odd Years

GEO 5650 - Senior Thesis
1-4 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

GEO 5660 - Applied Geophysics
4 credits

Field-oriented course involving data collection, data analysis, and overview/introduction of geophysical imaging and analysis of the subsurface. For GEO 6660, students must complete a written project and presentation.

Prerequisite/Restriction: MATH 1210, PHYS 2210, PHYS 2220; or instructor permission

Cross-listed as: GEO 6660.

Semester(s) Traditionally Offered: Spring (even years)

Course Fee: $20.00

GEO 5670 - Inverse Theory
3 credits

This course introduces the mathematical tools for optimizing model parameters (and estimating uncertainties for a given set of observational measurements. For 6000-level graduate credit, students must complete a semester project and additional problem set assignments.

Prerequisite/Restriction: MATH 1210 ; MATH 1220 or STAT 3000

Cross-listed as: GEO 6670

Semester(s) Traditionally Offered: Spring Odd Years

GEO 5680 - Paleoclimatology
3 credits

Covers climate through the past four billion years of geologic time. Explores driving forces behind climate changes. Examines data and methods used in paleoclimate research. Includes discussion of literature and stresses local paleoclimate records. Three lectures per week, along with field trips.

Prerequisite/Restriction: GEO 3600/WATS 3600 or instructor permission

Cross-listed as: GEO 6680 and PSC 5680/PSC 6680 and WATS 5680/WATS 6680.

Semester(s) Traditionally Offered: Spring

Course Fee: $75.00

GEO 5690 - Geodynamics
3 credits

This course examines the physical processes that drive deformation and a wide variety of the other geological phenomena, including processes and observations of heat transfer, the role of gravity in stress and strain, and the various different flavors of rock rheology. Observational metrics (including geochemistry, laboratory measurements, and geophysical measurements of rock properties) will also be covered. For 6000-level graduate credit, students must complete a semester project and additional problem set assignments.

Cross-listed as: GEO 6690

Semester(s) Traditionally Offered: Fall Even Years

GEO 5900 - Topics for Teachers
1-4 credits

Special topics in geology for elementary and secondary science teachers to provide an understanding of the geology of Utah and the Western United States. Emphasis on field and lab activities.

Prerequisite/Restriction: Introductory geology course or instructor permission

Repeatable for credit.

GEO 6050 - Graduate Seminar in Tectonics (Topic)
1-3 credits

Advanced topics of current interest in tectonics and orogenesis.

Cross-listed as: GEO 7050
GEO 6100 - Graduate Seminar in Geomorphology (Topic) 1-3 credits

Advanced topics of current interest in geomorphology and landscape evolution.

Cross-listed as: GEO 7100.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

GEO 6120 - Advanced Geomorphology 3 credits

Process geomorphology seminar focusing on hillslope, tectonic, and climatic geomorphology research.

Cross-listed as: GEO 7120.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

Course Fee: $75.00

GEO 6150 - Fluvial Geomorphology 3 credits

Focuses on physical processes in streams that control their shape, plan form, slope, bed material, and distribution of channel bars. Emphasizes field analysis of these topics, and application of geomorphology to aquatic ecology and environmental restoration.

Cross-listed as: GEO 5150 and WATS 6150/WATS 5150.

Semester(s) Traditionally Offered: Fall

GEO 6170 - Fluvial Geomorphology Lab 2 credits

Field analysis focuses on physical processes in streams which control their shape, plan form, slope, bed material, and distribution of channel bars. Application of geomorphology to aquatic ecology and environmental restoration.

Cross-listed as: GEO 5170 and WATS 6170/WATS 5170.

Semester(s) Traditionally Offered: Fall

Course Fee: $150.00

GEO 6190 - Aqueous Geochemistry 3 credits

This course will investigate chemical reactions occurring in natural waters focusing on the thermodynamic and kinetic descriptions of chemical speciation, mineral dissolution and precipitation, and redox cycling.

Prerequisite/Restriction: CHEM 1220, GEO 3500 and MATH 1210

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

GEO 6200 - Graduate Seminar in Geochemistry (Topic) 1-3 credits

Advanced topics of current interest in geochemistry.

Cross-listed as: GEO 7200.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

GEO 6240 - Structural Analysis of Deformed Geological Materials 3 credits

Explores how rocks, sediments, ice, and soils deform. By examining the geometry, kinematics, mechanics, and mechanisms of deformation, students learn how to interpret deformed materials in the field and laboratory.

GEO 6250 - Mechanics and Processes in Earth Sciences 3 credits

Fundamentals of solid and fluid mechanics with applications to the earth sciences. Applications to rock deformation, fluid flow, glacier movement, and slope stability. Designed for graduate students in earth sciences and engineering. Two lectures, one lab per week.

Prerequisite/Restriction: MATH 1210, PHYS 2210, and graduate standing

Cross-listed as: GEO 7250.

Semester(s) Traditionally Offered: Spring

Course Fee: $30.00

GEO 6300 - Graduate Seminar in Petrology (Topic) 1-3 credits
Advanced topics of current interest in petrology of igneous, metamorphic, or sedimentary rocks.

Cross-listed as: GEO 7300.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

GEO 6350 - Graduate Seminar in Paleontology and Paleoecology (Topic)
1-3 credits

Advanced topics in paleontology, paleoecology and the evolution of ancient life.

Cross-listed as: GEO 7350
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

GEO 6360 - Volcanology
3 credits

Provides students with a basic understanding of volcanic processes. Students gain an understanding of the range and scope of volcanoes and volcanic eruptions. Prehistoric volcanic eruptions reconstructed from their deposits. To receive graduate credit, student must write student grant proposal to do research in some area of volcanology relevant to hazards assessment.

Cross-listed as: GEO 5360.
Semester(s) Traditionally Offered: Fall
Course Fee: $60.00

GEO 6400 - Graduate Seminar in Sedimentary Geology (Topic)
1-3 credits

Advanced topics of current interest in sedimentary geology, depositional systems, and basin evolution.

Cross-listed as: GEO 7400
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $100.00

GEO 6440 - Paleoecology
2 credits

Interrelationships between various organisms and between organisms and their environment. Provides field, laboratory, and quantitative techniques for the interpretation of ancient environments and the analysis of past biotic interrelationships. Three lectures and one lab per week. Half semester; may be paired with GEO 5430.

Prerequisite/Restriction: GEO 5430
Cross-listed as: GEO 5440.

Semester(s) Traditionally Offered: Fall
Course Fee: $40.00

GEO 6450 - Deep Time: Studying the Earth’s expansive past
3

The study of Earth’s deep time record is critical for conceptualizing Earth’s beginnings, biotic evolution, plate tectonics, and climate change. This course presents historical and cutting-edge research on such topics within the context of the geologic time scale. Much of the course will be taught in the field on a week-long field trip to Death Valley or Grand Canyon.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

GEO 6460 - Advanced Physical Sedimentology
3 credits

Detailed interpretation of sedimentary rocks, based on petrography and sedimentary characteristics. Source terranes, tectonic settings, depositional environments, and diagenetic changes during burial. Three lectures and two labs per week. Half semester.

Prerequisite/Restriction: GEO 3500 and GEO 3550
Cross-listed as: GEO 5460.
Semester(s) Traditionally Offered: Fall
Course Fee: $60.00

GEO 6470 - Chemical Sedimentary Rocks
2 credits

Application of field observations, hand-sample, thin-
section, and X-ray diffraction analyses to the interpretation of chemical sedimentary rocks. Emphasizes determination of depositional environment and evaluation of diagenetic changes. Three lectures and one lab per week. Half semester.

Prerequisite/Restriction: GEO 3500 and GEO 3550

Cross-listed as: GEO 5470.

Semester(s) Traditionally Offered: Spring
Course Fee: $40.00

GEO 6490 - Facies Analysis of Sedimentary Rocks
3 credits

This course will cover topics including sedimentary processes and results, contacts, facies analysis, sequence stratigraphy, and implications of sedimentologic studies. Lectures, field trips, literature review, and geologic writing will be emphasized, with 6000 level credit earned through student presentations and a semester projects.

Prerequisite/Restriction: GEO 3550

Cross-listed as: GEO 5490

Semester(s) Traditionally Offered: Spring, Taught Alternate Years
Course Fee: $100.00

GEO 6500 - Advanced Igneous Petrology
4 credits

Advanced concepts in the origin and evolution of magmatic systems, effects of different tectono thermal regimes on magma genesis, magma dynamics, and phase equilibria in magmatic systems. Concepts illustrated by rock suites from classic locations. Three lectures and three laboratory hours each week.

Prerequisite/Restriction: GEO 4500 or equivalent

Cross-listed as: GEO 5500.

Semester(s) Traditionally Offered: Fall
Course Fee: $60.00

GEO 6510 - Graduate Seminar in Hydrology (Topic)
1-3 credits

Advanced topics of current interest in hydrology.

Cross-listed as: GEO 5510.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

GEO 6520 - Techniques of Groundwater Investigations
3 credits

Survey of techniques used in groundwater investigations for collecting physical and chemical data. Includes well drilling and construction; water level, flow rate, and discharge measurements; hydraulic and tracer tests; and groundwater sampling.

Prerequisite/Restriction: GEO 5510 or instructor permission

Cross-listed as: GEO 5520.

Semester(s) Traditionally Offered: Spring
Course Fee: $45.00

GEO 6540 - Quantitative Methods in Geology
3 credits

Application of various quantitative methodologies to geologic problems. Two lectures and one lab per week. GEO 6540 requires student presentation on thesis research methodology.

Prerequisite/Restriction: GEO 3500 or GEO 3550 or GEO 3600 or GEO 3700 or instructor permission

Cross-listed as: GEO 5540.

Semester(s) Traditionally Offered: Fall
Course Fee: $60.00

GEO 6550 - Geochemical Application of Electron Microprobe and X-Ray Fluorescence Analysis
4 credits

Theory and application of X-ray fluorescence spectrometry and the electron microprobe to problems in geochemistry and materials analysis. Two hours lecture and six hours laboratory per week.

Prerequisite/Restriction: CHEM 1210 or equivalent, or instructor permission

Cross-listed as: GEO 5550.
Geology

GEO 6560 - Subsurface Analyses: Principles and Techniques
2 credits

Survey of techniques to characterize subsurface geologic environments. Survey of three-dimensional analyses, deep drilling, coring, well-log analyses, subsurface geophysical methods, fluid and stress measurements, and petophysical properties. Graduate students examine and interpret data sets related to research projects.

Prerequisite/Restriction: GEO 3550, GEO 3700, or instructor permission

Cross-listed as: GEO 5560.

Semester(s) Traditionally Offered: Spring

Course Fee: $50.00

GEO 6580 - Geochronology and Thermochronology
3 credits

Constraining the timing and tempo of geological processes is fundamental to geologic research. This course provides an overview of geochronology and thermochronology. Lectures will focus on principles and assumptions of techniques and seminar-style discussions centered on papers applying these methods.

Cross-listed as: GEO 7580

Semester(s) Traditionally Offered: Fall, Odd years

GEO 6600 - Graduate Seminar in Geophysics (Topic)
1-3 credits

Advanced topics of current interest in geophysics.

Cross-listed as: GEO 7600.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring

GEO 6610 - Tectonic Evolution of North America
3 credits

Survey of tectonic styles and processes along plate margins, using the tectonic evolution of western North America as the prime example. Two lectures and one lab per week.

Prerequisite/Restriction: GEO 3700

Cross-listed as: GEO 5610.

GEO 6620 - Global Geophysics
3 credits

Application of physics to understanding geologic processes, the earth's interior, and the theory of plate tectonics. Two lectures and one two-hour lab per week.

Prerequisite/Restriction: GEO 3700 and PHYS 2220

Cross-listed as: GEO 5620.

Course Fee: $45.00

GEO 6640 - Introduction to Seismology
3 credits

This course introduces the mathematical fundamentals of the elastic wave equation, and some basic tools for characterizing seismic sources and imaging variations of material properties in the Earth's interior. For 6000-level graduate credit, students must complete a semester project and additional problem set assignments.

Semester(s) Traditionally Offered: Fall, Odd years

GEO 6690 - Geodesy and Crustal Deformation
3 credits

This course introduces the fundamentals of measurement of the Earth's shape and gravity, and some basic tools for modeling temporal changes in the shape of the Earth's surface and its gravitational potential. 7000 level students will solve additional problems and require a theoretical development component for semester projects.
GEO 6650 - Quaternary Geochronology  
3 credits

This course examines the principles behind the most widely used numerical dating techniques for the Quaternary period (last 2 million years). Discussion will focus on the strengths and weaknesses of each technique and provide examples of their successful applications to a range of geological and geoarchaeological materials and problems.

Cross-listed as: GEO 7650

Semester(s) Traditionally Offered: Spring, Taught Odd Years

Course Fee: $75.00

GEO 6660 - Applied Geophysics  
4 credits

Field-oriented course involving data collection, data analysis, and overview/introduction of geophysical imaging and analysis of the subsurface. For GEO 6660, students must complete a written project and presentation.

Prerequisite/Restriction: MATH 1210, PHYS 2210, PHYS 2220; or instructor permission

Cross-listed as: GEO 5660.

Course Fee: $20.00

GEO 6670 - Inverse Theory  
3 credits

This course introduces the mathematical tools for optimizing model parameters (and estimating uncertainties for a given set of observational measurements. For 6000-level graduate credit, students must complete a semester project and additional problem set assignments.

Prerequisite/Restriction: MATH 1210; MATH 1220 or STAT 3000

Cross-listed as: GEO 5670

Semester(s) Traditionally Offered: Spring Odd Years

GEO 6680 - Paleoclimatology  
3 credits

Covers climate through the past four billion years of geologic time. Explores driving forces behind climate changes. Examines data and methods used in paleoclimate research. Includes discussion of literature and stresses local paleoclimate records. Three lectures per week, along with field trips.

Prerequisite/Restriction: GEO 3600/WATS 3600 or instructor permission

Cross-listed as: GEO 5680 and PSC 6680/PSC 5680 and WATS 6680/WATS 5680.

Semester(s) Traditionally Offered: Spring

Course Fee: $75.00

GEO 6690 - Geodynamics  
3 credits

This course examines the physical processes that drive deformation and a wide variety of the other geological phenomena, including processes and observations of heat transfer, the role of gravity in stress and strain, and the various different flavors of rock rheology. Observational metrics (including geochemistry, laboratory measurements, and geophysical measurements of rock properties) will also be covered. For 6000-level graduate credit, students must complete a semester project and additional problem set assignments.

Cross-listed as: GEO 5690

Semester(s) Traditionally Offered: Fall Even Years

GEO 6700 - Graduate Seminar in Structural Geology (Topic)  
1-3 credits

Advanced topics of current interest in structural geology.

Cross-listed as: GEO 7700.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring
GEO 6800 - Graduate Seminar
1-6 credits

Cross-listed as: GEO 7800

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEO 6820 - Graduate Seminar Series
1 credit

Seminar for graduate students, linked to the Department of Geology's visiting speaker series.

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

GEO 6900 - Graduate Internship/Co-op Experience
1-6 credits

Graduate educational work experience.

Prerequisite/Restriction: Approval of contract between student and department prior to enrollment

Repeatable for credit.
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEO 6970 - Thesis
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEO 6990 - Continuing Graduate Advisement
1-3 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEO 7050 - Graduate Seminar in Tectonics (Topic)
1-3 credits

Advanced topics of current interest in tectonics and orogenesis.

Cross-listed as: GEO 6050.

GEO 7100 - Graduate Seminar in Geomorphology (Topic)
1-3 credits

Advanced topics of current interest in geomorphology and landscape evolution.

Cross-listed as: GEO 6100.

GEO 7120 - Advanced Geomorphology
3 credits

Process geomorphology seminar focusing on hillslope, tectonic, and climatic geomorphology research.

Cross-listed as: GEO 6120.

GEO 7200 - Graduate Seminar in Geochemistry (Topic)
1-3 credits

Advanced topics of current interest in geochemistry.

Cross-listed as: GEO 6200.

GEO 7250 - Mechanics and Processes in Earth Sciences
3 credits

Fundamentals of solid and fluid mechanics with applications to the earth sciences. Applications to rock deformation, fluid flow, glacier movement, and slope stability. Designed for graduate students in earth sciences and engineering. Two lectures, one lab per week.

Prerequisite/Restriction: MATH 1210, PHYS 2210, and graduate standing

Cross-listed as: GEO 6250.

GEO 7250 - Mechanics and Processes in Earth Sciences
3 credits

Fundamentals of solid and fluid mechanics with applications to the earth sciences. Applications to rock deformation, fluid flow, glacier movement, and slope stability.Designed for graduate students in earth sciences and engineering. Two lectures, one lab per week.

Prerequisite/Restriction: MATH 1210, PHYS 2210, and graduate standing

Cross-listed as: GEO 6250.

Course Fee: $75.00

GEO 7200 - Graduate Seminar in Geochemistry (Topic)
1-3 credits

Advanced topics of current interest in geochemistry.

Cross-listed as: GEO 6200.

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

GEO 7250 - Mechanics and Processes in Earth Sciences
3 credits

Fundamentals of solid and fluid mechanics with applications to the earth sciences. Applications to rock deformation, fluid flow, glacier movement, and slope stability. Designed for graduate students in earth sciences and engineering. Two lectures, one lab per week.

Prerequisite/Restriction: MATH 1210, PHYS 2210, and graduate standing

Cross-listed as: GEO 6250.

Semester(s) Traditionally Offered: Spring
Course Fee: $30.00
GEO 7300 - Graduate Seminar in Petrology (Topic)  
1-3 credits  
Advanced topics of current interest in petrology of igneous, metamorphic, or sedimentary rocks.  
Cross-listed as: GEO 6300.
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring

GEO 7350 - Graduate Seminar in Paleontology and Paleoecology (Topic)  
1-3 credits  
Advanced topics in paleontology, paleoecology and the evolution of ancient life.  
Cross-listed as: GEO 6350
Repeatable for credit  
Semester(s) Traditionally Offered: Fall, Spring

GEO 7400 - Graduate Seminar in Sedimentary Geology (Topic)  
1-3 credits  
Advanced topics of current interest in sedimentary geology, depositional systems, and basin evolution.  
Cross-listed as: GEO 6400.
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $100.00

GEO 7450 - Deep Time: Studying the Earth's expansive past  
3  
The study of Earth's deep time record is critical for conceptualizing Earth's beginnings, biotic evolution, plate tectonics, and climate change. This course presents historical and cutting-edge research on such topics within the context of the geologic time scale. Much of the course will be taught in the field on a week-long field trip to Death Valley or Grand Canyon.  
Semester(s) Traditionally Offered: Spring
Effective Term  
Spring

GEO 7500 - Graduate Seminar in Hydrology (Topic)  
1-3 credits  
Advanced topics of current interest in hydrology.  
Cross-listed as: GEO 6510.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

GEO 7550 - Geochronology and Thermochronology  
3 credits  
Constraining the timing and tempo of geological processes is fundamental to geologic research. This course provides an overview of geochronology and thermochronology. Lectures will focus on principles and assumptions of techniques and seminar-style discussions centered on papers applying these methods.  
Cross-listed as: GEO 6580
Semester(s) Traditionally Offered: Fall, odd years

GEO 7560 - Geodesy and Crustal Deformation  
3 credits  
This course introduces the fundamentals of measurement of the Earth's shape and gravity, and some basic tools for modeling temporal changes in the shape of the Earth's surface and its gravitational potential. 7000 level students will solve additional problems and require a theoretical development component for semester projects.  
Cross-listed as: GEO 6590
Semester(s) Traditionally Offered: Fall, Odd years

GEO 7600 - Graduate Seminar in Geophysics (Topic)  
1-3 credits  
Advanced topics of current interest in geophysics.  
Cross-listed as: GEO 6600.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

GEO 7650 - Quaternary Geochronology  
3 credits
This course examines the principles behind the most widely used numerical dating techniques for the Quaternary period (last 2 million years). Discussion will focus on the strengths and weaknesses of each technique and provide examples of their successful applications to a range of geological and geoarchaeological materials and problems.

Cross-listed as: GEO 6650

Semester(s) Traditionally Offered: Spring, Taught Odd Years
Course Fee: $75.00

GEO 7700 - Graduate Seminar in Structural Geology (Topic)
1-3 credits

Advanced topics of current interest in structural geology.

Cross-listed as: GEO 6700.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

GEO 7800 - Graduate Seminar
1-6 credits

Cross-listed as: GEO 6800

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEO 7970 - Dissertation Research
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GEO 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Prerequisite/Restriction: Not open to those with more than one year high school German or equivalent

SEMESTER(S) TRADITIONALLY OFFERED: FALL

GERM 1010 - German First Year I
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: GERM 1010 or at least one (but not more than two) years of German in high school or equivalent

Semester(s) Traditionally Offered: Spring
Course Fee: $24.00

GERM 1800 - German I Study Abroad
1-4 credits

Intensive study in a German-speaking country, advancing proficiency in the four language skills and multicultural knowledge at the beginning level.

Repeatable for credit.
Semester(s) Traditionally Offered: Summer

GERM 2010 - German Second Year I
4 credits

Further development of first-year competencies with emphasis on language structure, vocabulary expansion, reading, writing, and conversation in the context of cross-cultural analysis.

Prerequisite/Restriction: GERM 1020 or equivalent

Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

GERM 2020 - German Second Year II
4 credits

Further development of first-year competencies with emphasis on language structure, vocabulary expansion, reading, writing, and conversation in the context of cross-
GERM 2550 - German Civilization  
3 credits

Covers the most important developments in German-speaking countries from the High Middle Ages to the present. Deals with political, social, literary, historical, and artistic expressions of an emerging culture. Taught in English.

GERM 2570 - Contemporary Germany  
3 credits

Covers the most important elements of contemporary German culture in its literary, social, and artistic manifestations, and the political and historical dimensions of agents of change. Taught in English.

GERM 2800 - German II Study Abroad  
1-4 credits

Intensive study in a German-speaking country, advancing proficiency in the four language skills and multicultural knowledge at the second-year level.

Repeatable for credit.
Semester(s) Traditionally Offered: Summer

GERM 2880 - Individual Readings  
1-4 credits

Individual study of selected readings in German.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

GERM 2988 - Special Problems  
1-3 credits

An elective course intended for advanced students. Students will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. German culture will also be emphasized.

Significant reading and work outside of class are required.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Campus: USU Eastern only

GERM 3000 - Introduction to German Studies (DHA)  
DHA Depth Humanities and Creative Arts  
3 credits

Introduction to the discipline of German Studies (history, literature, the arts, philosophy, science, economics, politics, etc.), addressing information resources, research methods, student career goals, and practice. Advances oral and written language proficiency. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 3040 - Advanced German Grammar and Composition (CI)  
CI Communications Intensive  
3 credits

Thorough review of German grammar and style. Application of rules of writing to compositions. Oral presentations of contemporary topics with graded difficulty. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 3050 - Advanced German Grammar and Composition (CI)  
CI Communications Intensive  
3 credits

Thorough review of German grammar and style. Application of rules of writing to compositions. Oral presentations of contemporary topics with graded difficulty. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

Semester(s) Traditionally Offered: Fall, Spring
GERM 3300 - Contemporary German Speaking Cultures  
(DHA)  
DHA Depth Humanities and Creative Arts  
3 credits

Multidisciplinary examination of current trends in contemporary cultures. Written, oral, visual, and electronic texts from the post-World War II period will be analyzed and placed in sociopolitical, economic, historical, and literary contexts. Emphasis on Germany as a multicultural society, and on related popular and minority cultural discourse. Interactive format. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 3510 - Business German (CI)  
CI Communications Intensive  
3 credits

Study of current German business and commercial practices, terminology, and business-related communications skills in a multi-disciplinary and global world context. Advances the four language skills. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 3540 - Techniques in Translating German Texts (CI)  
CI Communications Intensive  
3 credits


Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 3550 - Cultural History of German Speaking Peoples (DHA)  
DHA Depth Humanities and Creative Arts  
3 credits

Overview and critical analysis of cultural, historical, and intellectual developments that have shaped the civilizations of German-speaking peoples from 800 A.D. until the end of World War II. Examination of written, oral, visual, and electronic texts integrated in the context of Western philosophy and humanist thought. Interactive format. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 3600 - Survey of German Literature I (DHA)  
DHA Depth Humanities and Creative Arts  
3 credits

Overview, with selected readings, of the major literary trends in German-speaking cultures from the medieval period to the early nineteenth century, including the study of genres, epochs, styles, and theories in the context of evolving cultures. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 3610 - Survey of German Literature II (DHA)  
DHA Depth Humanities and Creative Arts  
3 credits

Overview, with selected readings, of the major literary trends in German-speaking cultures from the early nineteenth century to the present, including the study of genres, epochs, styles, and theories in the context of evolving cultures. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 3800 - German III Study Abroad  
1-4 credits

Intensive study in a German-speaking country, advancing proficiency in the four language skills and multicultural knowledge at the third-year level. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

Repeatable for credit.  
Semester(s) Traditionally Offered: Summer

GERM 3880 - Individual Readings  
1-4 credits

Individual study of selected readings in German. Taught in German.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

GERM 4200 - Applied German Linguistics and Phonetics
3 credits

Discussion of syntactical and morphological problems of German, principles of language learning, and analysis of phonological and phonetic patterns. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 4600 - Faust's Legacy
3 credits

Examination of the legendary figure of Faust through historical and contemporary perspectives. Analysis of the Faust theme and character as presented in literature, films, stage productions, and musicals. Taught in English.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 4610 - German Narratives
3 credits

Readings from a wide range of narrative texts representing various historical periods. Focus on literary traditions within historical contexts. Examination of styles, motifs, and the theory of the novel. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 4650 - Trends in Modern German Literature (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Study of literary movements, topics, and styles of modern (twentieth century) German literature. Concentration on texts representing a variety of aesthetic expressions, central to experiences of twentieth-century life. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

GERM 4800 - German IV Study Abroad
1-4 credits

Intensive study in a German-speaking country, advancing proficiency in the four language skills and multicultural knowledge at the fourth-year level.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

Repeatable for credit.

Semester(s) Traditionally Offered: Summer

GERM 4880 - Individual Readings
1-4 credits

Readings in technical, scientific, and literary German. Taught in German.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

GERM 4900 - Special Topics
3 credits

Selected critical topics and themes relating to German literature, culture, film, pedagogy, linguistics, and associated theories. Includes readings in English and German. Content determined by student need and interest. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing

Repeatable for credit.

GERM 4910 - German for Special Purposes
3 credits

Advances German communicative proficiency in the fields of business, science, and pedagogy. Promotes professional applications of German terminologies and procedures for science and commerce, as well as teaching methodology. Discipline-interactive projects advance the four language skills. Taught in German.

Prerequisite/Restriction: GERM 2020 or demonstration of equivalent proficiency through testing
GERM 4920 - German Language Tutoring
1 credit

Allows students to develop tutoring skills by assisting professors in lower-division courses or fulfilling instructional duties for a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated to a maximum of 3 credits. Taught in German.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

GERM 6200 - German Linguistics and Phonetics
3 credits

Discussion of syntactical and morphological problems of German and principles of language learning. Phonological and phonetic patterns of the German language also discussed. Taught in German.

Prerequisite/Restriction: GERM 2020, another 3000-level or higher GERM course, or demonstrated proficiency through testing

Greek

GRK 1010 - Beginning Ancient Greek I
5 credits

Basics of Greek grammar and vocabulary. Beginning readings.

Prerequisite/Restriction: LATN 1010, LATN 1020

Semester(s) Traditionally Offered: Fall

GRK 1020 - Beginning Ancient Greek II
5 credits

Intermediate concepts of Greek grammar and vocabulary. Intermediate readings.

Prerequisite/Restriction: Minimum grade of B in GRK 1010

Semester(s) Traditionally Offered: Spring

GRK 3300 - Intermediate Greek Prose
3 credits

Readings in ancient Greek prose.

Prerequisite/Restriction: Minimum grade of B in GRK 1020

Semester(s) Traditionally Offered: Fall

GRK 3330 - Intermediate Greek Poetry
3 credits

Readings in Greek poetry.

Prerequisite/Restriction: Minimum grade of B in GRK 3300

Semester(s) Traditionally Offered: Spring

GRK 4300 - Advanced Greek Readings
3 credits

Readings in Ancient Greek poetry and/or prose.

Prerequisite/Restriction: Minimum grades of B in GRK 3300 and GRK 3330

Repeatable for credit.

GRK 4930 - Directed Readings in Greek Poetry and Prose Authors
1-3 credits

Directed readings in advanced Greek poetry and prose authors.

Prerequisite/Restriction: Successful completion of at least three semesters of Greek

Semester(s) Traditionally Offered: Fall, Spring, Summer

Health (USU Eastern)

HEAL 0020 - First Aid
4 contact hours

Learn how to respond to common first aid emergencies, including burns; cuts; head, neck and back injuries and more. Pediatric option available.

Campus: USU Eastern only
HEAL 0030 - CPR
4 contact hours

Learn how to respond to cardiac and breathing emergencies in adults, including the use of automated external defibrillators (AED). Adult and infant/child CPR options available.

Campus: USU Eastern only

HEAL 0100 - Certified Nursing Assistant Course
1-180 contact hours

Students who complete this course will learn the holistic approach to safely caring for patients in a variety of settings and will develop a basic understanding of how healthcare systems operate and how to function efficiently within a facility. After completing this course and passing a state examination, students will play an essential role on a healthcare team by observing, reporting, and performing skills learned within this course. Students will understand how to work on a healthcare team to meet the patient needs.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

HEAL 0105 - Certified Nursing Assistant Clinical
1-60 contact hours

Students in this course will gain experience for the Certified Nursing Assistant program through the performance of simple nursing skills that are appropriate for the profession. For example, students will learn personal hygiene, intake and output, bed making, etc. Students are required to complete hands-on clinical training at a long-term nursing facility. Training is supervised by state-approved clinical instructors.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

HEAL 0110 - Certified Nursing Assistant First Aid/CPR
1-30 contact hours

Students will learn to know and recognize when and how to use CPR and what is considered a life-threatening condition. Students will be able to recognize an emergency and be able to perform basic First aid and CPR. A student can become certified in First Aid and CPR.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

HEAL 0120 - Certified Nursing Assistant Written Exam Refresher
12 contact hours

This course will provide students a refresher on the pertinent information in preparing to take the Certified Nursing Assistant State Written examination.

Campus: USU Eastern only

HEAL 0130 - Certified Nursing Assistant Skills Exam Refresher
12 contact hours

This course will provide students a refresher on the pertinent information in preparing to take the Certified Nursing Assistant State Skills examination.

Campus: USU Eastern only

HEAL 0200 - EMT Basic Certification
128 contact hours

This course will provide the student with the skills necessary to perform the basic duties of an Emergency Medical Technician. Students will learn how to recognize the nature and seriousness of a patient’s condition, or the extent of injuries, to assess requirements for emergency care and to administer appropriate care based on assessment findings. Students will be taught how to lift, move, position, or otherwise handle the patient to minimize discomfort and prevent further injury; perform triage at a mass casualty site; and perform safely and effectively the skills of an Emergency Medical Technician.

Campus: USU Eastern only

HEAL 0300 - Introduction to Medical Terminology
90 contact hours

This course provides the student with the skills necessary to interpret and understand medical terminology, in order to be successful in the pursuit of
health occupation careers. This is accomplished by utilizing a method of study that not only instructs the students in building medical terms but also gives the student immediate application in utilizing the medical term.

Campus: USU Eastern only

HEAL 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

HEAL 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

HEAL 1020 - Responding to Emergencies
2 credits

First Aid for the non-major and is an elective course. This course will offer training for everyday use, by matching American Red Cross standards for Responding to Emergencies and Community CPR courses.

Campus: USU Eastern only

HEAL 1030 - Medical Assisting: Administrative Competencies
4 credits

Focuses on knowledge necessary to perform medical assistant administrative duties. Includes introduction to the medical assisting and health profession, ethics, safety, and security in the medical office, integrated administrative procedures, health insurance, medical coding and billing. Communication and management skills in leadership, conflict resolution, and customer service are emphasized.

Campus: USU Eastern only

HEAL 1600 - Medical Assisting
6 credits

Focuses on knowledge necessary to perform clinical competencies as a medical assistant. Includes emergency procedures and first aid, therapeutic approach, integrated clinical procedures, diagnostic procedures, and laboratory procedures.

Prerequisite/Restriction: NURS 1000 or concurrent enrollment in NURS 1000

Campus: USU Eastern only

HEAL 1700 - Medical Assisting Internship
4 credits

Designed to provide for student attainment of the Entry Level Competencies for the Medical Assistant. Placement in an ambulatory health care setting is required. In an actual work situation, students will perform both administrative and clinical competencies. Administrative competencies include performance of clerical functions, bookkeeping procedures and preparation of special accounting entries. Clinical competencies include knowledge of fundamental principles, specimen collection, diagnostic testing and patient care. Transdisciplinary competencies will be integrated in both the clinical and administrative areas. These include communication, legal concepts, patient instruction and operational functions.

Prerequisite/Restriction: HEAL 1030 or HEAL 1600 or concurrent enrollment in HEAL 1030 or HEAL 1600

Campus: USU Eastern only

HEAL 1860 - Phlebotomy and Clinical Laboratory
2 credits

Focuses on the knowledge and skill necessary to perform phlebotomy and specific clinical laboratory duties. Skills include drawing blood, obtaining blood cultures, using Lancet or a Microlance for a Microdraw or an Infant Heel Stick, and measuring bleeding time.

Campus: USU Eastern only

HEAL 2020 - Emergency First Response
3 credits

Designed to meet the skill requirements of students majoring in health related fields and for those working in fields requiring the individual to respond with first aid in the line of duty. Meets or exceeds American Red Cross
standards for Emergency Response and CPR for the Professional Rescuer and standards for the Utah Emergency Medical Training Council First Responder Course.

Campus: USU Eastern only

HEAL 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in health. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

HEAL 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

Health Education and Promotion

HEP 2000 - First Aid and Emergency Care
2 credits

Provides instruction and practical experience for the development of first aid knowledge, skills, and personal judgment. Focuses on recognizing emergencies, activating EMS, and providing direct care.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $25.00

HEP 2300 - Cardiopulmonary Resuscitation
1 credit

Techniques and skills of adult, child, and infant airway management and cardiopulmonary resuscitation for the lay person (one rescuer). Taught according to current standards.

Semester(s) Traditionally Offered: Arranged

HEP 2500 - Health and Wellness
2 credits

Designed to enable students to enhance personal wellness by gaining understanding about the social, physical, spiritual, and emotional dimensions of health, and by applying different strategies for improving personal health behaviors.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 3000 - Drugs and Human Behavior
3 credits

Students evaluate the historical and modern use, misuse, and abuse of drugs in relation to current concepts of physical, social, and emotional wellness. Special emphasis on educational and community strategies for prevention of drug-related problems.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 3100 - School Health Programs
3 credits

Essentials of the existing paradigm of Comprehensive School Health Programs and their development in relation to current child health status. Assessment, planning, implementation, and evaluation.

Prerequisite/Restriction: Formal acceptance into the School Health Education Emphasis or School Health Minor or instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Arranged

HEP 3200 - Consumer Health
3 credits

Focuses on helping students become discriminating consumers of health information, health products, and health services.

Campus: Online.
Semester(s) Traditionally Offered: Fall, Summer

HEP 3300 - Clinical Experience I
1 credit

Clinical experience in school health education.
HEP 3400 - Stress Management
3 credits

Concepts and principles of personal stress management, with special emphasis on effective stress management coping strategies, maximizing positive stress outcomes, and minimizing negative stress effects, to aid in obtaining and maintaining a balanced health homeostatic condition.

Campus: Online.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 3500 - Elementary School Health Education
2 credits

Explores child health status and the vital roles that the school/elementary teacher plays in enabling children to acquire healthful lifestyle behaviors while increasing their potential for academic success.

Semester(s) Traditionally Offered: Arranged

HEP 3600 - Introduction to Community Health (CI)
CI Communications Intensive
3 credits

Introduction to agencies, facilities, and programs playing a role in protection and promotion of health in the community. Special emphasis on competencies necessary for the health educator to function in a variety of community settings.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 3700 - Introduction to Epidemiology for Health Educators
3 credits

This class is an introductory epidemiology for students in health education. The primary goal for this class is to discuss fundamental knowledge and understandings of epidemiology as a health educator or health professional in the field.

Prerequisite/Restriction: One of any statistics classes

Semester(s) Traditionally Offered: Fall, Spring

HEP 3800 - Health Care Systems
3 credits

The course reviews the history of how the U.S. health care system was developed and explores the complexities of various delivery systems including: providers, accessibility, quality of care, health care financing, insurance carriers, etc.

Semester(s) Traditionally Offered: Fall

HEP 3900 - Social Marketing in Health Education
3 credits

Explores social marketing techniques used in health promotion and examines the marketing process, which includes formative research, target audience analysis and segmentation, marketing mix, marketing strategies, pretesting, implementation, and evaluation.

Prerequisite/Restriction: HEP 3600 Enrollment limited to Community Health Education and Public Health Education majors only

Semester(s) Traditionally Offered: Spring

HEP 4000 - Health Services Administration
3 credits

This course explored the management, general environment, types and structures of health services organizations and systems. The course also reviews the manager's role in ethical and legal concerns, problem solving, the “quality” environment, and marketing and allocating resources.

Semester(s) Traditionally Offered: Spring

HEP 4100 - Foundations of Community Health
3 credits

Professional preparation course for health education
majors. Primary emphasis on ethical issues, behavioral and sociological theories used in the profession, philosophical issues, technology, and health education methodologies.

Prerequisite/Restriction: HEP 2500

Semester(s) Traditionally Offered: Fall, Spring

HEP 4200 - Planning and Evaluation for Health Education (QI)
QI Quantitative Intensive
3 credits

Provides indepth study of planning, implementation, and evaluation of school and community health education programs. Students obtain hands-on experience planning a health education program.

Prerequisite/Restriction: HEP 3600; MATH 1050 or STAT 1040 or STAT 1045

Semester(s) Traditionally Offered: Fall

HEP 4250 - Advanced Cooperative Work Experience
1-15 credits

Professional-level cooperative education work experience as student advances toward completion of the program.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 4300 - Clinical Experience II
1 credit

Clinical experience in school health education.

Prerequisite/Restriction: Acceptance into School Health major or minor and Admission into Teacher Education

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

HEP 4400 - Creative Methods in Teaching Health Education
3 credits

Planning, designing, and evaluating comprehensive school health education curricula and instruction for secondary school students, utilizing various creative instructional strategies and materials. Participation in peer teaching experiences.

Prerequisite/Restriction: HEP 2500; Student in School Health Emphasis or School Health minor must be admitted to the Teacher Education Program

Semester(s) Traditionally Offered: Fall, Spring

HEP 4500 - Sexuality Education Within the Schools
3 credits

Emphasizes broad understanding of human sexuality, with specific focus on adolescent sexuality/behavior, age and topic appropriate instruction, state law, and effective curriculum стратегии for human sexuality education within the secondary schools.

Prerequisite/Restriction: Formal acceptance into the School Health Education emphasis or School Health minor, or instructor permission

Semester(s) Traditionally Offered: Spring

HEP 4600 - Field Work in Health Education
1-6

Supervised student participation in school or community health programs or directed projects.

Prerequisite/Restriction: HEP 3600, HEP 4100, HEP 4200 and instructor permission

Repeatable
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring

HEP 4700 - Honors Senior Thesis
1-6 credits

Requirements for the honors thesis include: (1) a detailed review of scholarly literature on the health topic of interest to the student, and (2) the collection of primary data on the topic of interest (e.g., through interviews, surveys, focus groups, etc.), which must include references. The student must meet regularly with
the faculty mentor, who will help with the development of the honors thesis.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 4800 - Human Diseases
3 credits

This course explores the body systems and common diseases that afflict them. Risk factors are identified with a focus on risk reduction and the implementation of health promotion strategies in order to prevent or intervene in the disease process.

Semester(s) Traditionally Offered: Fall, Spring

HEP 5000 - Race, Culture, Class, and Gender Issues in Health (CI)
CI Communications Intensive
3 credits

Focuses on how multicultural issues affect health status and health choices. Special emphasis on how race, ethnicity, culture, socioeconomic status, and gender impact health status and access to health care.

Prerequisite/Restriction: Junior standing, ENGL 2010, HEP 2500

Semester(s) Traditionally Offered: Fall, Spring

Effective Term
Summer 2016

HEP 5100 - Cultural and Complementary Medicine (CI)
CI Communications Intensive
3 credits

Provides in-depth view into health beliefs, traditions, and practices of various cultures and of the major minority groups in the U.S. Emphasizes ancient, eastern, and native health practices collectively known as complementary medicine and healing modalities.

Semester(s) Traditionally Offered: Arranged

HEP 5200 - Foundations of Global Health
3 credits

The purpose of this course is to provide an introduction to health promotion practice and public health from a global perspective.

Prerequisite/Restriction: Junior standing

Semester(s) Traditionally Offered: Arranged

HEP 5300 - Grant Writing for Health Educators
3 credits

Teaches practical skills needed to plan and write proposals for federal, state, local, and private funding. Students develop proposals in area in which they have developed expertise, and coordinate with a local agency for funding.

Prerequisite/Restriction: HEP 2500 and fulfillment of Communications Literacy CI2 requirement Enrollment limited to Health Education and Public Health majors only

Semester(s) Traditionally Offered: Spring

HEP 5400 - Prevention Strategies for Obesity and Disordered Eating
3 credits

Promoting healthy behaviors using a “Health at Every Size” approach will be the primary goals of the course. Evidence-based programs for obesity and disordered eating prevention will be discussed. Additionally, students will discuss on issues related to obesity and disordered eating (e.g., weight stigma, media literacy, bullying).

Prerequisite/Restriction: Junior standing for Undergraduate students

Semester(s) Traditionally Offered: Fall, Spring

HEP 5500 - Student Teaching Seminar
2 credits

Weekly seminar dealing with the professional practice of school health education.

Prerequisite/Restriction: HEP 4400

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

HEP 5630 - Student Teaching
10 credits

Practical experience teaching health in the public school
Prerequisite/Restriction: HEP 4400

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $300.00

HEP 5700 - Special Topics in Health
1-6 credits

In-depth review and discussion of special topics in health. May be graded Pass/Fail, as determined by instructor or section.

Repeatable for credit.
Semester(s) Traditionally Offered: Arranged

HEP 5900 - Independent Study
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 5950 - Independent Research
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 6000 - Evaluating Health-Promotion Programs
3 credits

Students learn to develop and carry out a health-promotion program evaluation, interpret the results of an evaluation, and identify implications for future program planning.

Semester(s) Traditionally Offered: Spring

HEP 6100 - Current Trends in Health Promotion
3 credits

Focuses on trends and issues in the promotion of health behaviors in a variety of settings. Analyzes and challenges prevailing assumptions and philosophies in relation to health promotion.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall

HEP 6250 - Graduate Cooperative Work Experience
1-15 credits

Professional level of education work experience in a cooperative education position for graduate students.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 6300 - Stress Management
3 credits

Explores concepts and principles of personal stress management, with special emphasis on effective stress management coping strategies, maximizing positive stress outcomes, and minimizing negative stress effects, thus aiding in obtaining and maintaining a balanced, healthy homeostatic condition.

Semester(s) Traditionally Offered: Arranged

HEP 6500 - Proposal Seminar for Health Education
2 credits

During this seminar, second-year health education graduate students develop a thesis proposal adhering to departmental, college, and University guidelines. Students apply what they have learned in theory, research methods, and statistics courses for the final proposal.

Prerequisite/Restriction: EDUC 6570, EDUC 6600, and HEP 6800; or consent of instructor

Pass/Fail only.
Semester(s) Traditionally Offered: Arranged

HEP 6600 - Field Work in Health Education
3-6 credits

Supervised student participation in school or community health projects or directed projects.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
HEP 6700 - Special Topics in Health
1-6 credits

In-depth review and discussion of special topics in health.

Repeatable for credit.
Semester(s) Traditionally Offered: Arranged

HEP 6800 - Seminar in Health Behavior
3 credits

Explores current theoretical perspectives in relation to behaviors. Students critically examine theories commonly used in health education. Focuses on practical application of theory in health promotion programs.

Semester(s) Traditionally Offered: Fall

HEP 6900 - Independent Study
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 6950 - Independent Research
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 6970 - Thesis
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HEP 6990 - Continuing Graduate Advisement
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Heavy Equipment and Trucking (USU Eastern)

HETR 0100 - Forklift Refresher
30 contact hours

This course is designed for a person who has industry experience with the forklift or has previously been certified on the forklift. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0110 - Forklift Journeyman Certification
8 contact hours

This course is designed for a person who has industry experience and has met the minimum qualifications as a journeyman on the forklift. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0200 - Dozer Refresher
30 contact hours

This course is designed for a person who has industry experience on dozer or has previously been certified on the dozer. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0210 - Dozer Journeyman Certification
8 contact hours

This course is designed for a person who has industry experience and has met the minimum qualifications as a journeyman on the dozer. It will include instruction on proper equipment pre qualifications as a journeyman on the dozer. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only
HETR 0300 - Front End Wheel Loader Refresher
30 contact hours

This course is designed for a person who has industry experience on front end wheel loader or has previously been certified on the front end wheel loader. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0310 - Front End Wheel Loader Journeyman Certification
8 contact hours

This course is designed for a person who has industry experience and has met the minimum qualifications as a journeyman on the front end wheel loader. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0400 - Tractor Loader Backhoe Refresher
30 contact hours

This course is designed for a person who has industry experience on tractor loader backhoe or has previously been certified on the tractor loader backhoe. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0410 - Tractor Loader Backhoe Journeyman Certification
8 contact hours

This course is designed for a person who has industry experience on track hoe or has previously been certified on the track hoe. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0500 - Road Grader Refresher
30 contact hours

This course is designed for a person who has industry experience on road grader or has previously been certified on the road grader. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0510 - Road Grader Journeyman Certification
8 contact hours

This course is designed for a person who has industry experience and has met the minimum qualifications as a journeyman road grader. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0600 - Track Hoe Refresher
30 contact hours

This course is designed for a person who has industry experience on track hoe or has previously been certified on the track hoe. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.

Campus: USU Eastern only

HETR 0610 - Track Hoe Journeyman Certification
8 contact hours

This course is designed for a person who has industry experience on track hoe and has met the minimum qualifications as a journeyman. It will include instruction on proper equipment pre inspection, start up, safe maneuvering, workplace hazard training, equipment shutdown, and post inspection. This is not the full course; it is designed only as a refresher course.
The first step will be to refresh on Hours of Service (Log Books) and other Laws and Regulations. Next the student is to begin preparation for a Pre-Trip exam and must pass it off and also other necessary knowledge of the vehicle. Next the student will receive instruction on the Backing Skills Course and will need to pass a Backing skills test. Finally the student will receive instruction on driving “Behind the Wheel” and with trailers and cornering of the semi-tractor trailer rig, pass off a road test. All objectives will need to be passed off by the third week of class time. (Class time may be extended only because of events or holidays that may conflict with the refresher schedule). If a student misses any other days, it is up to them to make up the missed days and the University is not responsible to provide extra days (certain emergencies may be considered). If a student does not pass on time then additional fees will be assessed. All determination of someone’s eligibility to enter as or complete a refresher is strictly up to the Instructor. The course includes: Use of assigned equipment (trucks, trailers, etc.), instruction bookwork, handouts, tests, computer access. etc. One Class A or B pretrip, skills and road test and if applicable, one time test at Driver License Division for: general knowledge, air brakes and combination vehicle tests is required.

The brake adjustment certification is a necessary certification for any person who is adjusting their own brakes on any Commercial Motor Vehicle in accordance with federal Motor Carrier Safety Administration’s (FMCSA’s) provisions: 396.25(1)(2)(3)CFR FMCSR. At the end of this course a person will have received the classroom and hands on training to be certified as described above.

Individual work approved by the department instructor. Time and membership hours to be arranged.

Individual work approved by the department instructor. Time and membership hours to be arranged.

Individual work approved by the department instructor. Time and membership hours to be arranged.

Students will learn field troubleshooting on a variety of equipment including engines, transmissions, final drives, and electrical/battery systems. Safety training will be emphasized in all aspects of general maintenance.

Students will learn theory and practical operation of a front end loader, and related pieces of equipment. Students will demonstrate all phases of operation from pre-shift to post-shift inspections, safety operation, truck loading, rough grading excavation, fueling, lubrication, and field troubleshooting.

Students will learn theory and practical operation of tractor loader backhoe. Students will demonstrate competence in trenching, hazardous digging, demolition, truck loading, and grading. Field troubleshooting lubrication, general maintenance, and special emphasis on safety and hazard awareness.

Students will learn theory and practical operation of a motor grader. Students will demonstrate competence in...
pre-shift and post-shift inspections, finish grading, road maintenance, snow removal, safety roading, grade stake reading, field troubleshooting, lubrication, and basic maintenance.

Campus: USU Eastern only

HETR 1660 - Dozer Operation
2 credits

Students will learn theory and practical operation of a dozer. Students will demonstrate competence in pre-shift and post-shift inspections. Students will also show competence in safe operation, excavation demolition, slot dozing, road building, push cat and cutting grade, fueling, lubrication, and field troubleshooting.

Campus: USU Eastern only

HETR 1670 - Fork Lift Operation
2 credits

Course focuses on knowledge necessary to be a certified forklift operator. Content includes pre-operation vehicle-inspection, vehicle capacity and stability, SAFE operating instruction, and maintenance requirements. Students will become familiar with safe load manipulation, stacking and unstacking load, pedestrian traffic where the vehicle will be operated, and will cover narrow aisles and other restricted places where the vehicle will be operated.

Campus: USU Eastern
Semester(s) Traditionally Offered: Fall, Spring, Summer

HETR 2760 - Dump and Trailering
2 credits

Students will learn theory and practical operation of a dump truck and drop deck low-boy trailer, the safest way to load and lash each piece of equipment for transport, P.T.O. operation, overhead hazards, safe backing, fueling, lubrication, chain and boomer safety, tire care, and safety.

Campus: USU Eastern only

HETR 2770 - Laws and Regulations
4 credits

Theory course which describes laws and regulations, defensive driving, principles of haulage and operation of equipment, safety procedures, and preparation for examination. This course, along with HETR 2780 and HETR 2790, is intended to prepare students for their Commercial Driver's License (CDL) and employment in the trucking industry. Intended to provide the material and experience necessary to pass the written exam for the class A Commercial Drivers License.

Campus: USU Eastern only

HETR 2780 - Maintenance
3 credits

Includes lubrication, fluid maintenance, tire and wheel maintenance, electrical maintenance, driving observation, and testing based on knowledge, skills and safety attitude. This course, along with HETR 2770 and HETR 2790, is intended to prepare students for their Commercial Drivers License (CDL) and employment with the trucking industry.

Campus: USU Eastern only

HETR 2790 - Behind the Wheel
6 credits

Covers on and off highway procedures, driving with and without loads, turning, cornering, backing, braking (gear and pedal), shifting, road speeds, traffic, signals, road signs, pre and post shift inspections. This course, along with HETR 2770 and HETR 2780, is intended to prepare students for their Commercial Driver's License (CDL) and employment in the trucking industry.

Campus: USU Eastern only

HETR 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in heavy/equipment and trucking. The student meets with the instructor/coordinate periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

HETR 2988 - Special Problems
1-3 credits
Individual work approved by the instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

History

HIST 1060 - Introduction to Islamic Civilization (BHU)
BHU Breadth Humanities
3 credits

Survey of Islamic civilization from the Prophet Muhammad to the present.

HIST 1100 - Foundations of Western Civilization: Ancient and Medieval (BHU)
BHU Breadth Humanities
3 credits

Survey of institutions and developments of early and medieval Western civilization from its Mediterranean origins to the beginning of the early modern period.

HIST 1110 - Foundations of Western Civilization: Modern (BHU)
BHU Breadth Humanities
3 credits

Survey of the institutions and developments in Western civilization from 1500 to the present.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 1120 - The Latin and Greek Element in English
3 credits

Survey of classical word roots in English, with a view to enhancing students’ comprehension of English vocabulary and its Indo-European heritage.

Cross-listed as: CLAS 1120

HIST 1500 - Pre-Modern World (BHU)
BHU Breadth Humanities
3 credits

Surveys pre-Nineteenth Century cultural and economic interactions in important zones of exchange. Regional focus determined by instructor. Themes may include: trade, religious conversion, migration, slavery, warfare, and other types of cross-cultural exchange.

Semester(s) Traditionally Offered: Fall, Spring

HIST 1510 - The Modern World (BHU)
BHU Breadth Humanities
3 credits

Survey of world history from the beginning of the nineteenth century to the present.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 1600 - American Cultures in Film
3 credits

Introduction to major ethnic groups in America and their treatment in recent feature films.

Cross-listed as: ENGL 1600.

Semester(s) Traditionally Offered: Fall, Spring

HIST 1700 - American Civilization (BAI)
BAI Breadth American Institutions
3 credits


HIST 2010 - Special Topics Seminar
3 credits

Study of special cross-cultural topics, including Imperial Paris, British India, Slavery in America, and Ute History.

HIST 2018 - Native American History and Culture (BSS)
BSS Breadth Social Sciences
3 credits

Provides a broad overview of Native American history from pre-history to the present. First half of the course emphasizes an anthropological approach to the study of the origins and reality of historical and contemporary Native American peoples. Topics include early colonization of North America, diversity of aboriginal cultures, the great ancestral civilizations of Mesoamerica and South America, and Native America in the 20th and 21st centuries. Second half of the course examines the process and results of conquest and colonization, the United States government Indian policy, and the
persistence of Native American culture and tribal identity throughout the modern era. Course employs discussion, lecture, independent reading and writing projects, participation in Native American cultural activities and Native American history in film.

Prerequisite/Restriction: Previous anthropology experience or coursework is suggested.

Cross-listed as: ANTH 2018

Campus: USU Eastern only

HIST 2210 - Introduction to Folklore (BHU)
BHU Breadth Humanities
3 credits

Introduction to major genres of folklore (folk narrative, custom, folk music and song, vernacular architecture and arts), folk groups (regional, ethnic, occupational, familial), and basic folklore research method (collecting and archiving).

Cross-listed as: ANTH 2210 and ENGL 2210.

Semester(s) Traditionally Offered: Fall, Spring

HIST 2700 - United States to 1877 (BAI)
BAI Breadth American Institutions
3 credits

Survey of the development of American society, economy, culture, and politics to 1877.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 2710 - United States 1877-Present (BAI)
BAI Breadth American Institutions
3 credits

Survey of the development of American society, economy, culture, and politics since 1877.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 2720 - Survey of American Folklore
3 credits

Principal ethnic, regional, and occupational folk groups in America. Relations between folklore and American history, literature, and society. Key genres in American folklore (narrative, art, song, etc.) and their role in American culture.

Cross-listed as: ENGL 2720 and ANTH 2720

Semester(s) Traditionally Offered: Spring

HIST 2730 - Navajo History and Culture
3 credits

This is an introductory course in the survey of Navajo history and culture, ranging from prehistoric through contemporary times on both a local and trans-southwestern level. Lecture, discussion, film and readings provide the student with a visual and interactive approach to learning.

Campus: USU Eastern only

HIST 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Campus: USU Eastern only

HIST 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit

Campus: USU Eastern only

HIST 3000 - History Research Methods
3 credits

This course is a foundational course for the History major. In it, students will learn to scan the historical literature; identify and articulate a researchable historical problem; find, synthesize and analyze the most relevant historical literature related to that research problem; and develop a research proposal that outlines the importance of the historical problem and the methods and primary sources that would apply to addressing that problem. Preparatory to HIST 4990.
HIST 3010 - Introduction to Buddhism (3 credits)

General survey of historical development, basic doctrine, and practice of Hinayana and Mahayana Buddhism.

Cross-listed as: RELS 3010.

HIST 3020 - Introduction to Hinduism (DHA) (3 credits)

Surveys history, doctrinal developments, and sociological concerns of Hinduism from the Vedic Period through the Modern Period. Focuses primarily on Hindu religious thought as applied to Hindu life through various modes of religious action.

Cross-listed as: RELS 3020.

HIST 3030 - Introduction to Islam (DHA) (3 credits)

This course will focus on understanding Islam through the examination of what Muslim jurists, theologians, exegetes and traditionalists think of their own traditions. This course will focus on the core beliefs, practices, scriptures and sentiments that have defined historically Muslim communities. In addition, the course aims to examine the spiritual dimensions, the theological discourses and the legal maxims of the Muslim traditions.

Cross-listed as: ARBC 3030 and RELS 3030.

HIST 3070 - Perspectives in Folklore (DHA) (3 credits)

In-depth consideration of a rapidly emerging area of folklore studies: digital culture. Explores folklore in a digital context, folk groups and communities developed via communication technologies, and virtual ethnography.

Cross-listed as: ENGL 3070.

HIST 3110 - Ancient Near East (DHA/CI) (3 credits)

Survey of history and civilization of ancient Mesopotamia, Egypt, and Israel, from prehistory to 500 B.C. Writing intensive.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Cross-listed as: ARTH 3110.

HIST 3130 - Greek History (DHA/CI) (3 credits)

History of Greece from Neolithic period to modern times. Special emphasis on politics, art, literature, and civilization. Writing intensive.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

HIST 3150 - Roman History (CI) (3 credits)

History of Rome from Neolithic era to “fall” of the Western Empire. Special emphasis on politics, art, literature, and civilization. Writing intensive.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

HIST 3160 - Classical Drama and Society (3 credits)

Review and analysis of the nature and function of ancient Greek and Roman drama in its theatrical, historical, and social context. Focuses on the major dramatists of classical antiquity.
Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Cross-listed as: CLAS 3160.

Semester(s) Traditionally Offered: Fall, Spring

HIST 3170 - Descent and Return: Ancient Views of Hades and the Afterlife
3 credits

This course will focus on classical views of Hades and the afterlife, paying special attention to the gods and heroes, such as Persephone, Odysseus, Orpheus, and Aeneas, who were able to make the journey down into Hades while alive and then return back to the upper world. We will also discuss the historical background to the works and related religious and literary themes.

Cross-listed as: CLAS 3170/RELS 3170

Effective Term
Spring

HIST 3210 - Classical Mythology
3 credits

Introduces major myths of the Classical world. Explores how these myths serve as keys to understanding the documents and arts of Classical civilization.

Cross-listed as: ARTH 3210, CLAS 3210 and RELS 3210

HIST 3220 - Medieval European Civilization, 500-1500
DHA/CI
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits

Provides students with overview of major themes in medieval European history from 500 to 1500 A.D. Also introduces major historiographical problems related to this period. Writing intensive and document based.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Cross-listed as: RELS 3220

HIST 3225 - Medieval Britain, 500-1500
3 credits

Focuses on changes to English politics, religion and society brought on by the Anglo-Saxon and Viking invasions, Norman Conquest, Black Death and Wars of the Roses. Particular emphasis is given to the development of the common law and Parliament.

Effective Term
Spring

HIST 3230 - Early Modern Europe (DHA)
Depth Humanities/Creative Arts
3 credits

Explores major themes of early modern European history, such as secularization, the rise of the nation state, the Reformation, and the birth of capitalism. Introduces major historiographical issues of the period. Reading and writing intensive.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

HIST 3240 - Modern Europe from 1789 to the Present
3 credits

Historical survey of Europe from the French Revolution to the present, with special emphasis on political and cultural implications of imperialism.

Prerequisite/Restriction: HIST 1110

HIST 3250 - Renaissance Europe 1300 to 1520 (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits

Emphasizing writing and primary sources, covers significant changes in Europe in government, society, and intellectual life caused by the Black Death, the humanist revolution in arts and literature, and the centralizing efforts of popes and monarchs.

HIST 3270 - The Crusades (DHA)
DHA Depth Humanities and Creative Arts
3 credits

This course follows the evolution of the concept of holy war in Europe, western Asia and North Africa from the European campaigns to Jerusalem in the 1000s CE to the expansion of the Muscovite and Ottoman empires in the 1500s.
Cross-listed as: RELS 3270

Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2015

HIST 3280 - East Central Europe Since 1520
3 credits

Examines history of East Central Europe, with special emphasis on growth of nationalism and establishment of the states of Czechoslovakia, Hungary, and Poland. Emphasizes research and writing.

HIST 3320 - Tsarist Russia
3 credits

Political, economic, and cultural development of Russian people to 1917. Writing and computer intensive.

HIST 3330 - The Soviet Experiment
3 credits

This course surveys Soviet history, beginning with an examination of the decaying and anachronistic Russian Empire, and the 1917 revolution that saw its end, and concluding with a look at the causes and consequences of the USSR's collapse in 1991.

Semester(s) Traditionally Offered: Fall
Effective Term
Spring

HIST 3410 - The Modern Middle East
3 credits

Examines history of the Middle East (Arabian peninsula, Fertile Crescent, Egypt, Iran, and Turkey), with special emphasis on social and political currents which have shaped the area’s history.

HIST 3460 - Comparative Asian History
3 credits

Surveys history of Asian continent, analyzing common patterns in the cultures of West, South, Southeast, and East Asia.

HIST 3470 - Religion and Politics in South Asia
3 credits

This course offers an introduction to South Asian religious-political history combined with an examination of how religion and politics intersect in India and Pakistan, with a focus on the 19th and 20th centuries.

Cross-listed as: RELS 3470

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring

HIST 3482 - Ancient China to 1800
3 credits

This course traces the emergence of political states within China and their eventual unification into a single empire, an institution that persisted for millennia. The development of literature, religion, philosophy, and material culture in Chinese society all played a role in shaping the character of what became China today.

Cross-listed as: RELS 3482

HIST 3483 - Modern China, 1800 to Present (CI/DHA)
CI/DHA Communications Intensive/Depth Humanities/Creative Arts
3 credits

This course examines the dramatic clash of Chinese and Western cultures that spawned China’s search for a modern identity. Conclude course with discussion of China’s current challenges and future prospects.

HIST 3510 - Africa and the World
3 credits

Explores foundation of Africa’s contemporary problems. Surveys Africa’s history of interactions with Asia and Europe. In addition to writing several short essays covering readings and films, students investigate an aspect of cultural, political, or economic interaction and prepare a short research paper.

HIST 3530 - African Environmental History (DHA)
DHA Depth Humanities and Creative Arts
3 credits
Surveys changing historical relationship between Africans and their physical environment. Readings cover ecological change in arid, savanna, rain forest, and montane environments. Students also survey and evaluate the methods and sources used by environmental historians to explain environmental stress, degradation, and rehabilitation.

**HIST 3550 - Culture of East Asia (DHA)**
DHA Depth Humanities and Creative Arts 3 credits

Helps students explore and appreciate the culture of three East Asian countries: China, Japan and Korea. Students gain sincere view and understanding of these East Asian cultures through readings, hands-on cultural activities, viewing video materials, writing, and discussions. Topics include: major historical and social events, customs and traditions, thoughts and beliefs, people, food, contemporary issues, art, literature, and film.

Cross-listed as: ANTH 3550 and LANG 3550.

**HIST 3560 - Modern East Asia (DHA)**
DHA Depth Humanities and Creative Arts 3 credits

Survey of the modern history of East Asia through use of chronological narrative while also providing some depth by focusing on a limited number of important events and major themes. Achieved through critical analysis of primary sources and discussion of specialized readings. Students will gain factual knowledge about recent history of the region and also learn to appreciate the uniqueness of East Asian cultures and their impact on the contemporary world.

**HIST 3620 - History of Colonial Latin America**
3 credits

Surveys art, culture, religion, and social organization of the Aztecs, Incas, and Mayas, and of the European dominated post-conquest. Introduces students to major historiographical problems in the field.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

**HIST 3630 - History of Modern Latin America**
3 credits

Introduces history and historiography of Latin America from the wars of independence to the contemporary era. Writing intensive.

**HIST 3650 - Caribbean History**
3 credits

Surveys the Caribbean from pre-Columbian cultures to the present, with special emphasis on slavery, colonialism, piracy, immigration, independence and revolutionary movements, nation-building, artistic creation, and tourism.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

**HIST 3660 - History of Mexico**
3 credits

Surveys Mexico from the rise of indigenous states to the present, with special emphasis on slavery, colonialism, independence, the U.S.-Mexican War, the French Intervention, the Mexican Revolution, political reform, everyday life, globalization, and border issues.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

**HIST 3670 - Slavery in the Atlantic World (CI)**
CI Communications Intensive 3 credits

Examines slavery in the Americas from the Atlantic perspective (including Africa and Europe) from the Fifteenth Century until abolition, with special emphasis on the slave trade, the plantation system, daily life, slavery and race, resistance, the Haitian Revolution, and abolition in the Americas.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

**HIST 3700 - Regional Folklore (CI)**
CI Communications Intensive 3 credits

Study of folklore and folklife as they relate to regional cultures.

Cross-listed as: ENGL 3700.
Semester(s) Traditionally Offered: Fall, Spring
HIST 3710 - Topics in Folklore (CI)
CI Communications Intensive
3 credits
Issues, problems, and methodologies in folklore study. Focus and instructor variable.
Cross-listed as: ENGL 3710 and RELS 3710
Repeatable for credit.

Semester(s) Traditionally Offered: Spring
HIST 3720 - Colonial America
3 credits
Advanced survey of North American Colonies, emphasizing British experience, from their founding to 1763. Addresses major issues of interpreting America’s beginnings.

Semester(s) Traditionally Offered: Fall
HIST 3730 - The New American Nation
3 credits
Advanced survey of American history from 1763 to 1800, with special emphasis on historiography of the Revolution, creation of a Republic, and efforts to define the New Nation.

Semester(s) Traditionally Offered: Spring
HIST 3740 - United States in the Age of Jefferson and Jackson
3 credits
Examines history of United States from 1800 to 1846, from election of Jefferson to outbreak of war with Mexico.
Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Semester(s) Traditionally Offered: Fall
HIST 3750 - Civil War and Reconstruction
3 credits
Analysis of most trying period in U.S. history, with special emphasis on the course and results of the war.
Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Semester(s) Traditionally Offered: Spring
HIST 3751 - Trials of Gilded Age America, 1877-1900 (DHA/CI)
DHA Depth Humanities and Creative Arts and Communications Intensive
3 credits
An in-depth examination of Gilded Age America, using high-profile murder cases as a means of understanding the era’s socio-economic, cultural and political changes.

Semester(s) Traditionally Offered: Fall
HIST 3760 - The United States, 1900-1945 (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits
Analyzes scholars’ approaches to U.S. history in the early twentieth century, with attention to socio-economic change, political reform, and transforming impact of American involvement in two world wars. Writing intensive.
Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Semester(s) Traditionally Offered: Spring
HIST 3770 - Contemporary America, 1945-Present
3 credits
Domestic and foreign policy since World War II. Emphasizes Cold War, Civil Rights, and the political and social developments of contemporary United States. Contains intensive writing component.

Semester(s) Traditionally Offered: Fall
HIST 3840 - The Modern American West
3 credits
Considers emerging scholarly literature about the American West in the twentieth century, with attention to economic, environmental, and demographic questions.
HIST 3850 - History of Utah (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits
Prehistory to the present. Examines environment and peoples of Utah, emphasizing use of primary documents to view and interpret Utah’s past. Reading and writing intensive.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Semester(s) Traditionally Offered: Spring

HIST 3900 - Science and Technology in World History (DSC)
DSC Depth Life and Physical Sciences
3 credits
Explores the nature of scientific and technological change. Employs historical approach as the means for exploring the relationships between science, technology, and human values. Investigates how science and technology have shaped economic, political, military, societal, environmental, and cultural life.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

HIST 3950 - Environmental History (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits
Surveys writings from a relatively new genre of historical scholarship that attempts to explain the relationship between human society and the natural world. Readings focus on North America, but students also have opportunity to survey materials from the non-Western world. Course is reading and writing intensive, and requires students to conduct a research project in which they construct the history of a particular landscape.

HIST 4150 - Japan, Europe, and the Early Modern World
3 credits
Provides a comparative view of encounters between the societies of Early Modern Europe and Tokugawa Japan.

Effective Term
Spring 2015

HIST 4230 - The History of Christianity in the West (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits
Introduces students to history of Christian spirituality, asking how Christianity has been lived and how it has shaped lives over two thousand years. Uses original sources to introduce both the history and the historiographical problems surrounding the Christian religion. Writing intensive.

Cross-listed as: RELS 4230

HIST 4250 - The Reformation in Britain: 1450-1688
3 credits
Focuses on major research questions in the field of early modern studies. Explores causes and consequences of English Reformation and British Civil War. Writing and research intensive.

HIST 4251 - The Tudors, 1485-1603 (DHA)
DHA Depth Humanities/Creative Arts
3 credit
Examines important changes in government, religion, economics and the social world during the reign of the Tudor dynasty in England (1485-1603). Students will use primary source documents to examine these changes over time.

Prerequisite/Restriction: ENGL 2010

Semester(s) Traditionally Offered: Taught Alternate Years

HIST 4290 - Europe and the French Revolution, 1700-1815
3 credits
Examines causes and consequences of the French Revolution, introducing students to major themes in its interpretation.
HIST 4310 - History of Nationalism
3 credits
Examines development of nationalism. Addresses different theories of nationalism, and then tests these theories with various case studies. Emphasizes research and writing.

HIST 4330 - Modern Germany with Special Emphasis on the Twentieth Century
3 credits
Historical survey of Germany beginning with Frederick the Great of Prussia, and considering the parallel history of the Habsburg empire and the Germany of the Kleinstaaterei. Considers wars and economic and political developments beginning in 1871, which produced the Nazi period.
Prerequisite/Restriction: HIST 1110

HIST 4350 - Greek Intellectual History
3 credits
Through reading and discussing Greek literature and philosophy, attempts to understand the major Greek philosophers, in the context of the major literary authors of the period and contemporary political developments.
Prerequisite/Restriction: CLAS 3210
Cross-listed as: WGS 4350
Semester(s) Traditionally Offered: Spring

HIST 4390 - European Imperialism
3 credits
Survey of European Imperialism in the nineteenth and twentieth century world. Themes include the political, social, and cultural impact of European expansion as well as the responses to this phenomenon by indigenous people.
Semester(s) Traditionally Offered: Spring
Effective Term Summer

HIST 4510 - American Metropolis: Cities and Suburbs in United States History
3 credits
Examines the history of communities, cities, and suburbs in American history, from the Colonial era to the present. Explores how forces, including immigration, economic growth, and technological change, shaped American cities. Also examines subjects connected to urban history, including architectural history, as well as the history of landscape architecture and urban planning.

HIST 4550 - Women and Gender in America (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits
Writing intensive course drawing on film, primary documents, and readings to trace the history of women, emphasizing race, class, and gender influences of each era.
Cross-listed as: WGS 4550.
Semester(s) Traditionally Offered: Fall

HIST 4560 - Women in Islam (DHA)
DHA Depth Humanities and Creative Arts
3 credits
Within a religious and historical framework, it explores topics such as gender and social roles, women’s rights, veiling and dress, female circumcisions, arranged marriages, education, employment, parenting, honor killings, and politics in the lives of Islamic women. A basic knowledge of Islam is recommended before enrolling.
Cross-listed as: RELS 4560

HIST 4565 - Early Islamic History (DHA)
DHA Depth Humanities and Creative Arts
3 credits
This course focuses on the history of the Islamic world to the 1400s, beginning in sixth-century Arabia and ending with the conversion of the western Mongol states to Islam and the rise of the Ottoman Empire.
Cross-listed as: RELS 4565
Semester(s) Traditionally Offered: Fall
HIST 4566 - Modern Islamic Thought  
3 credits

This course introduces students to the history of the Islamic world in the modern era (1500s to 2000s) through the lenses of intellectual and legal history. This was a turbulent period for Muslim societies. Within the space of a few centuries, Muslims went from being the rulers of powerful empires to being under the rule or influence of Europe's colonial powers, and, finally, forming or being divided into post-colonial nation states. These processes have shaped the way that Muslim leaders, legal specialists, and intellectuals have approached the question of what it means to be Muslim, how an ideal Muslim society should look, and how Muslims should relate to one another and to the non-Muslim societies they encounter in an increasingly globalized world.

Semester(s) Traditionally Offered: Fall  
Effective Term  
Fall 2016  

HIST 4600 - The History of the American West (DHA/CI)  
DHA/CI Depth Humanities and Creative Arts and Communications Intensive  
3 credits

Traces major themes in nineteenth century history of the land between the Mississippi River and the Pacific Coast. In a writing intensive course, students use primary documents and secondary materials to discover the race, class, and gender issues that shaped the American West.

HIST 4610 - Themes and Methods in Economic History  
3 credits

Themes and methods in economic history, drawing on various societies and time periods. Designed to prepare future historians to work in their field.

Prerequisite/Restriction: Fulfillment of Quantitative Literacy (QL) requirement through coursework or examination (General Education Requirements)

HIST 4620 - Advanced Seminar in American Studies (CI)  
CI Communications Intensive  
3 credits

Practical introduction to theories and methods of American Studies, utilizing interdisciplinary research around a central theme, subject, or text(s). Strongly recommended for American Studies majors and American Studies minors. Open to students who have taken three courses in literature and/or history.

Cross-listed as: ENGL 4620.

Semester(s) Traditionally Offered: Fall, Spring

HIST 4630 - History of the Southwest Borderlands  
3 credits

Reading-intensive and writing-intensive course, examining the historical experiences of Mexican Americans, from prior to the U.S. annexation of Northern Mexico in 1848 to the present. Special emphasis given to immigration and migration, labor, gender, race and ethnicity, and the social and cultural evolution of Mexican Americans within American society.

Semester(s) Traditionally Offered: Taught Alternate Years

HIST 4650 - Women and Gender in the US West  
3 credits

This course will examine the interconnected histories of women in the US West, exploring how gender, race and class shaped their experiences. Moving from pre-contact through the mid twentieth century, students will explore how colonialism and migrations impacted the lives of diverse groups of women, including but not limited to their family lives, how they made a living and the types of communities they built.

HIST 4700 - Folk Material Culture  
3 credits

Study of folk objects and their connections with culture and history.

Cross-listed as: ENGL 4700.

Semester(s) Traditionally Offered: Spring

HIST 4710 - American Indian History  
3 credits

Prehistory to the present. Emphasizes ethnohistory and the Western U.S., focusing on intercultural contacts, subsistence and environmental change, and contemporary political and economic issues, while analyzing primary documents and secondary readings.
This course will cover the history of the Northern Utes from the earliest records up to the present. Historical analysis and methodology will also be taught and specific assignments given to assist each student understand methodology from within the context of Ute History.

Traces struggle of black Americans for equality since emancipation, with emphasis on the post-World War II period. Focuses on the individuals and social trends that laid the groundwork for change by the mid-Twentieth Century.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Study of African-American experience from slavery to freedom, as well as the difficult quest for democracy and equality in contemporary America. Includes both creative and research writing components.

Cross-listed as: RELS 4730

Focuses on one theme or topic in folklore, and offers lectures from nationally prominent scholars in the area. Taught during one week, every day and all day.

Cross-listed as: ENGL 4750.
Focuses exclusively on World War II developments in the ETO. That is, the efforts of the Allied forces, mainly the United States, Britain, the Soviet Union, Free France, Canada, and resistance fighters and British Commonwealth soldiers against the expansion and occupation of most of Eurasia by Nazi Germany and/or Fascist Italy. Covers the chronology of 1939 to 1945. Included in the course’s scope is the Holocaust.

Semester(s) Traditionally Offered: Spring

HIST 4821 - World War II in Asia
DHA Depth Humanities and Creative Arts
3 credits

During WWII, as Hitler and the Nazi regime conquered Europe, Japan was committing its own atrocities as it forged a Pacific empire. The Japanese attack on US territory at Pearl Harbor in 1941 provoked the US to enter the conflict, and hostilities only concluded years later when Japanese civilians became the first (and to date only) victims of atomic warfare. What role did Japanese traditional culture play in the war and how did the two enemies become Cold War allies? This course explores the origins of the Pacific War and the legacy that continues to shape the societies of Asia.

Semester(s) Traditionally Offered: Alternate
Effective Term
Spring

HIST 4822 - The Vietnam War
3 credits

This course examines the Vietnam War from multiple perspectives, American and Vietnamese experiences, policies, casualties, popular culture, and enduring legacies. It places the conflict within a global and historical context.

Semester(s) Traditionally Offered: Taught alternate years

HIST 4850 - Interpreting the Past for Teachers
3 credits

Focuses on nonformal educational experiences open to secondary school students outside of the classroom. Interpretive modes examined include historical film, documentaries, living history programs, history fairs and festivals, and historical novels and magazines.

Semester(s) Traditionally Offered: Fall, Spring

HIST 4860 - Teaching History
3 credits

Designed to introduce history teaching majors to ethical and methodological issues arising in history classroom.

Semester(s) Traditionally Offered: Fall

HIST 4870 - Teaching World History: Themes, Approaches, and Materials
3 credits

For history teaching majors and minors only. Introduces students to a number of approaches to the study and teaching of world history. Students survey theoretical and pedagogical literature, then assemble a course package, which is presented to their peers.

Semester(s) Traditionally Offered: Spring

HIST 4880 - History Workshop: Special Topics
1-3 credits

Focuses on a theme or topic in history. Check with major department for limitations on number of credits that can be counted for graduation.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 4885 - ST: History and Visual Media
3 credits

Examines the ways in which visual media - particularly modern electronic formats such as film and television shaped past human experience and subsequently reflect or misrepresent it.

HIST 4890 - Cold War in Asia (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Explores history of the Cold War conflicts in Korea and Vietnam, from Asian and American perspectives. Students ascertain the economic, political, military, environmental, diplomatic, psychological, and demographic implications of these conflicts for the U.S., as well as for the Asians involved.
HIST 4891 - Cold War: Vietnam and Afghanistan (DHA)
DHA Depth Humanities and Creative Arts 
3 credits


HIST 4910 - Special Studies in History
3 credits

Examination of special areas and themes in history.
Repeatable for credit.

HIST 4930 - Directed Readings
1-3 credits

Directed readings in any special historical field. For each credit granted, minimum of four books must be read.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.

HIST 4940 - Historical Internship
1-3 credits

Directed internship involving participation in a historical research or cultural management project.
Repeatable for credit.

HIST 4945 - Archives Management/Archives Internship
3 credits

Through a mixture of lecture, discussion, and hands-on activities, provides an introduction to archives and archival practices. Examines archival practices in the real world, and discusses how archival institutions interact with the public in general and with historians in particular. Drawing on his experience as a professional archivist, the instructor uses materials held in USU Special Collections and Archives to teach this course.

Cross-listed as: HIST 6840.

HIST 4990 - Special Topics in History (CI)
CI Communications Intensive 
3 credits

Senior history seminar emphasizing historiographical literacy, research, and writing skills in relation to a specific historical topic. Prerequisites: Lower- and upper-division courses in areas relating to topic in question.

Prerequisite/Restriction: HIST 3000 and senior standing
Repeatable for credit.

HIST 5690 - American Studies Capstone Seminar (CI)
CI Communications Intensive 
3 credits

Required for students majoring in American Studies. Enables students to synthesize American Studies theory and methods with interdisciplinary cognate courses. Supports senior thesis design and writing, allowing topics to reflect individual programs of study.

Cross-listed as: ENGL 5690.

HIST 5700 - Folk Narrative
3 credits

Forms and functions of folk narrative genres: myth, legend, folktale, memorate, and ballad.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement and completion of a 3000-level course having an ANTH, ENGL, or HIST prefix

Cross-listed as: ANTH 5700 and ENGL 5700.

HIST 6000 - Historical Methods and Research
3 credits

Introduction to the historical profession, emphasizing research and writing skills, as well as the critical assessment of scholarly works. Should be taken at beginning of student’s graduate program. Required for history master’s students.

Semester(s) Traditionally Offered: Spring
HIST 6010 - History and Theory
3 credits
Examination of major works that have influenced the theory and practice of historical writing. History master’s students are required to complete HIST 6010, HIST 6020, or another theory-enriched course.
Repeatable for credit.

HIST 6020 - Approaches to History
3 credits
Uses readings in particular instructor’s field to underscore theories and methods different historians bring to their subject. History master’s students are required to complete HIST 6010, 6020, or another theory-enriched course.
Repeatable for credit.

HIST 6030 - Research Seminar
3 credits
Research in primary sources for graduate students.
Repeatable for credit.

HIST 6100 - Special Topics: Ancient History
3 credits
Intensive readings and group discussions of selected topics in ancient history.
Repeatable for credit.

HIST 6130 - Special Topics: Early Modern European History
3 credits
Intensive readings and group discussions of selected topics in early modern European history.
Repeatable for credit.

HIST 6160 - Special Topics: Modern European History
3 credits
Intensive readings and group discussions of selected topics in modern European history.
Repeatable for credit.

HIST 6200 - Special Topics: Comparative World History
3 credits
Intensive readings and group discussions of selected topics in comparative world history.
Repeatable for credit.

HIST 6230 - Special Topics: Middle Eastern History
3 credits
Intensive readings and group discussions of selected topics in middle eastern history.
Repeatable for credit.

HIST 6260 - Special Topics: Asian History
3 credits
Intensive readings and group discussions of selected topics in Asian history.
Repeatable for credit.

HIST 6300 - Special Topics: African History
3 credits
Intensive readings and group discussions of selected topics in African history.
Repeatable for credit.

HIST 6330 - Special Topics: Latin American History
3 credits
Intensive readings and group discussions of selected topics in Latin American history.
Repeatable for credit.

HIST 6400 - Special Topics: American History
3 credits
Intensive readings and group discussions of selected topics in American history.
Repeatable for credit.

HIST 6410 - Special Topics in Mormon History and Culture
3 credits
Intensive readings and group discussions of selected topics in Mormon history and culture.
Repeatable for credit.
HIST 6420 - Special Topics in Religious History
3 credits
Intensive reading and group discussions of selected topics in Religious History
Repeatable for credit

HIST 6430 - Special Topics: Western American History
3 credits
Intensive readings and group discussions of selected topics in Western American history.
Repeatable for credit

HIST 6460 - Seminar in Environmental History
3 credits
Focuses on historical writings seeking to explain relationship between society and nature. Many of assigned readings are set in the non-Western world.

HIST 6500 - Archiving Internship
2-4 credits
Directed internship at a regional archive. Internship should reflect eight to sixteen hours of work per week during the semester.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6520 - Editing Internship
2 credits
Training in requirements of editorial work in scholarly journals and books. Emphasis placed on editing techniques and mechanics of editorial work. Can be repeated once for credit.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6540 - Museum Internship
2-4 credits
Directed internship at a regional museum. Internship should reflect eight to sixteen hours of work per week during the semester.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6560 - Professional Internship
2-4 credits
Directed internship involving participation in a historical research project for a government agency, corporation, municipality, or some other entity.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6580 - Teaching Internship
2 credits
Involves working with the teacher of an upper-division undergraduate course. Intern prepares, explains, and grades one of the written assignments in the course, as well as completing work required of the undergraduates. Can be repeated once for credit.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6600 - American Studies Theory and Method
3 credits
Provides students with theory and method of graduate-level research in American Studies.
Cross-listed as: ENGL 6600.
Semester(s) Traditionally Offered: Fall

HIST 6610 - Seminar on the American West
3-4 credits
Readings and research on topics in the American West. Interdisciplinary focus suitable for graduate students in History and American Studies.
Cross-listed as: ENGL 6610.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall
HIST 6620 - Seminar in Native American Studies
3-4 credits

Readings and research on topics in Native American history and culture. Interdisciplinary focus suitable for graduate students in History and American Studies.

Cross-listed as: ENGL 6620.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall

HIST 6630 - Studies in Film and Popular Culture
3 credits

Offered annually on a rotating basis by professors in folklore and English (Cultural Studies, Literature, British and Commonwealth). Topics and theoretical approaches vary, but the primary focus is on feature films.

Cross-listed as: ENGL 6630
Repeatable for credit.
Semester(s) Traditionally Offered: Fall

HIST 6700 - Folklore Theory and Method
3 credits

Serves as orientation for new graduate students in folklore. Introduces students to comparative annotation, folklore indices, oral-formulaic theory, performance theory, contextual analysis, and other approaches.

Cross-listed as: ENGL 6700.
Semester(s) Traditionally Offered: Fall

HIST 6710 - Space, Place and Folklore
3 credits

Study of expressive culture in relation to space and place in social theory. Perspectives range from ideas about landscape and region to globalization.

Cross-listed as: ENGL 6710.
Semester(s) Traditionally Offered: Spring

HIST 6720 - Folklore Fieldwork
3 credits

Basic methodology class for folklorists and oral historians. Students learn interviewing techniques and other methods for observing and recording the performance of tradition and traditional history.

Cross-listed as: ENGL 6720.
Semester(s) Traditionally Offered: Fall, Spring

HIST 6730 - Public Folklore
3 credits

Provides history and analysis of governmental involvement in protecting, promoting, and otherwise manipulating and utilizing cultural heritage.

Cross-listed as: ENGL 6730.
Semester(s) Traditionally Offered: Fall, Spring

HIST 6740 - Folk Narrative
3 credits

Covers principal narrative genres in folk tradition (myth, tale, legend, ballad) and the basic theories for their analysis and discussion.

Cross-listed as: ENGL 6740.
Semester(s) Traditionally Offered: Spring

HIST 6750 - Advanced Folklore Workshop: Fife Conference
3 credits

Intensive workshop focusing on a topic in folklore. Brings in nationally known experts as lecturers and discussants. Taught during one week, every day and all day.

Cross-listed as: ENGL 6750.
Repeatable for credit.
Semester(s) Traditionally Offered: Summer

HIST 6760 - Folk Art, Traditional Art, and Material Culture
3 credits

This course is a graduate level seminar. Course of study includes the history of the idea of folk art, contemporary and established questions pertaining to vernacular
production, and a exploration and analysis of actual objects in relation to theory.

Cross-listed as: ENGL 6760.

Semester(s) Traditionally Offered: Spring

HIST 6770 - Seminar in Folklore and Folklife
3 credits

Conducts close, professional-level study of major areas of folklore and folklife research.

Cross-listed as: ENGL 6770.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6800 - Paleography
3 credits

Skills course covering subjects such as technology of writing, interpretation of hands, and mastery of abbreviations. Useful to any student working with old manuscripts, it is essential for those writing theses in medieval or early modern European history.

HIST 6820 - Writing Scholarly Reviews
3 credits

Prepares students for writing, editing, and publishing reviews in their chosen discipline. Taught by book review editors at Western American Literature and Western Historical Quarterly.

HIST 6840 - Archives Management/Archives Internship
3 credits

Through a mixture of lecture, discussion, and hands-on activities, provides an introduction to archives and archival practices. Examines archival practices in the real world, and discusses how archival institutions interact with the public in general and with historians in particular. Drawing on his experience as a professional archivist, the instructor uses materials held in USU Special Collections and Archives to teach this course.

Cross-listed as: HIST 4945.

HIST 6860 - Historical Criticism: Practicum
1-3 credits

Preparation of critiques for student-presented projects entered into Utah History Fair state-wide competition. Operation of one-day workshop for History Fair finalists.

HIST 6880 - Special Topics: Advanced History Workshop
1-3 credits

From teaching values of democracy in public school setting to writing publishable biographies, Department of History sponsors advanced credit workshops on a range of subjects.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6900 - Directed Studies
1-3 credits

Directed readings in any special historical field. For each credit granted, a minimum of four books must be read. Instructor signature required.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6970 - Thesis Research
1-6 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

HIST 6990 - Continuing Graduate Advisement
1-6 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Honors

HONR 1300 - U.S. Institutions (BAI)
BAI Breadth American Institutions
3 credits

Interdisciplinary course providing basic understanding of history, principles, form of government, and economic system of the United States.

Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.

Semester(s) Traditionally Offered: Fall
HONR 1320 - Civilization: Humanities (BHU)
BHU Breadth Humanities
3 credits
Interdisciplinary course providing basic understanding of broad range of themes cutting across human history and continuing to be important in contemporary society. Covers both Western and non-Western civilization.
Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.
Semester(s) Traditionally Offered: Fall, Spring

HONR 1330 - Civilization: Creative Arts (BCA)
BCA Breadth Creative Arts
3 credits
Interdisciplinary course providing basic understanding of broad range of themes cutting across human history and continuing to be important in contemporary society. Covers both Western and non-Western civilization.
Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.
Semester(s) Traditionally Offered: Fall, Spring

HONR 1340 - Social Systems and Issues (BSS)
BSS Breadth Social Sciences
3 credits
Interdisciplinary course that considers how a society of self-interested individuals can live together in peace and harmony. Topic explored from perspectives of different disciplines.
Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.
Semester(s) Traditionally Offered: Fall, Spring

HONR 1350 - Integrated Life Science (BLS)
BLS Breadth Life Sciences
3 credits
Interdisciplinary course focusing on basic concepts of life science. Demonstrates role of modeling, prediction, and observation in the process of scientific discovery, which occurs within an historical and social context.
Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.

HONR 1360 - Integrated Physical Science (BPS)
BPS Breadth Physical Sciences
3 credits
Interdisciplinary course focusing on basic concepts of physical science, including structure of matter and magnitude and character of the forces of nature. Demonstrates role of modeling, prediction, and observation in the process of scientific discovery, which occurs within an historical and social context.
Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.
Semester(s) Traditionally Offered: Fall, Spring

HONR 2000 - Scholars Forum
1 credit
Includes orientation to the Honors Program and to undergraduate research. Gateway to the Honors Program for entering first-year students.
Campus: Online.

HONR 2100 - Honors Inquiry Seminar
1 credit
Introduces students to the nature of inquiry in their field or major. Sections are major-specific. Assists students in planning their undergraduate education to enable them to graduate with Honors.
Prerequisite/Restriction: Admission to Honors Program Required for Honors in University Studies
Semester(s) Traditionally Offered: Spring

HONR 2200 - Honors Enrichment
0.5 credit
Provides opportunity for Honors students to enhance their academic experience by attending and reflecting on a series of colloquia, as well as cultural and arts events. During the semester, students attend activities chosen from a menu prepared by the Honors Program. Each event affords an opportunity to react in writing, as well
as orally during the bimonthly seminars. Grading based on attendance, participation, and written work.

Prerequisite/Restriction: Admission to Honors Program

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

HONR 3010 - Special Topics: Life and Physical Sciences (DSC/QI)

DSC/QI Depth Life and Physical Sciences

3 credits

Focuses on basic scientific concepts and methods of inquiry used by scientists. Considers science from a broad perspective, showing how various disciplines are related.

Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.

Repeatable

Semester(s) Traditionally Offered: Fall, Spring

Effective Term

Spring 2016

HONR 3020 - Special Topics: Humanities/Creative Arts (DHA/CI)

DHA/CI Depth Humanities and Creative Arts/CI

3 credits

Humanities section focuses on important historical and contemporary cultural themes, both Western and non-Western. Creative Arts section examines one or more art forms across cultures. Covers several forms of art. Students attend concerts, visit galleries, and attend theatrical performances.

Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.

Repeatable

Semester(s) Traditionally Offered: Fall, Spring

Effective Term

Spring 2016

HONR 3030 - Special Topics: Social Sciences (DSS/CI)

DSS/CI Depth Social Sciences

3 credits

Examines one or more social institutions and asks how we live within these structures from the perspectives of different disciplines.

Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.

Repeatable

Semester(s) Traditionally Offered: Spring

Effective Term

Spring 2016

HONR 3035 - Special Topics: Social Sciences

3 credits

Examines the significance of different ideas across history and cultures and connects these important social ideas to contemporary experience. Trains students to think critically and independently about the social sciences and to evaluate interpretations or arguments on these topics. May emphasize a particular discipline, question, or issue. Meets all requirements for Quantitative Intensive courses.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

Effective Term

Spring 2016

HONR 3070 - Honors Interdisciplinary Depth

(DHA/DSC/DSS)

DHA, DSC, DSS Depth Humanities and Creative Arts, Depth Life and Physical Sciences, Depth Social Sciences

3-6 credits

Course may combine two or three depth categories (DHA, DSC, DSS) in a variable 3-6 credits course covering 1-2 semesters. Usually team-taught and may include service learning, fieldwork, or undergraduate research. Course fulfills one depth requirement per semester of student enrollment (up to two for a yearlong course).

Prerequisite/Restriction: Must meet breadth graduation requirements, QL, CL1, CL2 Honors Program students only

Cross-listed as: USU 3070

Semester(s) Traditionally Offered: Fall, Spring, Summer

HONR 3071 - Honors Interdisciplinary Depth, Part 1

(DHA/DSC/DSS)

DHA, DSC, DSS Depth Humanities and Creative Arts, Depth Life and Physical Sciences, Depth Social Sciences

3 credits
First half of a two-semester course sequence that combines two of three depth categories (DHA, DSC, DSS). Students must complete the second half of the course to achieve the depth designation.

Prerequisite/Restriction: Must meet breadth graduation requirements, QL, CL1, CL2 Honors Program students only

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

HONR 3072 - Honors Interdisciplinary Depth, Part 2 (DHA/DSC/DSS)
DHA, DSC, DSS Depth Humanities and Creative Arts, Depth Life and Physical Sciences, Depth Social Sciences
3 credits

Second half of a two-semester course sequence that combines two of three depth categories (DHA, DSC, DSS). This half of the course bears the depth designation. Students are expected to take both semesters.

Prerequisite/Restriction: Must meet breadth graduation requirements, QL, CL1, CL2 Honors Program students only

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

HONR 3900 - Independent Study
1-3 credits

Independent research, library and/or laboratory work, or creative effort working in a one-to-one relationship with a faculty member.

Prerequisite/Restriction: Limited to students actively pursuing an Honors degree

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

HONR 4000 - Reading Seminar
1-3 credits

Opportunity to read, discuss, and write about books and current events.

Prerequisite/Restriction: Open only to students enrolled in USU Honors Program.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

HONR 4700 - Honors Fellows
0.5 credit

Upper-division Honors students assist in leading Honors seminars and tutorials.

Semester(s) Traditionally Offered: Fall, Spring

HONR 4800 - Thesis/Project Seminar
1 credit

Oral presentation and discussion of Honors senior theses/projects. Guest presentations focus on essential contrasts and similarities in “ways of knowing” among various academic specialties.

Semester(s) Traditionally Offered: Fall, Spring

HONR 4900 - Senior Thesis/Project (CI)
CI Communications Intensive
1-3 credits

All Honors students are required to submit a senior thesis/project for graduation with an Honors degree. Thesis/project may be in any area of student’s choice, prepared in cooperation with an advisor drawn from the faculty at large.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Institute of Government and Politics

IOGP 5900 - Government and Policy Internship Seminar
3 credits

A semester government and policy internship seminar in Washington, DC or in Salt Lake City, UT

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

IOGP 5910 - Campaign Internship
1-9 credits

A semester long campaign internship in Washington, DC or in Salt Lake City, UT

Semester(s) Traditionally Offered: Fall, Spring, Summer
IOGP 5920 - Washington Internship
1-9 credits
A semester long internship in Washington, DC
Semester(s) Traditionally Offered: Fall, Spring, Summer

IOGP 5930 - State and Local Government Internship
0.5-9 credits
A semester long internship in either local or state government
Semester(s) Traditionally Offered: Fall, Spring, Summer

IOGP 5940 - Administrative Internship
1-9 credits
A semester long internship in either local or state government
Semester(s) Traditionally Offered: Fall, Spring, Summer

IOGP 5950 - International Internship
1-9 credits
A semester long international internship
Semester(s) Traditionally Offered: Fall, Spring, Summer

Instructional Technology and Learning Sciences

ITLS 1000 - Information Literacy
3 credits
Designed to develop ability to locate, evaluate, and use information. Develops competencies needed for lifelong pursuits of information through the use of libraries and electronic resources.
Semester(s) Traditionally Offered: Fall, Spring

ITLS 4015 - Technology Tools and Integration for Teachers
1-3 credits
Integrated experience for pre-service teachers to apply instructional design principles in their instruction. Hands-on experience using a wide variety of technological tools with integration in practical learning environments. Application of technology as both process and product.

ITLS 4210 - Information Access and Literacy Skills
2 credits
Information problem-solving skills basic to lifelong information access in today's networked world. Used as part of the Engineering and Technology Education/Instructional Technology minor program.
Campus: Taught off campus through special programs.
Semester(s) Traditionally Offered: Spring

ITLS 4220 - Introduction to Learning Theories
3 credits
Detailed study of communication and learning theories as applied to instructional design process. Examines principles and research upon which instructional design and instructional technology are based. Used as part of the Engineering and Technology Education/Instructional Technology minor program.
Campus: Taught off campus through special programs.
Semester(s) Traditionally Offered: Spring

ITLS 4230 - Introduction to Adult Learning
3 credits
Covers philosophical and theoretical foundations of adult education, as well as practical applications for incorporating them into current educational settings. Used as part of the Engineering and Technology Education/Instructional Technology minor program.
Campus: Taught off campus through special programs.
Semester(s) Traditionally Offered: Spring

ITLS 4250 - Instructional Design I
3 credits
Guided experience in analysis, design, and development of instructional product development utilizing the ADDIE model. Used as the first project experience for the Engineering and Technology Education degree and the Instructional Technology undergraduate minor.
Campus: Taught off campus through special programs.
Semester(s) Traditionally Offered: Summer
ITLS 4260 - Instructional Design II
3 credits
Guided experience in development, implementation, and evaluation of instructional product development utilizing the ADDIE model. Used as the second project experience for the Engineering and Technology Education degree and the Instructional Technology undergraduate minor.
Campus: Taught off campus through special programs.
Semester(s) Traditionally Offered: Summer

ITLS 4290 - Applying Instructional Design
3 credits
Individual experience in instructional product development utilizing the ADDIE model. Used as the capstone experience for the Engineering and Technology Education degree and the Instructional Technology undergraduate minor.
Campus: Taught off campus through special programs.
Semester(s) Traditionally Offered: Fall

ITLS 4300 - Clinical Experience in School Library Media
1 credit
School library media clinical observation experience. Students involved in observing management and assisting in middle and secondary library media centers, arranged by department.
Prerequisite/Restriction: Minimum of 40 hours of observation experience required
Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

ITLS 4500 - Integration and Innovation of Technology in Education
1 credit
Based on current educational standards, and using appropriate tools, students design and create an electronic/digital portfolio specific to content area(s) of their anticipated teaching license. Emphasizes integration of technology as both product and process.
Prerequisite/Restriction: Admittance to teacher education
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00

ITLS 4910 - Undergraduate Research and Creative Opportunity
1-3 credits
Cooperative process of discovery, investigation, research, or creativity between faculty and one or more students.
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 5000 - SLM Foundations and Information Management
3 credits
Introduction to historical and philosophical foundations of library media programs. Examines role of library media programs in schools and their contributions to the curriculum. Explores circulation, cataloging, automation tools, technical services, policies, and techniques. To receive graduate-level credit, students must fulfill additional requirements.
Cross-listed as: ITLS 6000
Campus: Also taught off campus.
Semester(s) Traditionally Offered: Fall

ITLS 5015 - SLM Collection Development and Literature
3 credits
Focuses on building, maintaining, and evaluating collections for library media programs. Discusses policy development for selection, protecting intellectual freedom, and reviewing, evaluating, and maintaining materials in all formats. Explores children's and young adult literature. To receive graduate-level credit, students must fulfill additional requirements.
Cross-listed as: ITLS 6015.
Campus: Also taught off campus.
Semester(s) Traditionally Offered: Fall

ITLS 5025 - SLM Programs and Instructional Development
3 credits
Presents a wide variety of activities which are integral to a school library media program, including reading
guidance, instructional development, curriculum development, media skill instruction, and information literacy. Emphasizes collaboration within schools. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: ITLS 5000 or ITLS 6000 or instructor permission

Cross-listed as: ITLS 6025

Campus: Also taught off campus.
Semester(s) Traditionally Offered: Spring

ITLS 5030 - Information Access, Literacy, and Technology  
3 credits

Introduction to finding information and resources using print and electronic sources. Emphasizes reference services, knowledge of basic reference/information sources, and resource sharing; and teaching information retrieval strategies within a school library media program. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 6030.

Campus: Also taught off campus.
Semester(s) Traditionally Offered: Spring

ITLS 5040 - SLM Center Administration and Leadership  
3 credits

Includes study of organization, personnel, budgets, programs, and management of a library media center. Students define their role within a school setting and in relation to that of the principal and teachers. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: ITLS 5000/ITLS 6000 and ITLS 5025/ITLS 6025 or instructor permission

Cross-listed as: ITLS 6040.

Campus: Also taught off campus.
Semester(s) Traditionally Offered: Summer or Arranged

ITLS 5090 - School Library Media Practicum  
1-6 credits

Observation and guided field experience in a library media center under professional library media specialists and instructional technology professionals. Bridge of theory into practice. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: ITLS 5000 or ITLS 6000 and ITLS 5015 or ITLS 6015 and ITLS 5025 or ITLS 6025 and ITLS 5030 or ITLS 6030 or instructor permission

Cross-listed as: ITLS 6090

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Summer

ITLS 5105 - eLearning Tools  
3 credits

Focuses on issues and methods of teaching and learning in distance education. Students develop strategies for effectively integrating technologies and facilitating learning at a distance. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 6105

Semester(s) Traditionally Offered: Summer

ITLS 5150 - eLearning Trends and Issues  
3 credits

The course is designed for those who are interested in electronic-mediated learning. The students have a major responsibility to choose the content and direction to develop a deeper understanding of all the components of eLearning, both synchronous and asynchronous.

Cross-listed as: ITLS 6150

ITLS 5195 - Practicum in eLearning  
3 credits

Students demonstrate effective practice by applying instructional development principles for designing, implementing, and evaluating instruction for distant learners. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: ITLS 5105/ITLS 6105

Cross-listed as: ITLS 6195
ITLS 5205 - Computer Applications for Instruction and Training
3 credits

Introduction to use of computer applications, with special emphasis on software used in instruction and training. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 6205.

ITLS 5215 - Digital Video Capture and Production I
3 credits

Fundamental theories and practice in design and development for camera and computer-based audio and video production, including recording, editing, and digitizing audio and video segments for education and training applications. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 6215.

ITLS 5220 - Digital Video Capture and Production II
3 credits

Advanced theories and practice in design and development for camera and computer-based audio and video production, including recording, editing, and digitizing audio and video segments for education and training applications. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: ITLS 5215 or ITLS 6215 or instructor permission

Cross-listed as: ITLS 6220.

ITLS 5225 - Digital Audio
3 credits

Explores basic concepts of digital audio, synthesis, and sign processing. Establishes proficiency with sound programs, as well as audio editing and sound design tools. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 6225.

ITLS 5230 - Instructional Graphic Production I
3 credits

Fundamental practices of using the computer to design and produce a wide variety of instructional graphics. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 6230.

ITLS 5240 - Instructional Graphic Production II
3 credits

Advanced practices of using the computer to design and produce a wide variety of instructional graphics and animations. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 6240.

ITLS 5245 - Interactive Multi-Media Production
3 credits

Covers fundamental programming concepts, in addition to fundamentals of the interactive multi-media environment. Students finishing this course will have at least one completed fully-functional project for their portfolios. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 6245.
ITLS 5265 - Internet Development  
3 credits  
Teaches web publishing primarily using HTML (Hyper-Text Markup Language). Explores current web technologies and includes design, development, and evaluation. To receive graduate-level credit, students must fulfill additional requirements.  
Cross-listed as: ITLS 6265.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  
Course Fee: $75.00  

ITLS 5270 - Digital Making and Learning  
3 credits  
People transform the landscape of technology by changing the way they think of and use computers. Students use cutting-edge technologies alongside more traditional crafts to explore basics of interactive computing. Graduate students engage in additional readings in theory and research.  
Cross-listed as: ITLS 6270  
Course Fee: $160.00  

ITLS 5275 - Multimedia Special Topic Studio I  
3 credits  
Selected special topics related to the development of multimedia products for instruction and training. To receive graduate-level credit, students must fulfill additional requirements.  
Cross-listed as: ITLS 6275.  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  
Course Fee: $75.00  

ITLS 5285 - Multimedia Special Topic Studio II  
3 credits  
Selected special topics related to the development of multimedia products for instruction and training. To receive graduate-level credit, students must fulfill additional requirements.  
Cross-listed as: ITLS 6285.  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  
Course Fee: $75.00  

ITLS 5290 - Multimedia Production for Instruction and Training  
3 credits  
A guided independent study (capstone) culminating in a project featured in a portfolio. Students will develop a project of their own choosing, exploring advanced topics from prior work &/or learning emerging or new technologies. Project management and interface design covered.  
Prerequisite/Restriction: Must have completed at least two ITLS Multimedia courses numbered 52xx or 62xx or instructor permission  
Cross-listed as: ITLS 6290  
Pass/Fail  
Semester(s) Traditionally Offered: Fall, Spring, Summer  
Course Fee: $75.00  

ITLS 5500 - Integration and Innovation of Technology in Education  
3 credits  
Research and practice means to creatively and effectively integrate technology into teaching and learning, based on local and national standards. Develop methods and resources to implement standards using technologies pertinent to student's field of study. Produce a portfolio of artifacts.  
Semester(s) Traditionally Offered: fall, spring, summer  
Effective Term  
Fall 2016  

ITLS 5750 - Instructional Technology Workshop  
1-4 credits  
Special training and experience in latest concepts and innovations in instructional technology. Content changes to reflect most recent topics and problems facing the profession.  
Repeatable for credit  
Semester(s) Traditionally Offered: Summer
ITLS 5900 - Independent Study
1-4 credits
Individually directed study and projects.
Prerequisite/Restriction: Permission of department
Repeatable for credit. Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 6000 - SLM Foundations and Information Management
3 credits
Introduction to historical and philosophical foundations of library media programs. Examines role of library media programs in schools and their contributions to the curriculum. Explores circulation, cataloging, automation tools, technical services, policies, and techniques. To receive graduate-level credit, students must fulfill additional requirements.
Cross-listed as: ITLS 5000
Campus: Also taught off campus.
Semester(s) Traditionally Offered: Fall

ITLS 6015 - SLM Collection Development and Literature
3 credits
Focuses on building, maintaining, and evaluating collections for library media programs. Discusses policy development for selection, protecting intellectual freedom, and reviewing, evaluating, and maintaining materials in all formats. Explores children's and young adult literature. To receive graduate-level credit, students must fulfill additional requirements.
Cross-listed as: ITLS 5015
Campus: Also taught off campus.
Semester(s) Traditionally Offered: Fall

ITLS 6025 - SLM Programs and Instructional Development
3 credits
Presents a wide variety of activities which are integral to a school library media program, including reading guidance, instructional development, curriculum development, media skill instruction, and information literacy. Emphasizes collaboration within schools. To receive graduate-level credit, students must fulfill additional requirements.
Prerequisite/Restriction: ITLS 5000 or ITLS 6000 or instructor permission
Cross-listed as: ITLS 5025
Campus: Also taught off campus.
Semester(s) Traditionally Offered: Spring

ITLS 6030 - Information Access, Literacy, and Technology
3 credits
Introduction to finding information and resources using print and electronic sources. Emphasizes reference services, knowledge of basic reference/information sources, and resource sharing; and teaching information retrieval strategies within a school library media program. To receive graduate-level credit, students must fulfill additional requirements.
Cross-listed as: ITLS 5030.
Campus: Also taught off campus.
Semester(s) Traditionally Offered: Spring

ITLS 6040 - SLM Center Administration and Leadership
3 credits
Includes study of organization, personnel, budgets, programs, and management of a library media center. Students define their role within a school setting and in relation to that of the principal and teachers. To receive graduate-level credit, students must fulfill additional requirements.
Prerequisite/Restriction: ITLS 6000/ITLS 5000 and ITLS 6025/ITLS 5025 or instructor permission
Cross-listed as: ITLS 5040.
Campus: Also taught off campus.
Semester(s) Traditionally Offered: Summer or Arranged

ITLS 6090 - School Library Media Practicum
1-6 credits
Observation and guided field experience in a library media center under professional library media specialists and instructional technology professionals. Bridge of
theory into practice. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: ITLS 5000 or ITLS 6000 and ITLS 5015 or ITLS 6015 and ITLS 5025 or ITLS 6025 and ITLS 5030 or ITLS 6030 or instructor permission

Cross-listed as: ITLS 5090

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Summer

ITLS 6105 - eLearning Tools
3 credits

Focuses on issues and methods of teaching and learning in distance education. Students develop strategies for effectively integrating technologies and facilitating learning at a distance. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5105

Semester(s) Traditionally Offered: Summer

ITLS 6150 - eLearning Trends and Issues
3 credits

The course is designed for those who are interested in electronic-mediated learning. The students have a major responsibility to choose the content and direction to develop a deeper understanding of all the components of eLearning, both synchronous and asynchronous.

Cross-listed as: ITLS 5150

ITLS 6195 - Practicum in eLearning
3 credits

Students demonstrate effective practice by applying instructional development principles for designing, implementing, and evaluating instruction for distant learners. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: ITLS 6105/ITLS 5105

Cross-listed as: ITLS 5195

Pass/Fail only
Semester(s) Traditionally Offered: Spring

ITLS 6205 - Computer Applications for Instruction and Training
3 credits

Introduction to use of computer applications, with special emphasis on software used in instruction and training. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5205.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00

ITLS 6215 - Digital Video Capture and Production I
3 credits

Fundamental theories and practice in design and development for camera and computer-based audio and video production, including recording, editing, and digitizing audio and video segments for education and training applications. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5215

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

ITLS 6220 - Digital Video Capture and Production II
3 credits

Advanced theories and practice in design and development for camera and computer-based audio and video production, including recording, editing, and digitizing audio and video segments for education and training applications. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: ITLS 5215 or ITLS 6215 or instructor permission

Cross-listed as: ITLS 5220

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

ITLS 6225 - Digital Audio
3 credits

Explores basic concepts of digital audio, synthesis, and sign processing. Establishes proficiency with sound
programs, as well as audio editing and sound design tools. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5225.

Semester(s) Traditionally Offered: Spring, Summer

ITLS 6230 - Instructional Graphic Production I
3 credits

Fundamental practices of using the computer to design and produce a wide variety of instructional graphics. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5230.

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

ITLS 6240 - Instructional Graphic Production II
3 credits

Advanced practices of using the computer to design and produce a wide variety of instructional graphics and animations. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5240

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

ITLS 6245 - Interactive Multi-Media Production
3 credits

Covers fundamental programming concepts, in addition to fundamentals of the interactive multi-media environment. Students finishing this course will have at least one completed fully-functional project for their portfolios. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5245.

Semester(s) Traditionally Offered: Spring, Summer
Course Fee: $75.00

ITLS 6265 - Internet Development
3 credits

Teaches web publishing primarily using HTML (Hyper-Text Markup Language). Explores current web technologies and includes design, development, and evaluation. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5265.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00

ITLS 6270 - Digital Making and Learning
3 credits

People transform the landscape of technology by changing the way they think of and use computers. Students use cutting-edge technologies alongside more traditional crafts to explore basics of interactive computing. Graduate students engage in additional readings in theory and research.

Cross-listed as: ITLS 5270

Course Fee: $160.00

ITLS 6275 - Multimedia Special Topic Studio I
3 credits

Selected special topics related to the development of multimedia products for instruction and training. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5275.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00

ITLS 6285 - Multimedia Special Topic Studio II
3 credits

Selected special topics related to the development of multimedia products for instruction and training. To receive graduate-level credit, students must fulfill additional requirements.

Cross-listed as: ITLS 5285.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00
ITLS 6290 - Multimedia Production for Instruction and Training
3 credits
Geared toward assisting master’s students in completing their degrees. Provides continuity from the first semester and encourages continued professional development in the discipline. Can be used as capstone experience for multimedia development minor. To receive graduate-level credit, students must fulfill additional requirements.

Prerequisite/Restriction: Must have completed at least two ITLS Multimedia courses numbered 52xx or 62xx or instructor permission

Cross-listed as: ITLS 5290

Pass/Fail
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00

ITLS 6300 - ITLS Orientation
1 credit
Geared toward assisting master’s students in completing their degrees. Provides continuity from the first semester and encourages continued professional development in the discipline.

Prerequisite/Restriction: Matriculation into the ITLS department

Semester(s) Traditionally Offered: Fall

ITLS 6310 - ITLS Foundations
3 credits
Explores foundations, history, perspectives, and literature in the field. Enables students to think more critically about their efforts and career goals.

Prerequisite/Restriction: Matriculation into the ITLS department

Semester(s) Traditionally Offered: Fall

ITLS 6350 - Instructional Design Process I
3 credits
Examines key techniques in design of instruction. Applies principles to specific design problems. Introduces techniques for developing instructional products according to completed designs.

Prerequisite/Restriction: Matriculation into the ITLS department

Campus: Taught off campus.
Semester(s) Traditionally Offered: Fall

ITLS 6390 - Transformative Uses of Technology for Learning
3
Explores the critical role of technology as one tool in the transformation of education. Involves students in change-related projects in their local environment. Principles and practices of implementing innovations into real-world settings and evaluating their effectiveness.

Prerequisite/Restriction: ITLS 6540 and matriculation into the ITLS department or instructor permission

Campus: Taught off campus.
Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

ITLS 6510 - Research and Evaluation in Instructional Technology
3 credits
Detailed study of methodologies for needs assessment, product evaluation, validation, and research. Includes methodological models, data collection, and data interpretation for both formative and summative evaluation.

Prerequisite/Restriction: Matriculation into the ITLS department

Semester(s) Traditionally Offered: Spring

ITLS 6530 - Instructional Design and Development Studio
3 credits
Focuses on the utilization and critique of not only
finished instruction, but also Instructional Design Theory, as well as a reverse-engineered look at Instructional Systems Design (ISD).

Prerequisite/Restriction: ITLS 6350 and matriculation into the ITLS department or instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

ITLS 6540 - Learning Theory
3 credits

Detailed study of communication and learning theories as applied to the instructional design process. Examines principles and research upon which instructional design and instructional technology are based.

Prerequisite/Restriction: Matriculation into the Instructional Technology and Learning Sciences department

Semester(s) Traditionally Offered: Fall

ITLS 6570 - Performance Systems
3 credits

Application of theory, principles, and practice of organizational systems and human competence in designing performance support systems, job aids, and just-in-time instruction.

Semester(s) Traditionally Offered: Fall

ITLS 6650 - Research Seminar
1 credit

Provides opportunity for exchange of ideas by Instructional Technology master’s students pursuing a Plan A option. Includes discussion of publications and products.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 6710 - Instructional Development Tools
3 credits

Detailed study of processes, tools, and techniques for guiding and aiding the instructional design process. Emphasizes tools for project management, analysis, and design.

Semester(s) Traditionally Offered: Fall

ITLS 6720 - Instructional Technology in Adult Education
3 credits

Application of theory, principles, and practice of instructional technology in providing instruction to adult learners.

Semester(s) Traditionally Offered: Spring, Summer

ITLS 6740 - Instructional Evaluation
2 credits

Examines theories and implementation of both formative and summative evaluation of instruction. Includes expert and learner feedback, rapid prototyping, and cost analysis.

Prerequisite/Restriction: Matriculation into the Instructional Technology and Learning Sciences department

Semester(s) Traditionally Offered: Spring

ITLS 6750 - Instructional Technology Workshop
1-4 credits

Special training and experience in the latest concepts and innovations in instructional technology. Content changes reflecting the most recent topics and problems facing the profession.

Repeatable for credit.

Semester(s) Traditionally Offered: Summer

ITLS 6760 - Grant Writing
3 credits

Introduction to the many facets of grant writing. Students write a grant proposal for submission to a funding agency and reflectively critique other proposals.

Semester(s) Traditionally Offered: Spring

ITLS 6770 - Practicum in the Improvement of Instruction
1-4 credits

A field-based program focused upon characteristics of effective teaching methodologies, teaching performance, curriculum decision making, value guidelines, and the
characteristics of the learner.

Repeatable for credit.
Semester(s) Traditionally Offered: Taught on demand

ITLS 6775 - Computers in Education for In-service Teachers
3 credits

Introduction to microcomputer applications in education for in-service teachers. Includes hands-on experiences with range of software tools for design, production, and administration.

Campus: Taught off campus.
Semester(s) Traditionally Offered: Taught on demand
Course Fee: $75.00

ITLS 6780 - Instructional Technology Programs
1-3 credits

Designed primarily as an in-service experience for teachers, trainers, administrators, and instructional technology personnel to improve local programs and services.

Repeatable for credit.
Semester(s) Traditionally Offered: Taught on demand

ITLS 6790 - Instructional Technology in Education and Training
1-3 credits

Offered on request to instructional designers, teachers, administrators, and media personnel who have special needs related to instructional technology and seek assistance in improving their local programs.

Repeatable for credit.
Semester(s) Traditionally Offered: Taught on demand

ITLS 6870 - Current Issues Seminar
1-3 credits

Allows exploration of new cutting-edge topics in the field. Topics vary and are announced the semester prior to registration. Topics may be theory or practice based.

Repeatable for credit.
Semester(s) Traditionally Offered: Arranged
Course Fee: $75.00

ITLS 6900 - Independent Study
1-6 credits

Individually directed study and projects.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 6910 - Independent Research
1-6 credits

Individually directed research.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 6940 - Internship
1-6 credits

An on-site experience in which the student applies knowledge and skills in a work environment. Used as culminating experience for the MS or MEd, Plan C.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 6960 - Creative Project
1-6 credits

Individual experience in instructional product development. May be used as the culminating experience for the MEd and MS Plan C.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 6970 - Thesis
1-6 credits

Individual work in MS thesis and Plan B report writing with guidance and criticism.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 6990 - Continuing Graduate Advisement
1-8 credits

Allows students access to faculty and facilities to complete graduate thesis, project, and papers.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7000 - Pro-seminar I in Instructional Technology
3 credits

Lectures and discussions on advanced topics in instructional technology and related disciplines. Required for Instructional Technology EdS and PhD students.

Prerequisite/Restriction: Admission to PhD program in Instructional Technology and Learning Sciences or admission to EdS program in Instructional Technology is required prior to enrollment

Semester(s) Traditionally Offered: Fall

ITLS 7010 - Pro-seminar II in Instructional Technology
3 credits

Continuation of ITLS 7000. Lectures and discussions on advanced topics in instructional technology and related disciplines. Required for Instructional Technology EdS and PhD students.

Prerequisite/Restriction: ITLS 7000 Admission to PhD program in Instructional Technology and Learning Sciences or admission to EdS program in Instructional Technology is required prior to enrollment

Semester(s) Traditionally Offered: Spring

ITLS 7150 - Advanced Seminar in Instructional Technology
3 credits

In-depth study of various topics including learning theory, instructional design, instructional theory, instructional development tools, production techniques, and instructional applications in different cultures. Specific topics for each semester will be announced.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7200 - Quantitative and Design Research in Instructional Technology
3 credits

Examines current trends, applications, methods, and research questions that are appropriate to the use of quantitative and design research within the field of instructional technology.

Semester(s) Traditionally Offered: Fall

ITLS 7300 - Research in Instructional Technology and Learning Sciences
3 credits

Provides doctoral students with opportunities to achieve further depth in their research skills, as well as opportunities for obtaining additional knowledge by critiquing existing designs and approaches of instructional technology and learning sciences investigation. Emphasizes building research designs, with the intention of creating more exposure and experience regarding the role technology plays in the way people learn.

Semester(s) Traditionally Offered: Spring

ITLS 7450 - Internship in Program Evaluation
1-4 credits

Experience in practical aspects of program evaluation through planned, supervised evaluation project. Participation must be approved by student’s supervisory committee.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7460 - Internship in Research
1-4 credits

Experience in conducting research through planned, supervised evaluation project. Participation must be approved by student’s supervisory committee.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7820 - Practicum in Instructional Technology
2 credits

Requires four practica selected from the following: funding proposal, product/research, review product development, evaluation, empirical investigation, and teaching.

Prerequisite/Restriction: Instructor permission
Enrollment limited to Instructional Technology EdS and PhD students only

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7870 - Current Issues Seminar
1-3 credits

Allows exploration of new cutting edge topics in the field. Topics vary and are announced the semester prior to registration. Topics may be theory or practice based.

Repeatable for credit.
Semester(s) Traditionally Offered: Arranged
Course Fee: $75.00

ITLS 7900 - Independent Study
1-6 credits

Individually directed study and projects.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7910 - Independent Research
1-6 credits

Provides for individually directed research.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7920 - College Teaching Seminar
1-3 credits

Develops skills and knowledge necessary for college teaching. Activities are designed to help participants in a variety of areas, including instructional development and presentation skills development.

Semester(s) Traditionally Offered: Arranged

ITLS 7960 - Practicum, Educational Specialist
1-9 credits

Culminating project/externship in partial fulfillment of the Educational Specialist degree.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7970 - Dissertation
1-18 credits

Individual work on research problems in the PhD program.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7990 - Continuing Graduate Advisement
1-9 credits

Allows graduate students access to faculty and facilities to complete graduate dissertation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ITLS 7990 - Continuing Graduate Advisement
1-9 credits

Allows graduate students access to faculty and facilities to complete graduate dissertation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Intensive English Language Institute

IELI 1000 - Conversational English
3 credits

This is an integrated skills course which builds on all language skills (reading, writing, listening, and speaking). The main emphasis will be on speaking and listening used in common conversational situations found at and around American universities.

Prerequisite/Restriction: IELI placement exam
IELI 1120 - Writing I
4 credits
Develops writing skills at the high-beginning level. Focuses on description, narration, grammar, and appropriate word order at sentence and paragraph levels.
Semester(s) Traditionally Offered: Fall, Spring

IELI 1160 - Reading I
4 credits
Focuses on comprehension of expository texts at a high-beginning level. Emphasizes word knowledge, vocabulary development, knowledge of sentence structure, and general organization of text.
Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 1220 - Writing from Sources
4 credits
Focuses on sentence and paragraph writing at a low-intermediate level. Students gather information from various sources, organize it, and present it in written form.
Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 1230 - Cross-Cultural Talk
3 credits
Multilevel course designed to improve oral communication through small group work and one-on-one conversation with American undergraduate teaching fellows. Emphasizes interactive language fluency. Repeatable for credit for students who place at the basic level on the IELI placement exam.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 1240 - Integrated Skills
3 credits
Multilevel speaking, reading, writing, and listening

IELI 1260 - Reading II
4 credits
Focuses on comprehension of texts at the low-intermediate level, with an emphasis on distinguishing main ideas from supporting ideas, active reading, summarizing, and increasing vocabulary.
Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 1900 - Intermediate Topics in ESL and U.S. Culture
1-3 credits
English as a Second Language study on specific topics or themes. Selected intermediate level language activities will be assigned to allow students to explore aspects of U.S. culture. This course is NOT part of the IELI core curriculum.
Repeatable for credit.
Pass/Fail
Semester(s) Traditionally Offered: Summer
Effective Term
Summer 2015

IELI 2310 - Comprehending Authentic Discourse
3 credits
Focuses on listening and note-taking of authentic passages, such as interviews, news reports, university lectures, and documentaries. Develops strategies for comprehension and organization of information.
Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2320 - Writing from Authentic Texts
4 credits
Focuses on developing writing skills at the intermediate level, moving from the paragraph to the academic essay. Students learn to acknowledge sources and use the library and the Internet to inform their writing.
Semester(s) Traditionally Offered: Fall, Spring, Summer
IELI 2330 - Spoken Discourse and Cross-Cultural Communication
3 credits

Emphasizes interpersonal communication and academic tasks with American undergraduate classroom assistants. Focuses on the dynamics of small-group interactions.

Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2360 - Reading Authentic Texts
4 credits

Focuses on comprehension of academic and popular-media texts including articles from newspapers, magazines, and web pages. Awareness of discourse organization and development of academic vocabulary are emphasized.

Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2410 - Comprehending Lecture Discourse
3 credits

Develops techniques for understanding the planned and spontaneous academic discourse of university classrooms. Focuses on information processing.

Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2420 - Writing from Academic Sources
4 credits

Introduces students to academic writing demands. Students gather information from various sources, such as interviews, surveys, and academic texts; analyze and summarize the information; and write documented essays and reports.

Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2440 - Academic Discourse
3 credits

Designed to assist students in developing oral competency, with emphasis on comprehensibility in academic presentations.

Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2450 - Topics for ESL
4 credits

Introduces contemporary topics, which vary by semester and level. Focuses on language development through content-based instruction. Repeatable for up to 12 credits.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2460 - Reading from Academic Sources
4 credits

Focuses on processes and strategies for a variety of academic and disciplinary genres, with a special emphasis on the basic university textbook; strategies for learning from textbooks and other materials relevant to reading for academic purposes; and vocabulary study.

Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2470 - Cross-Cultural Perspectives (BSS)
BSS Breadth Social Sciences
4 credits

Designed to be taken by IELI students. Brings together students from a variety of ethnic backgrounds for the purpose of cultural exploration. Students examine the influence of culture on beliefs, behaviors, and values.

Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2475 - Cross-Cultural Explorations (BSS)
BSS Breadth Social Sciences
3 credits

Designed to be taken by American undergraduates who are native English speakers. Brings together students from a variety of ethnic backgrounds for the purpose of cultural exploration. Students examine the influence of culture on beliefs, behaviors, and values.

Semester(s) Traditionally Offered: Fall, Spring, Summer

IELI 2900 - Advanced Topics in ESL and U.S. Culture
1-3 credits

English as a Second Language study on specific topics or themes. Selected advanced level language activities will be assigned to allow students to explore aspects of U.S. culture. This course is NOT part of the IELI core curriculum.
Workshop for international students who will hold teaching assistantships at USU. Focuses on culturally and pedagogically appropriate behaviors for American undergraduate students. Includes micro-teaching practicum.

Prerequisite/Restriction: Student must demonstrate oral English proficiency

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall

ITDS 4900 - Senior Thesis/Project
3 credits

Students majoring in Interdisciplinary Studies are required to complete a 3-credit thesis or project as part of the major. The thesis or project must be either a research paper or a creative activity appropriate to the theme of the Interdisciplinary Studies major. Each student works with his or her faculty advisor to determine an appropriate topic of study or a project. The student and advisor outline the protocol and parameters of the thesis or project.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 1740 - Computer Applications in Interior Design
3 credits
Introduction to software specifically related to discipline of interior design. Computer techniques taught using personal computers and related peripherals.

Prerequisite/Restriction: Enrollment limited to interior design majors only

ID 1750 - Design in Everyday Living (BCA)
BCA Breadth Creative Arts
3 credits
Investigation of the basic elements and principles of design related to everyday living experiences and the practical application of relevant theory.

ID 1760 - Rapid Visualization in Interior Design
3 credits
Students develop and hone abilities in and understanding of various types of rapid visualization in interior design.

ID 1790 - Interior Design Theory
3 credits
Explores basic philosophy of interior design. Analyzes design elements and principles when applied to interior spaces. Evaluation of contemporary design theories as factors influencing design trends.

Prerequisite/Restriction: Interior Design Majors or pre-majors only

ID 2710 - Architectural Graphics I
3 credits
Competency development in use of drafting tools, symbols, and techniques used in interior design presentation. Includes communication skills related to
techniques and approaches to graphic presentations of interior design solutions: floor plans, elevations, sections, axonometrics, details, and dimensioning.

Prerequisite/Restriction: Bachelors of Interior Design (BID) Majors only

Semester(s) Traditionally Offered: Fall
ID 2720 - Architectural Graphics II
3 credits

Introduction to three-dimensional drawing: isometric and perspective. Development of methods of rapid graphic communication techniques and approaches to complete professional presentations. Exploration of various types of media and presentation methods.

Prerequisite/Restriction: ID 2710

Semester(s) Traditionally Offered: Spring
ID 2730 - Interior Space Planning and Human Dimensions
3 credits

Focuses on physical, psychological, and human factors influencing design of interior space. Includes research, programming, analysis, and design of residential and nonresidential spaces.

Prerequisite/Restriction: ID 2710

Semester(s) Traditionally Offered: Spring
ID 2750 - Computer Aided Drafting and Design I
3 credits

Introduction to computer aided drafting and design for design students.

Prerequisite/Restriction: Bachelors of Interior Design (BID) Majors only

Semester(s) Traditionally Offered: Fall
ID 2760 - Computer Aided Drafting and Design II
3 credits

Advanced exploration and study of computer aided design, creative applications, and proficiencies.

Prerequisite/Restriction: ID 2750

Semester(s) Traditionally Offered: Spring
ID 2770 - History of Interior Furnishings and Architecture I
3 credits

Identification of historical architectural styles and elements in interior furnishings and materials, dating from Antiquity through the Renaissance, French, English and American periods up to the Industrial Revolution.

Prerequisite/Restriction: BID Majors only

Semester(s) Traditionally Offered: Fall
ID 2780 - History of Interior Furnishings and Architecture II
3 credits

Identification of historical architectural styles and elements in interior furnishings and materials, dating from the Industrial Revolution to the present.

Prerequisite/Restriction: BID Majors only

Semester(s) Traditionally Offered: Spring
ID 3710 - Interior Design Pre-Internship
1 credit

Preparation course for ID 4710.

Prerequisite/Restriction: Instructor permission and junior class standing
Repeatable for credit

Semester(s) Traditionally Offered: Spring
ID 3730 - Interior Materials and Construction (QI)
QI Quantitative Intensive
3 credits

Identification of current interior materials; their characteristics, use, and care. Experience in specification estimation, workroom procedures, and development of a working resource file.

Prerequisite/Restriction: ID 2730

Semester(s) Traditionally Offered: Fall
ID 3760 - Commercial Design Studio
3 credits

Studio projects of various complexity and type, having commercial focus. May include hospitality, retail, medical, office, and other commercial and institutional design opportunities.

Prerequisite/Restriction: ID 2730
Semester(s) Traditionally Offered: Fall, Spring

ID 3770 - Residential Design Studio
3 credits

Studio projects of various complexity and type, having residential focus. Analysis of various approaches to problem solving. Graphic and verbal presentation, emphasizing high-end design evaluation.

Prerequisite/Restriction: ID 3760
Semester(s) Traditionally Offered: Fall, Spring

ID 3790 - Architectural Systems
3 credits

Study of architectural systems in contemporary buildings. Investigation of construction drawings and their interpretation. Includes related codes and professional terminology.

Prerequisite/Restriction: Bachelors of interior Design (BID) Majors only
Semester(s) Traditionally Offered: Fall

ID 4700 - Topics in Interior Design
3 credits

Current topics associated with interior design.

Prerequisite/Restriction: Instructor permission and junior class standing
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 4710 - Interior Design Advanced Internship I
3 credits

Interior design experience in applying skills and knowledge in businesses and community agencies.

Prerequisite/Restriction: Instructor permission and junior class standing
Repeatable for credit.
Semester(s) Traditionally Offered: Spring

ID 4730 - Environmental Design for Interiors
3 credits

Explores global environmental issues and their impact on the design process. Includes the history, principles, and theories of sustainability; life-cycle design practices; relevant green design terminology; and the LEED Green Building Rating System.

Prerequisite/Restriction: Bachelors of Interior Design (BID) Majors only
Semester(s) Traditionally Offered: Fall

ID 4740 - Business and Professional Practices in Interior Design (CI)
CI Communications Intensive
3 credits

Overview of business practices and principles for interior design, including: salesmanship, marketing, client and trade relationships, establishing an interior design practice, and fee structure.

Prerequisite/Restriction: ID 4710
Semester(s) Traditionally Offered: Spring

ID 4750 - Senior Design Studio I
3 credits

Interior design projects focusing on research, programming, schematics, space planning, project specifications, and presentation.

Prerequisite/Restriction: Senior ranking in Interior Design and ID 4790
Semester(s) Traditionally Offered: Fall

ID 4760 - Senior Design Studio II
3 credits
Interior design projects include finish selections, specifications, construction document development, and project presentation.

Prerequisite/Restriction: ID 4750

Semester(s) Traditionally Offered: Spring

ID 4770 - Senior Exhibit
1 credit

Analysis and review of student work in preparation for formal exhibition.

Prerequisite/Restriction: ID 4750

Semester(s) Traditionally Offered: Spring

ID 4780 - Interior Design Travel Course
1-9 credits

Travel experiences geared toward the examination of design in various geographical locations, both within the United States and abroad.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 4790 - Computer Applications of Modeling in Interior Design
3 credits

Application of software to produce a model of interior spaces, using contemporary modeling software. Graduate students will complete an animation in addition to the regular assignments.

Prerequisite/Restriction: ID 2760

Cross-listed as: ID 6760

Semester(s) Traditionally Offered: Fall, Spring

ID 4900 - Independent Study in Interior Design
1-5 credits

Focused independent activities. Students must identify a project or topic of interest and discuss with proposed instructor.

Prerequisite/Restriction: Junior class standing and approval of faculty

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 4910 - Creative Projects
1-4 credits

Creative project or practicum conducted under direction of faculty member. Topic may be initiated by student or faculty.

Prerequisite/Restriction: Junior class standing and approval of faculty

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 6700 - Graduate Topics in Interior Design
1-6 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 6710 - Graduate Internship in Interior Design
1-3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 6720 - Research Methods in Interior Design
3 credits

Semester(s) Traditionally Offered: Fall

ID 6730 - Interior Design Graduate Studio
1-6 credits

Requires research, analysis, and production of a given subject area, including its final planning, design, and documentation. Student plans project and executes it through individual initiative and scheduled consultation with the instructor.

Prerequisite/Restriction: Graduate standing

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 6740 - Advanced Interior Design Theory
3 credits

Surveys history of interior design theory from its architectural, decorative, and societal beginnings to the
present. Requires analysis and application of critical thought.

Semester(s) Traditionally Offered: Fall, Spring

ID 6750 - Readings in Interior Design
1-3 credits

Readings about the creative process, post-occupancy evaluation, culture and environment, and design forecasting. Repeatable for up to 3 credits.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

ID 6760 - Computer Applications of Modeling in Interior Design
3 credits

Application of software to produce a model of interior spaces, using contemporary modeling software. Graduate students will complete an animation in addition to the regular assignments.

Prerequisite/Restriction: ID 2760

Cross-listed as: ID 4790

Semester(s) Traditionally Offered: Fall, Spring

ID 6770 - Facilities Planning and Management
3 credits

Facilities management process in large-scale organizations. Formation of facilities policies, procedures, and standards. The facilities database, space allocations, and management process.

Semester(s) Traditionally Offered: Spring

ID 6780 - Design Methodologies in Interior Design
3 credits

Identifies and defines various design methodologies, with regard to design solutions for interior environments.

Semester(s) Traditionally Offered: Fall

Interior Design

ID 6790 - Master's Seminar in Interior Design
1-6 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

ID 6900 - Special Problems
1-3 credits

Selected problems to meet individual student interests and areas of concentration.

Prerequisite/Restriction: Graduate standing and permission of departmental faculty

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 6970 - Masters Thesis Research in Interior Design
1-6 credits

Repeatable for up to 6 credits.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 6990 - Continuing Graduate Advisement
1-3 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Italian

ITAL 1010 - Italian First Year I
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs. Native speaker instructor. Self-study with tutorial assistance.

Semester(s) Traditionally Offered: Fall

ITAL 1020 - Italian First Year II
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure
ITAL 2010 - Italian Second Year I  
4 credits

Second-year overview of speaking, listening, reading, and writing, with exposure to cultures and customs. Native speaker instructor. Self-study with tutorial assistance. 
Prerequisite: ITAL 2010 or equivalent

ITAL 2020 - Italian Second Year II  
4 credits

Second-year overview of speaking, listening, reading, and writing, with exposure to cultures and customs. Native speaker instructor. Self-study with tutorial assistance. 
Prerequisite: ITAL 2020 or equivalent

ITAL 2988 - Special Problems  
1-3 credits

An elective course intended for advanced students. Students will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Italian culture will also be emphasized. Significant reading and work outside of class are required. 
Prerequisite/Restriction: Instructor permission 
Repeatable for credit 
Campus: USU Eastern only

Japanese

JAPN 1010 - Japanese First Year I  
5 credits

Semester(s) Traditionally Offered: Fall 
Course Fee: $24.00

JAPN 1020 - Japanese First Year II  
5 credits

Second course in beginning Japanese. Introduction to the basic 100 Kanji. Mastery of more complicated sentences, including conditional temporal, volitional, and potential expressions. Exposure to Japanese culture and customs. 
Prerequisite/Restriction: JAPN 1010 or equivalent

JAPN 2010 - Japanese Second Year I  
5 credits

First course in intermediate Japanese. Proficiency in reading and writing 150 additional Kanji. Mastery of the last basic grammar topics, such as passive, causative, passive causative, and giving/receiving expressions. Introduction to honorific/humble expression. Exposure to Japanese culture and customs. 
Semester(s) Traditionally Offered: Fall 
Course Fee: $24.00

JAPN 2020 - Japanese Second Year II  
5 credits

Prerequisite/Restriction: JAPN 2010 or equivalent

JAPN 2010 - Japanese Second Year I  
5 credits

First course in intermediate Japanese. Proficiency in the
JAPN 2988 - Special Problems
1-3 credits

An elective course intended for advanced students. Students will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Japanese culture will also be emphasized. Significant reading and work outside of class are required.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Eastern only

JAPN 3010 - Japanese Third Year I
4 credits

First segment of the third-year Japanese reading/writing course. Proficiency in reading and writing an additional 500 Kanji.

Prerequisite/Restriction: JAPN 2020 or equivalent
Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

JAPN 3020 - Japanese Third Year II
4 credits

Second segment of the third-year Japanese reading/writing course. Proficiency in reading and writing an additional 500 Kanji.

Prerequisite/Restriction: JAPN 3010 or equivalent
Semester(s) Traditionally Offered: Spring
Course Fee: $24.00

JAPN 3050 - Japanese Calligraphy
1 credit

Study of Japanese writing system through practicing the art of calligraphy.

Cross-listed as: ART 3050.
Repeatable for credit.
Semester(s) Traditionally Offered: Spring

JAPN 3090 - Introduction to Japanese Literature
3 credits

This course will introduce students to a variety of forms and styles of Japanese literary works.

Semester(s) Traditionally Offered: Spring

JAPN 3100 - Readings in Contemporary Japanese Culture
3 credits

Introduction to contemporary Japanese culture through readings from newspapers and other source materials.

Prerequisite/Restriction: JAPN 3010 and JAPN 3020

JAPN 3100 - Readings in Contemporary Japanese Culture
3 credits

Introduction to contemporary Japanese culture through readings from newspapers and other source materials.

Prerequisite/Restriction: JAPN 3010 and JAPN 3020

JAPN 3510 - Japanese for the Business Environment
3 credits


Prerequisite/Restriction: JAPN 3020
Semester(s) Traditionally Offered: Spring

JAPN 3560 - Studies in Japanese Film
3 credits

Offers an introduction to the historical and theoretical study of Japanese cinema. Course screenings include some of the films made by well-known directors during the 1960s and 1970s, as well as the cutting-edge of contemporary films.

JAPN 4250 - Internship/Coop
3-9 credits

Cooperative education through internship programs provided by companies in Japan. Intended for students participating in the U.S.-Japan internship program.

Prerequisite/Restriction: JAPN 3010, JAPN 3020, and JAPN 3510
Semester(s) Traditionally Offered: Summer

JAPN 4920 - Japanese Language Tutoring
1 credit
Allows students to develop tutoring skills by assisting professors in lower-division courses or fulfilling instructional duties for a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated to a maximum of 3 credits.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

Journalism and Communication

JCOM 1040 - Newspaper Production
3 credits
Covers the writing, research, layout and design of the campus newspaper, “The Eagle” for first year students. Teaches computer-assisted reporting and utilizes four computer programs within the framework of the class. Emphasizes the interview, research and copy preparation of news, viewpoints, features, arts and entertainment and sports. Prepares students to enter the day-to-day print world of the communication field.

Prerequisite/Restriction: Grade of “B” or higher in high school and college English Classes and JCOM 1130
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

JCOM 1050 - Newspaper Production
3 credits
Covers the writing, research, layout and design of the campus newspaper, “The Eagle” for first year students. Teaches computer-assisted reporting and utilizes four computer programs within the framework of the class. Emphasizes the interview, research and copy preparation of news, viewpoints, features, arts and entertainment and sports. Prepares students to enter the day-to-day print world of the communication field.

Prerequisite/Restriction: Grade of "B" or higher in high school and college English Classes and JCOM 1130
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

JCOM 1130 - News Writing
3 credits

Prerequisite/Restriction: Fulfillment of Communications Literacy CL1 requirement through coursework or examination and English Proficiency Test offered through the Journalism and Communication Department
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00
Effective Term
Fall 2016

JCOM 1500 - Introduction to Mass Communication (BSS)
BSS Breadth Social Sciences
3 credits
History, philosophy, structures, and functions of the mass media (newspapers, magazines, TV and radio, advertising, and public relations) and their intersection with other social institutions. Media economics and the impacts of new technologies on media institutions and society.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 1510 - Introduction to Broadcasting
3 credits
Overview of the radio—television—cable industry with emphases to include history, technological innovations, programming practices, the business structure of the industry, and possible career paths available.

Campus: USU Eastern only

JCOM 1560 - Radio Production (Audio)
3 credits
Students will learn the history, law and current operating practices of the radio industry. Additionally, students will learn the techniques and disciplines of radio field and studio production through hands-on experience. Includes microphone setups, audio console operation and script writing. Students will learn cut/splice and digital editing. Analysis of the medium’s characteristics and practice in preparing and producing programs.
Campus: Main Campus

JCOM 1660 - Introduction to Television
3 credits

Study of the fundamentals of television production including design, shooting, editing, lighting techniques, and an examination of the technological underpinnings of the industry.

Campus: USU Eastern only

JCOM 1720 - Writing for Broadcast
3 credits

Writing factual and fictional materials for broadcast media. Assignments include news, commercials, public service announcements, interviews, documentaries and other types of scripts. Students will be taught proper script formats for both radio and television writing.

Prerequisite/Restriction: JCOM 1560 and JCOM 1660

Campus: USU Eastern only

JCOM 1800 - Communication Graphics
3 credits

Introduction into the design of communication projects with special emphasis on creative typography, computer-assisted layout and design as well as publication techniques.

Prerequisite/Restriction: Word processing course or instructor permission

Campus: USU Eastern only

Semester(s) Traditionally Offered: Fall, Spring

JCOM 2010 - Media Smarts: Making Sense of the Information Age (BSS)
BSS Breadth Social Sciences
3 credits

Critical analysis of the roles and performance of mass media content and messages, and their influence on society. Emphasizes critical reading of news, entertainment, and advertising content regarding women, minorities, children, and other groups. Basic mass media ethics and law.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL1 requirement through coursework or examination

Semester(s) Traditionally Offered: Fall, Spring

JCOM 2020 - Communication Research Methods (QI)
QI Quantitative Intensive
3 credits

Covers research methods used in the mass communication field. Practical application of quantitative information within journalism and public relations. Emphasizes using numbers to help audiences make sense of issues and events.

Prerequisite/Restriction: STAT 1040, STAT 1045, STAT 2000, STAT 2300 or AP STAT with a test score of at least 3; and a minimum grade of C+ in JCOM 1500 or JCOM 2010

Semester(s) Traditionally Offered: Fall, Spring

JCOM 2030 - Multimedia Boot Camp
3 credits

Required core JCOM major course that provides basics of digital multimedia skills.

Prerequisite/Restriction: JCOM major standing or permission of department head

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $150.00

JCOM 2070 - Newspaper Production
3 credits

Covers the writing, research, and layout and design of the campus newspaper, “The Eagle” for second-year students. Teaches computer-assisted reporting and utilizes four computer programs within the framework of the class. Emphasizes the interview, research and copy preparation of news, viewpoints, features, arts and entertainment and sports. Prepares students to enter the day-to-day print world of the communication field.

Prerequisite/Restriction: Grade of “B” or higher in high school and college English Classes and JCOM 1130

Campus: USU Eastern only

Semester(s) Traditionally Offered: Fall, Spring
JCOM 2080 - Newspaper Production
3 credits
Covers the writing, research, and layout and design of the campus newspaper, “The Eagle” for second-year students. Teaches computer-assisted reporting and utilizes four computer programs within the framework of the class. Emphasizes the interview, research and copy preparation of news, viewpoints, features, arts and entertainment and sports. Prepares students to enter the day-to-day print world of the communication field.
Prerequisite/Restriction: Grade of “B” or higher in high school and college English Classes and JCOM 1130
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

JCOM 2160 - Introduction to Online Journalism
3 credits
Prerequisite/Restriction: Minimum grades of C+ in JCOM 1130, JCOM 1500, and JCOM 2010
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00

JCOM 2180 - Beginning Photojournalism
3 credits
The course explores the history of photojournalism and the use of photojournalism in print and electronic media. The bulk of the course is spent shooting weekly assignments to improve students' technical skills and knowledge of composition and lighting. In place of a final exam, students will complete a documentary project. Students furnish a DSLR and must be familiar with their camera and have a basic understanding of aperture and shutter speed.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00
Effective Term
Fall 2016

JCOM 2220 - Introduction to Video Media
3 credits
Introduction to the theories and practice of video production and functions in broadcasting and the electronic mass media, including concepts, techniques, and impacts of various video approaches.
Prerequisite/Restriction: Minimum grades of C+ in JCOM 1130, JCOM 1500, and JCOM 2010
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

JCOM 2300 - Introduction to Public Relations
3 credits
Survey of theories and practice of public relations in a variety of business, corporate, governmental, and nonprofit organizational settings. Elements of promoting organizational messages and communicating with various publics.
Prerequisite/Restriction: Minimum grades of C+ in JCOM 1500 and JCOM 2010 May be taken concurrently with (but not before) JCOM 1130
Semester(s) Traditionally Offered: Fall, Spring

JCOM 2560 - Radio Performance
1-3 credits
Practical, hands on training experience in radio operations and production. Students will fulfill various tasks associated with the operation of the campus radio station. Students will attend a weekly meeting with the faculty advisor, produce promotional spots and underwriting, work regularly scheduled board shifts, and other duties as assigned according to the number of credit hours being attempted.
Prerequisite/Restriction: JCOM 1560
Campus: Main Campus
Semester(s) Traditionally Offered: Fall, Spring

JCOM 2660 - Television Practicum
1-3 credits
Advanced study in television production. The course is project based. Projects are determined by the needs of USU-Eastern, or available outside clients.
Prerequisite/Restriction: JCOM 2220
Campus: USU Eastern only

JCOM 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training and experience in communication areas. Students establish learning objectives, hours to be worked, and a credit agreement with the faculty/coordinator at the beginning of the semester. Students then meet periodically with the faculty/coordinator to review progress.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

JCOM 2988 - Special Problems
1-3 credits

Individual work to be approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

JCOM 3030 - Corporate Communications
3 credits

Communications and public relations professional must have solid interpersonal, small group, public speaking and organizational communications skills to be effective in whatever organizational structure they find themselves in. They must also know how to lead, coach, and train their internal and external clients to be better communicators within their own organizations. This class was developed to give students an opportunity to learn and apply basic skills in those areas.

Semester(s) Traditionally Offered: Spring

JCOM 3050 - Technical and Professional Communication Principles (CI)
CI Communications Intensive
3 credits

Technical communication principles and practices used in the workplace. Emphasizes technical writing of reports and correspondence using electronic information retrieval and presentation.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Cross-listed as: ASTE 3050

Semester(s) Traditionally Offered: Fall, Spring, Summer

JCOM 3090 - Graphic Communication in Agriculture
3 credits

Prepares students to be proficient in elements of design, graphic art production, photo editing, and image composition techniques used in agricultural communications and journalism fields.

Cross-listed as: ASTE 3090

Semester(s) Traditionally Offered: Spring

JCOM 3100 - Reporting Public Affairs (CI)
CI Communications Intensive
3

Emphasizes development of advanced reporting, newsgathering, interviewing, and writing skills.

Prerequisite/Restriction: Minimum grades of C+ in JCOM 1130, JCOM 1500, and JCOM 2010

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00
Effective Term
Fall 2016

JCOM 3110 - Feature Writing (CI)
CI Communications Intensive
3

Intensive feature-writing course emphasizing the research, writing, editing, and marketing of articles for magazines, newspapers, online sites, and other publications.

Prerequisite/Restriction: Minimum grade of C in JCOM 2020 and JCOM 3100; or instructor permission

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00
Effective Term
Spring
JCOM 3120 - Copy Editing and Publication Design (CI)
CI Communications Intensive
3
Editing and preparation of news stories and artwork for publication. Principles and practice of publication layout and design.

Prerequisite/Restriction: Minimum grade of C in JCOM 2020 AND minimum grade of C in JCOM 3100, JCOM 3200, or JCOM 3310; or instructor permission

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00
Effective Term
Spring

JCOM 3140 - Opinion Writing (DSS)
DSS Depth Social Sciences
3 credits
Study and practice of persuasive editorial and opinion writing for the mass media.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 3200 - Writing for Electronic Media
3 credits
Theory and practice of reporting public affairs for broadcast and electronic media. Emphasizes news gathering, understanding local political structures, news and feature writing, interviewing, media law, ethics, and cultural sensitivity.

Prerequisite/Restriction: Minimum grades of C+ in JCOM 1130, JCOM 1500, and JCOM 2010

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

JCOM 3310 - Writing for Public Relations (CI)
CI Communications Intensive
3 credits
Theory and practice of information-gathering for public relations, including basic news releases, features, speeches, annual reports, newsletters and brochures, broadcasting, and other forms. Emphasizes advanced news gathering techniques, interviewing, media law, ethics, and cultural sensitivity.

Prerequisite/Restriction: Minimum grades of C+ in JCOM 1130, JCOM 1500, and JCOM 2010

Semester(s) Traditionally Offered: Spring

JCOM 3320 - Strategic Research Methods in Public Relations (DSS)
DSS
3
Qualitative research methods standard to real-life applications in public relations problems and campaigns, including focus groups, case analysis, and strategic assessments.

Prerequisite/Restriction: Minimum grade of C in JCOM 2020 AND minimum grade of C in either JCOM 2300 or JCOM 3310

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

JCOM 3410 - Film as Cultural Communication (DSS)
DSS Depth Social Sciences
3 credits
Analysis of the economic, ideological, political, and cultural constraints influencing film content.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 4010 - Mass Communication Ethics (DSS)
DSS Depth Social Sciences
3 credits
Study of ethical systems and philosophies and their applications to the practice of mass communication.

Prerequisite/Restriction: Junior standing
Cross-listed as: JCOM 6440.

Semester(s) Traditionally Offered: Spring

JCOM 4020 - Mass Media and Society (DSS)
DSS Depth Social Sciences
3 credits
Study of theories and practice of the impact of mass
media in conjunction with other social institutions: political, social, cultural, ideological, economic, and religious.

Prerequisite/Restriction: Junior standing

JCOM 4030 - Mass Media Law (DSS)
DSS Depth Social Sciences
3

A comprehensive exploration of mass communication law. The course examines media rights of free expression and both the history and applicability of First Amendment protections. The course discusses the structure and functioning of the U.S. court system, defamation, trademark, copyright, access to information, and other related topics and themes.

Prerequisite/Restriction: Junior standing or instructor permission

Cross-listed as: JCOM 6430

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

JCOM 4040 - Social Media
3 credits

This class works with real-world clients to devise a social media strategy and implement it throughout the term. Students learn theory and real-world skills, including digital writing for multiple platforms, designing a social media business plan, and using analytics.

Prerequisite/Restriction: Must meet one of the following–1 Minimum grade of C+ in JCOM 1130; 2 minimum grade of C in JCOM 3100, JCOM 3110, or JCOM 3310; or 3 permission of the instructor

Semester(s) Traditionally Offered: Fall, Spring

JCOM 4100 - Hard News Café
3 credits

Advanced reporting and writing for student news website. Includes advanced reporting techniques, photojournalism, and posting of news reports and materials to interactive website.

Prerequisite/Restriction: Minimum grade of C in JCOM 3110 or instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00

JCOM 4110 - Computer-Assisted Reporting (CI)
CI Communications Intensive
3 credits

Advanced computer-based investigative and in-depth information-gathering and newswriting, including intensive use of computer databases to collect and analyze data.

Prerequisite/Restriction: Minimum grades of C in JCOM 3100 or JCOM 3200 or JCOM 3310; or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

JCOM 4120 - Sports Writing (CI)
CI Communications Intensive
3 credits

Information-gathering and writing of news and feature stories about sports for print and electronic mass media.

Prerequisite/Restriction: Minimum grades of C in JCOM 3100 or JCOM 3200 or JCOM 3310; or instructor permission

Semester(s) Traditionally Offered: Spring

JCOM 4150 - Advanced Digital Photojournalism
3 credits

The course explores the ethical practices of photojournalism and its use in print and electronic media. The bulk of the course is spent shooting weekly assignments to refine students’ technical and creative skills. The midterm and final are documentary photo projects. Students will compile a final photojournalism portfolio.

Prerequisite/Restriction: Minimum grade of C in JCOM 2180 or instructor permission

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00
Effective Term
Fall 2016

JCOM 4210 - Newscast I (CI)
CI Communications Intensive
4 credits

Basics of electronic newsgathering and writing for electronic news media. Use of electronic video equipment for creation of on-air newscast and other visual news materials.

Prerequisite/Restriction: Minimum grade of C in JCOM 2020, JCOM 2220, JCOM 3200

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

JCOM 4220 - Newscast II (CI)
CI Communications Intensive
4 credits

Newsroom organization and practice in electronic and video news production, including directing and producing, writing for video news, use of studio equipment, use of video production equipment, staff management, and control room operations.

Prerequisite/Restriction: Minimum grades of C in JCOM 3200 and JCOM 4210

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

JCOM 4230 - Corporate Video
3 credits

Project-based lab work in studio video productions for real-world clients. Use of video field equipment and production facilities. Completion of video packages.

Prerequisite/Restriction: Minimum grades of C+ in JCOM 1130, JCOM 1500, JCOM 2010, and JCOM 2220; or instructor permission

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

JCOM 4300 - Integrated Marketing Communication
3 credits

Teaches the integrated marketing functions necessary to effectively position, brand, and market a company. Provides students with opportunity to help bridge the gaps existing among management, strategic, and creative players in the design field. Prepares students to better function as effective account managers or campaign leaders in a public relations, marketing, branding, or advertising culture.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 4400 - Mass Media Criticism
3 credits

Critical analysis of mass media content, emphasizing the media’s social, cultural, and political impacts. Use of advanced research techniques.

Prerequisite/Restriction: Senior standing required for enrollment in JCOM 4400; instructor permission required for enrollment in JCOM 6400

Cross-listed as: JCOM 6400.

Semester(s) Traditionally Offered: Spring

JCOM 4410 - Gender and the Mass Media
3 credits

Examines the nature of gender-based images in a variety of mass media, from advertising to magazines, television, and film. Analysis of gender stereotypes and portrayals in news and entertainment media, along with resulting social impacts.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement; junior standing or instructor permission

Cross-listed as: WGS 4410 and WGS 6410 and JCOM 6410

Semester(s) Traditionally Offered: Fall

JCOM 4500 - Projects in Communication
1-5 credits

Individualized directed study in communication topics, based upon student proposal to instructor. Repeatable for up to 6 credits.

Prerequisite/Restriction: Instructor permission
JCOM 4510 - Communication Internship
1-3 credits

Supervised, real-world training and practice in communication work places, including news and business environments. Maximum of 6 credits may count toward the student’s major.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

JCOM 4520 - Senior Thesis
1-3 credits

Planning and execution of an in-depth research paper or project, as approved by the instructor, culminating in a formal public presentation. Required of all journalism and communication students for graduation in Honors Program. Students must also complete HONR 4800.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 4530 - Special Topics in Communication
3 credits

Advanced study in specialized communication topic areas. A maximum of 5 credits may be applied toward the major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

JCOM 5010 - Mass Media Historiography
3 credits

Survey of the history and development of the mass media, and their influence on other social institutions. Theory and practice of historical research, with heavy emphasis on use of databases, archival, and other primary sources to conduct original historical research.

Cross-listed as: JCOM 6010.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 5020 - Mass Communication Theory
3 credits

Advanced study of major mass communication theories and issues, and their evidence in case studies. Application of theory to significant societal problems.

Cross-listed as: JCOM 6020.

Semester(s) Traditionally Offered: Fall

JCOM 5030 - International Communications Problems
3 credits

Study of mass communication influences and effects within and between nations. Systems and techniques of mass communication as functions of national identity and development.

Cross-listed as: JCOM 6030.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 5110 - Literary Journalism (CI)
CI Communications Intensive
3 credits

In-depth analysis and practice of literary and stylistic elements of long-form journalistic and other nonfiction writers.

Cross-listed as: JCOM 6110.

Semester(s) Traditionally Offered: Fall

JCOM 5210 - Website Design and Production
3 credits

Principles and practice of planning, designing, and programming professional Web pages, including Internet communication analysis and planning, graphic design, and development using industry-standard programming languages and design applications.

Prerequisite/Restriction: Instructor permission

Cross-listed as: JCOM 6210.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $150.00

JCOM 5220 - Advanced Video Production
3 credits
Training and practice in advanced techniques of video production, including computer graphics generation, nonlinear video editing, and other specialized professional techniques for electronic video materials.

Prerequisite/Restriction: Minimum grade of C in JCOM 4220 or JCOM 4230; or instructor permission

Cross-listed as: JCOM 6220.

Semester(s) Traditionally Offered: Fall
Course Fee: $150.00

JCOM 5230 - Advanced Video Documentary Production
3 credits

Advanced production of long-form video productions and packages, including writing scripts, directing and production, control room applications, and advanced video production techniques.

Prerequisite/Restriction: Minimum grade of C in JCOM 4220 or JCOM 4230; or instructor permission

Cross-listed as: JCOM 6230.

Repeatable for credit.
Semester(s) Traditionally Offered: Spring
Course Fee: $150.00

JCOM 5300 - Case Studies in Public Relations (CI)
CI Communications Intensive
3 credits

Advanced study and practice in public relations cases, processes, techniques, campaigns, and marketing communications strategies. Analysis of approaches to corporate reputation issues, organizational positioning, and use of mass media strategies.

Prerequisite/Restriction: Minimum grade of C in JCOM 3320

Cross-listed as: JCOM 6300.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 5310 - Mass Media Management
3 credits

Examines theories, methods, and practice of management of mass media businesses, including personnel, marketing, and market positioning.

Prerequisite/Restriction: Instructor permission

Cross-listed as: JCOM 6310.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 5320 - Public Relations Agency
3 credits

Advanced hands-on experience in real-world workings of professional public relations agency, including client communications needs analysis, communications planning, strategies, market positioning, publicity, and campaign execution.

Prerequisite/Restriction: Instructor permission

Cross-listed as: JCOM 6320.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

JCOM 5420 - The Mass Media and Politics
3 credits

Examination of the role of the mass media in the political process, including both campaigns and governance. Examination of political advertising, news coverage, polling, opinion formation strategies, and politicians’ use of new media technologies.

Cross-listed as: JCOM 6420 and POLS 5420/POLS 6420.

Semester(s) Traditionally Offered: Fall

JCOM 6000 - Introduction to Graduate Study in Mass Communication
3 credits

Overview of mass communication theories and research methodologies designed to prepare the student for the graduate course of study and to assist in planning research agenda.

Semester(s) Traditionally Offered: Fall

JCOM 6010 - Mass Media Historiography
3 credits

Survey of the history and development of the mass
media, and their influence on other social institutions.

Theory and practice of historical research, with heavy emphasis on use of databases, archival, and other primary sources to conduct original historical research.

Cross-listed as: JCOM 5010.

JCOM 6020 - Mass Communication Theory 3 credits

Advanced study of major mass communication theories and issues, and their evidence in case studies. Application of theory to significant societal problems.

Cross-listed as: JCOM 5020.

Semester(s) Traditionally Offered: Fall

JCOM 6030 - International Communications Problems 3 credits

Study of mass communication influences and effects within and between nations. Systems and techniques of mass communication as functions of national identity and development.

Cross-listed as: JCOM 5030.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 6040 - Seminar in Mass Media Research Methods 3 credits

Introduction to the major theoretical perspectives and methodologies in mass communication research. Repeatable for credit with departmental permission.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

JCOM 6050 - Seminar in Mass Media Issues and Problems 3 credits

Variable topic seminar concerning research of issues and problems in mass media principles and practice. Repeatable for credit with departmental permission.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 6110 - Literary Journalism 3 credits

In-depth analysis and practice of literary and stylistic elements of long-form journalistic and other nonfiction writers.

Cross-listed as: JCOM 5110.

JCOM 6210 - Website Design and Production 3 credits

Principles and practice of planning, designing, and programming professional Web pages, including Internet communication analysis and planning, graphic design, and development using industry-standard programming languages and design applications.

Prerequisite/Restriction: Instructor permission

Cross-listed as: JCOM 5210.

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $150.00

JCOM 6220 - Advanced Video Production 3 credits

Training and practice in advanced techniques of video production, including computer graphics generation, nonlinear video editing, and other specialized professional techniques for electronic video materials.

Prerequisite/Restriction: Minimum grade of C in JCOM 4220 or JCOM 4230; or instructor permission

Cross-listed as: JCOM 5220.

Semester(s) Traditionally Offered: Fall

Course Fee: $150.00

JCOM 6230 - Advanced Video Documentary Production 3 credits

Advanced production of long-form video productions and packages, including writing scripts, directing and production, control room applications, and advanced video production techniques.

Prerequisite/Restriction: Minimum grade of C in JCOM 4220 or JCOM 4230; or instructor permission
JCOM 6300 - Case Studies in Public Relations
3 credits

Advanced study and practice in public relations cases, processes, techniques, campaigns, and marketing communications strategies. Analysis of approaches to corporate reputation issues, organizational positioning, and use of mass media strategies.

Prerequisite/Restriction: Minimum grade of C in JCOM 3320

Cross-listed as: JCOM 5300.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 6310 - Mass Media Management
3 credits

Examines theories, methods, and practice of management of mass media businesses, including personnel, marketing, and market positioning.

Prerequisite/Restriction: Instructor permission

Cross-listed as: JCOM 5310.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 6320 - Public Relations Agency
3 credits

Advanced hands-on experience in real-world workings of professional public relations agency, including client communications needs analysis, communications planning, strategies, market positioning, publicity, and campaign execution.

Prerequisite/Restriction: Instructor permission

Cross-listed as: JCOM 5320.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

JCOM 6400 - Mass Media Criticism
3 credits

Critical analysis of mass media content, emphasizing the media's social, cultural, and political impacts. Use of advanced research techniques.

Prerequisite/Restriction: Instructor permission required for enrollment in JCOM 6400; senior standing required for enrollment in JCOM 4400

Cross-listed as: JCOM 4400.

Semester(s) Traditionally Offered: Spring

JCOM 6410 - Gender and the Mass Media
3 credits

Examines the nature of gender-based images in a variety of mass media, from advertising to magazines, television, and film. Analysis of gender stereotypes and portrayals in news and entertainment media, along with resulting social impacts.

Prerequisite/Restriction: Enrollment in JCOM 6410 limited to graduate students only

Cross-listed as: JCOM 4410 and WGS 6410/WGS 4410.

Semester(s) Traditionally Offered: Fall

JCOM 6420 - The Mass Media and Politics
3 credits

Examination of the role of the mass media in the political process, including both campaigns and governance. Examination of political advertising, news coverage, polling, opinion formation strategies, and politicians’ use of new media technologies.

Cross-listed as: JCOM 5420 and POLS 6420/POLS 5420.

Semester(s) Traditionally Offered: Fall

JCOM 6430 - Mass Media Law
3 credits
A comprehensive exploration of mass communication law. The course examines media rights of free expression and both the history and applicability of First Amendment protections. The course discusses the structure and functioning of the U.S. court system, defamation, trademark, copyright, access to information, and other related topics and themes.

Cross-listed as: JCOM 4030

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

JCOM 6440 - Mass Communication Ethics
3 credits

Study of ethical systems and philosophies and their applications to the practice of mass communication.

Cross-listed as: JCOM 4010.

Semester(s) Traditionally Offered: Spring

JCOM 6500 - Special Projects in Mass Communication Research and Practice
1-3 credits

Directed study into specified research or real-world problems in the mass media and mass communication industries. Repeatable for credit with departmental permission.

Prerequisite/Restriction: Departmental permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

JCOM 6510 - Directed Readings in Mass Communication
1-12 credits

Directed readings, tutorial or experiential learning/project in mass communication.

Prerequisite/Restriction: Instructor and department head approval

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

JCOM 6600 - Internship
1-6 credits

Supervised training in selected communication work places.

Prerequisite/Restriction: Permission of graduate supervisory committee

Semester(s) Traditionally Offered: Fall, Spring, Summer

JCOM 6970 - Thesis Research
1-3 credits

Prerequisite: Departmental permission. Repeatable for credit with departmental permission.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

KOR 1010 - Korean First Year I
5 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

KOR 1020 - Korean First Year II
5 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: KOR 1010 or equivalent
KOR 2010 - Korean Second Year I
5 credits
Development of grammatical knowledge and writing skills.
Prerequisite/Restriction: KOR 1020 or equivalent

KOR 2020 - Korean Second Year II
5 credits
Development of advanced reading comprehension skill through discussions and summaries of a variety of texts.
Prerequisite/Restriction: KOR 2010 or equivalent

KOR 3010 - Korean Third Year I
4 credits
Development of advanced reading, writing, and conversational skills.
Prerequisite/Restriction: KOR 2020 or equivalent

KOR 3020 - Korean Third Year II
4 credits
Continuous development of advanced reading, writing, and conversational skills.
Prerequisite/Restriction: KOR 3010 or equivalent

KOR 3510 - Business Korean
3 credits
Designed to help students acquire a broad knowledge of business Korean and relevant Korean culture. Develops language skills and cultural knowledge useful for performing basic functions within the Korean business environment. Focuses on important business terms, phrases, and business etiquette.
Prerequisite/Restriction: KOR 2010 or equivalent language proficiency

KOR 4920 - Korean Language Tutoring
1 credit
Allows students to develop tutoring skills by assisting professors in lower-division courses or fulfilling instructional duties for a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated to a maximum of 3 credits.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.

LAEP 1030 - Introduction to Landscape Architecture (BCA)
BCA Breadth Creative Arts
3 credits
Environment as a basis for land use and design decisions. Topics discussed include environmental awareness, the planning and design process, and design related to open space, communities, and the region. Three one-hour lectures per week.

LAEP 1200 - 2D Graphic Representation
4 credits
Graphic techniques for landscape architectural drawings emphasizing 2D black and white representation. Various media explored for preparing drawings and sketches for presentation, including CAD software. Two three-hour studios per week.
Online - $120.00
Effective Term
Fall 2016

LAEP 1300 - 2D Color Graphic Representation
3 credits

This course will teach application of basic 2D color graphics to include drafting, rendering, and illustrative techniques and software used in developing landscape architectural drawings and environment analysis. Students will learn basic concepts and principles of 2D color graphic composition. The course will also introduce basic applications of Adobe Photoshop image processing and Adobe In-Design.

Prerequisite/Restriction: LAEP 1200

Semester(s) Traditionally Offered: Spring
Course Fee: $90.00
Effective Term
Summer 2016

LAEP 1350 - Theory of Design
4 credits

Basic elements of design with emphasis upon their relationship to landscape architecture. Form and spatial relationships are stressed through student development of two- and three-dimensional design models. Design theory applied to materials of landform, vegetation, water, and architecture. Two three-hour studios per week.

Prerequisite/Restriction: LAEP 1200

Semester(s) Traditionally Offered: Spring
Course Fee: $138.00

LAEP 2039 - Foundations of Sustainable Systems
3 credits

This course offers an introduction to sustainable systems and sustainable systems methodologies. Understanding sustainable development efforts through a systems perspective is critical to address current complex and interrelated development challenges. This introductory course is a requirement for students in the Sustainable Systems Minor.

Semester(s) Traditionally Offered: Fall
Course Fee: $39.00

LAEP 2250 - Internship and Cooperative Education
1-5 credits

Course credit for professional experience outside the classroom prior to graduation. A statement of professional goals and a summary report following the experience are required.

Repeatable for credit.

LAEP 2300 - History of Landscape Architecture
3 credits

An examination of landscape change in the context of its history from ancient to present times, with a primary emphasis on the visual qualities of designed landscapes. Three one-hour lectures per week.

Semester(s) Traditionally Offered: Spring

LAEP 2400 - 3D Representation
3 credits

In this course you will learn how to represent landscapes through the use of digital 3d software. This course will teach you the necessary software, principles of composition, and production techniques to provide you with a foundation upon which you can continue to build in subsequent courses.

Prerequisite/Restriction: LAEP 1200, LAEP 1300 (concurrent)

Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2016

LAEP 2600 - Landscape Construction I (QI)
QI Quantitative Intensive
4 credits

Introduction to site engineering, grading, cut and fill calculation, stormwater drainage, and erosion control. Two one-hour lectures and two two-hour studios per week.

Prerequisite/Restriction: LAEP 1200 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall
Course Fee: $141.00
LAEP 2650 - Architecture and the Built Environment 4 credits
Exploration of architectural form and structure in exterior environments. Emphasis placed on space created by architectural forms and their relationship to the surrounding landscape. Energy and water conservation measures with respect to the built environment.
Prerequisite/Restriction: LAEP 1200
Course Fee: $141.00

LAEP 2700 - Site Analysis: Social, Behavioral, and Biophysical Dimensions 4 credits
Site survey, analysis, and design synthesis. Focuses on human behavior and natural resources as design considerations for future land use planning. Introduces foundational site analysis methods and tools; and integrates Geospatial Information Systems (GIS) training for data interpretation.
Semester(s) Traditionally Offered: Fall
Course Fee: $172.00
Effective Term
Summer 2016

LAEP 2720 - Analysis and Design 2 5 credits
Serves as a lower-division capstone course, synthesizing lower-division landscape architecture coursework and applying that knowledge to site scale design projects. Includes units on design methodology, site planning and circulation, and creative problem solving. Three three-hour studios per week.
Prerequisite/Restriction: LAEP 2700 or LAEP 6270
Semester(s) Traditionally Offered: Spring
Course Fee: $163.00
Effective Term
Summer 2016

LAEP 3100 - Recreation/Open Space 5 credits
Focuses on regional and urban open space planning and design including project scale recreation design. Includes design seminars, field trips, and guest lecturers. Three three-hour studios per week.
Prerequisite/Restriction: LAEP 2720, matriculation into LAEP program or instructor permission
Semester(s) Traditionally Offered: Fall
Course Fee: $251.00
Effective Term
Fall 2016

LAEP 3120 - Land Planning for Residential Development 5 credits
Focuses on residential projects, planned unit developments, transit-oriented development and community facilities. Introduction to theory and methods of community and neighborhood design and planning. Three three-hour studios per week.
Prerequisite/Restriction: LAEP 3100
Semester(s) Traditionally Offered: Spring
Course Fee: $191.00

LAEP 3300 - Geographic Information Systems 4 credits
Emphasizes the major analytical and technical components of resource planning and design using computer techniques. Two three-hour studios per week.
Prerequisite/Restriction: LAEP 2720 or instructor's permission
Semester(s) Traditionally Offered: Fall
Course Fee: $141.00
Effective Term
Fall 2016

LAEP 3400 - Geodesign Studio: Advanced Geographic Information and Tools 5 credits
Geodesign Studio is to introduce the recent development of geographic information and geospatial technologies and to explore the applications in landscape architecture and environmental planning.
Prerequisite/Restriction: LAEP 3300 or instructor's permission
Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016
LAEP 3500 - Planting Design
2-4 credits
Emphasizes plant and environment relationships and plant community dynamics as they relate to planting design. In addition, basic planting design principles will be introduced. Involves application of planting design principles to a variety of project types. One segment will focus on land reclamation planting in nonirrigated landscapes. Two three-hour studios per week. Enrollment limited to students matriculated into the LAEP major.
Prerequisite/Restriction: LAEP 1200, LAEP 1300, LAEP 1350, LAEP 2700, LAEP 2720, PSC 2620

Semester(s) Traditionally Offered: Fall
Course Fee: $151.00
Effective Term
Fall 2016
LAEP 3600 - Landscape Materials
2 credits
Introduction to materials used in landscape design, including paving, walls, street furnishings, landscape lighting, decking, etc. Two one-hour lectures per week.

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00
LAEP 3610 - Landscape Construction II
5 credits
Design of landscape structures and surfaces, including wood construction, free-standing and retaining walls, pavement, etc. Design project through detail design development and completion of the working drawings and specifications. Enrollment limited to students matriculated into the Landscape Architecture major.
Prerequisite/Restriction: LAEP 2600, LAEP 3600, MATH 0995

Semester(s) Traditionally Offered: Spring
Course Fee: $54.00
Design project through detail design development and completion of the working drawings and specifications. Two three-hour studios per week.

Prerequisite/Restriction: LAEP 3120 and LAEP 3610

Semester(s) Traditionally Offered: Fall
Course Fee: $184.00

LAEP 4120 - Senior Capstone: Planning & Design Leadership
5 credits

This capstone studio requires students to demonstrate a synthesis and command of landscape architecture skills learned to date combined with leadership responsibilities to solve complex community issues. Starting with leading and managing the LAEP Charrette Process and finishing with an in depth study of a specific issue, all of which will show readiness for professional practice.

Prerequisite/Restriction: LAEP 4100 or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $238.00

Effective Term Spring 2016

LAEP 4150 - Field Studio Experience
3 credits

This course is the third semester in the construction sequence. This course will make explicit the connections between design and construction. Students will gain practical applied experience in the construction of projects they designed.

Prerequisite/Restriction: LAEP 3500, LAEP 3600, LAEP 3610 or instructor permission

Semester(s) Traditionally Offered: Fall
Course Fee: $208.00

LAEP 4250 - Internship and Cooperative Education
1-5 credits

Course credit for professional experience outside the classroom prior to graduation. Statement of professional goals and a summary report following the experience are required.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

LAEP 4350 - Travel Course
1-3 credits

Major field trip to examine a variety of projects in planning and design.

Cross-listed as: LAEP 6550

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $1,500.00

LAEP 4810 - Tutorial
1 credit

Directed readings and discussions of landscape issues.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

LAEP 4900 - Special Problems
1-5 credits

Selected problems to meet individual needs for students’ completion of professional education. Hours arranged.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

LAEP 4910 - Communication and Leadership in Professional Practice
3 credits

Focuses on communication and leadership as essential to the practice of Landscape Architecture. Classroom lectures and course requirements will emphasize both written and verbal communication geared toward professional practice and address the fundamentals of resume and portfolio preparation, legal and ethical issues and business and marketing strategies.

Cross-listed as: LAEP 6160
Semester(s) Traditionally Offered: Spring
Course Fee: $59.00
LAEP 4920 - Professional Practice II (CI)
CI Communications Intensive
1 credit
Exposure to legal and corporate aspects of professional practice, business ethics, and business planning.
Graduate students required to develop a corporate structure and marketing plan for the mock company they established in LAEP 6100.
Cross-listed as: LAEP 6170.

Semester(s) Traditionally Offered: Spring
LAEP 4930 - Preparing for the Landscape Architect Registration Examination
2 credits
This is an elective course, open to LAEP senior students who are interested in learning more about and preparing for the Landscape Architect Registration Examination (LARE).
Prerequisite/Restriction: LAEP 4910 (may be taken concurrently) or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $47.00
LAEP 4950 - Seminar
1 credit
Directed readings and reports on current and emerging areas of the profession. One recitation hour per week.

Semester(s) Traditionally Offered: Spring
LAEP 5090 - Sustainable Low Water Landscaping
3 credits
This course will focus on environmental analysis of climate, water, and soils of a prospective landscape site to inform the design process on selection of adapted plants and plant layout that will minimize irrigation water use and maintenance.
Cross-listed as: LAEP 6090 and PSC 5090/PSC 6090.

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00
LAEP 6030 - 2D Color Graphic Representation
3
This course will teach application of basic 2D color graphics to include drafting, rendering, and illustrative techniques and software used in developing landscape architectural drawings and environment analysis.
Students will learn basic concepts and principles of 2D color graphic composition. The course will also introduce basic applications of Adobe Photoshop image processing and Adobe In-Design.
Prerequisite/Restriction: LAEP 6120

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016
LAEP 6060 - E Studio/Entrepreneurship in Planning and Design
3 credits
E Studio stands for “entrepreneurship”, an attribute of high quality planning and design. This communication intensive course positions students for professional practice through preparing work for and competing in national competitions.
Prerequisite/Restriction: LAEP 4100 or LAEP 6100
Cross-listed as: LAEP 4040

Semester(s) Traditionally Offered: Spring
LAEP 6090 - Sustainable Low Water Landscaping
3 credits
This course will focus on environmental analysis of climate, water, and soils of a prospective landscape site to inform the design process on selection of adapted plants and plant layout that will minimize irrigation water use and maintenance.
Cross-listed as: LAEP 5090 and PSC 6090/PSC 5090.
Semester(s) Traditionally Offered: Fall
Course Fee: $25.00
LAEP 6100 - Regional Landscape Analysis and Planning
5 credits

Focuses on the challenges and opportunities inherent in conducting landscape planning and analysis on a broad scale. Students integrate a variety of landscape planning project scales through literature review, selected case studies, and a major applied studio project.

Prerequisite/Restriction: LAEP 6740, LAEP 6750

Semester(s) Traditionally Offered: Fall
Course Fee: $245.00

LAEP 6110 - Landscape Planning for Wildlife
3 credits

Application of principles of landscape ecology to planning for wildlife in urban, suburban, and exurban landscapes. Discussion of restoration of disturbed habitats in these environments. Includes real-world projects and field trips. Addresses issues of landscape restoration and bioengineering.

Semester(s) Traditionally Offered: Spring
Course Fee: $138.00

LAEP 6120 - Regional Landscape Policy and Implementation
2 credits

Case studies and/or implementation strategies for planning alternatives developed in LAEP 6100.

Semester(s) Traditionally Offered: Spring

LAEP 6130 - Preparing for the Landscape Architecture Registration Examination
2 credits

This is an elective course, open to LAEP graduate students who are interested in learning more about and preparing for the Landscape Architect Registration Examination (LARE).

Prerequisite/Restriction: LAEP 6160 (may be taken concurrently) or instructor permission

Semester(s) Traditionally Offered: Spring

LAEP 6160 - Communication and Leadership in Professional Practice
3 credits

Focuses on communication and leadership as essential to the practice of Landscape Architecture. Classroom lectures and course requirements will emphasize both written and verbal communication geared toward professional practice and address the fundamentals of resume and portfolio preparation, legal and ethical issues and business and marketing strategies.

Cross-listed as: LAEP 4910

Semester(s) Traditionally Offered: Spring
Course Fee: $59.00

LAEP 6170 - Professional Practice II
1 credit

Exposure to legal and corporate aspects of professional practice, business ethics, and business planning. Graduate students required to develop a corporate structure and marketing plan for the mock company they established in LAEP 6100.

Cross-listed as: LAEP 4920.

Semester(s) Traditionally Offered: Spring

LAEP 6200 - Bioregional Analysis and Planning
5 credits

Compilation and analysis of data for assessing biophysical and socio-economic features of landscapes, and for evaluating impacts of land-use policies across both landscapes and time. Provides real-world learning experience in working with stakeholders and agency decision-makers.

Semester(s) Traditionally Offered: Fall
Effective Term: Fall 2016

LAEP 6210 - Bioregional Management and Policy
5 credits

Continuation of ENVS 6200. Assessment of land-use policies across landscapes and time, with an emphasis on evaluating consequences of community growth via the generation and analysis of future development and management alternatives.

Semester(s) Traditionally Offered: Spring
Effective Term  
Spring 2016

LAEP 6220 - 2D Graphic Representation  
4 credits

Graphic techniques for landscape architectural drawings emphasizing 2D black and white representation. Various media explored for preparing drawings and sketches for presentation, including CAD software. Two three-hour studios per week.

Effective Term  
Fall 2016

LAEP 6230 - History of Landscape Architecture  
3 credits

Examination of historic landscape change from ancient to present times, with a primary emphasis on the visual qualities of designed landscapes. Three one-hour lectures and a one-hour seminar per week.

Semester(s) Traditionally Offered: Spring

LAEP 6240 - 3D Representation  
3 credits

In this course you will learn how to represent landscapes through the use of digital 3d software. This course will teach you the necessary software, principles of composition, and production techniques to provide you with a foundation upon which you can continue to build in subsequent courses.

Prerequisite/Restriction: LAEP 6120, LAEP 6130 (concurrent)

Semester(s) Traditionally Offered: Fall

Effective Term  
Spring 2016

LAEP 6250 - Internship and Cooperative Education Program  
1-5 credits

Course credit given for professional experience outside the classroom prior to graduation. Statement of professional goals and summary report following the experience are required.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

LAEP 6260 - Landscape Construction I  
4 Credits

Introduction to site engineering, grading, cut and fill calculation, storm water drainage, and erosion control. Two one-hour lectures and two two-hour studios per week.

Effective Term  
Fall 2016

LAEP 6270 - Site Analysis: Social, Behavioral, and Biophysical Dimensions  
4 credits

Site survey, analysis, and design synthesis. Focuses on human behavior and natural resources as design considerations for future land use planning. Introduces foundational site analysis methods and tools; and integrates Geospatial Information Systems (GIS) training for data interpretation. Graduate students evaluate, adapt, and apply methods for specific project analysis, as well as use GIS to analyze and create new data sets.

Semester(s) Traditionally Offered: Fall

Course Fee: $175.00

LAEP 6300 - Geographic Information Systems  
4 credits

This course introduces basic concepts and tools of geographic information systems (GIS) and its applications in landscape architecture.

Effective Term  
Fall 2016

LAEP 6310 - Recreation and Open Space Planning and Design  
5 credits

Focuses on planning and design of open space and recreational areas, as well as facilities of various types and scales. Students develop skills in analysis, research, planning strategy, and design technique to create functional spaces based on client needs and site limitations.

Prerequisite/Restriction: LAEP 2720 or instructor
LAEP 6320 - Land Planning and Design for Community Development
5 credits

Studio course introducing methods for the planning and design of residential projects of various types and scales. Students develop skills in critical analysis, design technique, and planning strategy to create functional spaces based on client needs and site requirements.

Prerequisite/Restriction: LAEP 6310

Semester(s) Traditionally Offered: Spring
Course Fee: $190.00

LAEP 6350 - Planting Design for Sustainability
4 credits

Emphasizes plant/environmental relationships, as well as plant community dynamics, aesthetics, function, and sustainability. Includes lectures, readings, projects, and papers.

Semester(s) Traditionally Offered: Fall
Course Fee: $150.00

LAEP 6370 - City and Regional Planning
3 credits

Introduction to historic and current theory and methods of city and regional planning. Includes legislative, administrative, and implementation practices within the planning process. Emphasizes public transportation and mobility issues.

Semester(s) Traditionally Offered: Fall
Course Fee: $250.00

LAEP 6400 - Geodesign Studio: Advanced Geographic Information and Tools
5

Geodesign studio is to introduce the recent development of geographic information and geospatial technologies, and to explore the applications in landscape architecture and environmental planning.

Prerequisite/Restriction: LAEP 3300 or instructor’s permission

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

LAEP 6410 - Redefining the Urban Landscape
5 credits

Focuses on urban environment for design expression and processes associated with the creation of cities. Explores different aspects of urban design theories and design approaches (conceptual, perceptual, and analytical), as applied to large urban areas and site-specific spaces.

Prerequisite/Restriction: LAEP 2700 and LAEP 2720

Semester(s) Traditionally Offered: Fall
Course Fee: $250.00

LAEP 6550 - Travel Course
1-3 credits

Major field trip to examine a variety of projects in planning and design.

Cross-listed as: LAEP 4350.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $1,500.00

LAEP 6740 - Planning Theory and Implementation Issues
3 credits

Explores theoretical underpinnings of planning and landscape theory, from the rational model to contemporary alternatives. Leads to discussions of issues of sprawl, sustainability, and transportation, including their effects on the built environment, agricultural lands, and open-space systems.

Semester(s) Traditionally Offered: Fall

LAEP 6750 - Implementation and Regulatory Techniques in Planning
3 credits

Review and analysis of the legal basis and techniques for land use and resource planning, including historic and visual resources at the federal, state, and local levels. Relies on readings in case law and specific case studies, as well as research focused on the evaluation of planning processes and strategies.
Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Fall, Spring

LAEP 6860 - Faculty/Interdisciplinary Seminar I
1 credit

Landscape architecture and environmental planning program options and research potential presented by departmental faculty. Also introduces students to other interdisciplinary programs and faculty within the University.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Fall, Spring

LAEP 6862 - Faculty/Interdisciplinary Seminar II
1 credit

Landscape architecture and environmental planning program options and research potential presented by departmental faculty. Also introduces students to other interdisciplinary programs and faculty within the University. Second seminar in a two-seminar series.

Prerequisite/Restriction: Graduate standing

Pass/Fail only.

Semester(s) Traditionally Offered: Spring

LAEP 6880 - Landscape Architecture Research Methods
2 credits

This course is designed to introduce the student to conducting research in landscape architecture and planning. Instruction will include the procedures and concepts for the research process, from identifying the problem to writing the report.

Semester(s) Traditionally Offered: Spring

LAEP 6890 - Seminar on Thesis Proposals and Procedures
1 credit

Explores preparation of thesis proposals and abstracts. Discussion of graduate degree completion requirements and procedures.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Spring

LAEP 6900 - Special Problems
1-5 credits

Selected problems to meet individual student interests and areas of concentration. Registration by permission of departmental faculty.

Prerequisite/Restriction: Graduate standing

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

LAEP 6910 - Reading Seminar I
1 credit

Selected readings directed by department faculty.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Fall

LAEP 6930 - Reading Seminar II
1 credit

Selected readings directed by department faculty.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Fall

LAEP 6960 - Master’s Project
1-6 credits

Requires research, analysis, and production of a given subject area, including its final planning, design, and documentation.

Prerequisite/Restriction: Graduate standing

Repeatable for credit

Semester(s) Traditionally Offered: Spring

LAEP 6970 - Thesis Research
1-6 credits

Prerequisite/Restriction: Graduate standing

Repeatable for credit.
LAEP 6990 - Continuing Graduate Advisement
1-3 credits

Prerequisite/Restriction: Graduate standing
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

LANG 2100 - Languages in Society (BSS)
BSS Breadth Social Sciences
3 credits

This course familiarizes students with ways to think about and analyze language. An understanding of language - what it is, how it works, how it is learned, how it is used - is an asset to everyone regardless of professional context.

Cross-listed as: LING 2100

Semester(s) Traditionally Offered: Spring

LANG 3550 - Culture of East Asia (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Helps students explore and appreciate the culture of three East Asian countries: China, Japan and Korea. Students gain sincere view and understanding of these East Asian cultures through readings, hands-on cultural activities, viewing video materials, writing, and discussions. Topics include: major historical and social events, customs and traditions, thoughts and beliefs, people, food, contemporary issues, art, literature, and film.

Cross-listed as: ANTH 3550 and HIST 3550.

LANG 3570 - Narrative Ethics in Asian Literature and Film
3 credits

This course will focus on the representation of narrative ethics in Asian literature, by visiting a broad array of diverse genres, including drama, poetry, prose, and film adaptations of literary works. This course is taught in English.

LANG 3990 - Special Topics
1-5 credits

Additional readings or research done beyond the material covered in other language courses. May be repeated for credit if different topic is covered.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.

LANG 4200 - Senior Honors Seminar
1 credit

Credit for completing and presenting a senior honors thesis project. Requirement may be fulfilled by publishing the thesis in an academic journal, defending the thesis before a faculty committee, presenting the thesis at an academic conference, or presenting the thesis in the languages session during Scholar’s Day.

LANG 4210 - Senior Honors Thesis
1-4 credits

Independent study research credits for preparation of a senior honors thesis to fulfill requirements for a degree in languages with departmental honors.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.

LANG 4330 - Communication in a Global Era
3 credits

Exploration of the role of communication in a global setting, including issues of language, culture, power and technology. A variety of theories and perspectives will be explored.

Cross-listed as: CMST 4330

Semester(s) Traditionally Offered: Fall, Spring, Summer

LANG 5950 - Global Communication Practicum
3 credits

This global communication practicum is designed to tie
together the various elements of the global communication major through practical experience in service learning or internship work in a cultural community distinct from the student’s own culture.

Cross-listed as: CMST 5950

Pass/Fail only
Semester(s) Traditionally Offered: Spring

Latin

LATN 1010 - Beginning Latin I
5 credits


Semester(s) Traditionally Offered: Fall

LATN 1020 - Beginning Latin II
5 credits


Prerequisite/Restriction: Minimum grade of B in LATN 1010

Semester(s) Traditionally Offered: Spring

LATN 3100 - Intermediate Latin Prose
3 credits

Readings in Latin prose.

Prerequisite/Restriction: Minimum grade of B in LATN 1020

Semester(s) Traditionally Offered: Fall

LATN 3130 - Intermediate Latin Poetry
3 credits

Readings in Latin poetry.

Prerequisite/Restriction: Minimum grade of B in LATN 3100

Semester(s) Traditionally Offered: Spring

LATN 4100 - Advanced Latin Readings
3 credits

Readings in Latin poetry and/or prose.

Prerequisite/Restriction: Minimum grades of B in LATN 3100 and LATN 3130

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring
LATS 2200 - Introduction to Latin America
3 credits

Interdisciplinary course examining Latin American geography, culture, history, literature, music, society, politics, and economics.

Semester(s) Traditionally Offered: Spring

Linguistics

LING 2100 - Languages in Society (BSS)
BSS Breadth Social Sciences
3 credits

This course familiarizes students with ways to think about and analyze language. An understanding of language - what it is, how it works, how it is learned, how it is used - is an asset to everyone regardless of professional context.

Cross-listed as: LANG 2100

Semester(s) Traditionally Offered: Spring

LING 2250 - Cooperative Education
1-3 credits

Course credit for professional experience outside the classroom. Statement of professional goals and a summary report following the experience are required.

Repeatable for credit.

LING 3100 - Language in Context
3 credits

This course explores the role of language in society, its social functions, and the impact of social context on how it is used and interpreted. Students will survey sociolinguistic research and examine the interaction between language and other social factors.

Semester(s) Traditionally Offered: Fall

LING 3300 - Clinical Experience I
1 credit

First clinical practicum in middle and secondary schools. Arranged by special methods instructor. Required at Level I.

Prerequisite/Restriction: Admission to Teacher Education

Corequisite: LING 4400 or LING 6400.

Pass/Fail only.

Course Fee: $50.00

LING 4100 - The Study of Language
3 credits

Investigates ways in which human languages are structured, how they change, how they reflect the cultures in which they are used, and how they are learned.

Cross-listed as: ANTH 4100.

Semester(s) Traditionally Offered: Fall, Spring (Summer distance ed. only)

LING 4250 - Cooperative Education
1-3 credits

Course credit for professional experience outside the classroom. Statement of professional goals and a summary report following the experience are required.

Repeatable for credit.

LING 4300 - Clinical Experience II
1 credit

Second clinical practicum in middle and secondary schools. Arranged by special methods instructor. Required at Level II.

Prerequisite/Restriction: Admission to Teacher Education

Corequisite: LING 4400 or LING 6400.

Pass/Fail only.

Course Fee: $50.00

LING 4400 - Teaching Modern Languages
3 credits

This course is designed for future Foreign/Dual Immersion language teachers. The main objective is to help them become familiar with the most relevant issues of L2 teaching and learning and the diverse approaches
fostering instruction with a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated for up to a maximum of 3 credits.

Repeatable for credit.

LING 5500 - Student Teaching Seminar
2 credits

Capstone seminar focused upon student teaching issues, professional development, and principles of effective instruction, with emphasis on reflective teaching.

Semester(s) Traditionally Offered: Fall, Spring

LING 5630 - Student Teaching in Secondary Schools
10 credits

Thirteen-week culminating practicum experience in which students assume full-time teaching responsibilities under direction of cooperating teachers in their major and minor fields.

Prerequisite/Restriction: Set by Secondary Education Department

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $300.00

LING 6010 - Research in Second Language Learning
3 credits

Readings in current SLL literature evaluated in terms of their implications for classroom practice.

Semester(s) Traditionally Offered: Fall

LING 6300 - Clinical Experience I
1 credit

First clinical practicum in middle and secondary schools for Master of Second Language Teaching students. Arranged by special methods instructor. Required at Level I.

Prerequisite/Restriction: Set by Secondary Education Department

Corequisite: LING 6400
LING 6310 - Clinical Experience II
1 credit

Second clinical practicum in middle and secondary schools for Master of Second Language Teaching students. Arranged by special methods instructor. Required at Level II.

Prerequisite/Restriction: Set by Secondary Education Department

Corequisite: LING 6400

LING 6350 - Pro-Seminar on Second Language Teaching
1-3 credits

This course is designed for graduate students enrolled in the Master of Second Language Teaching program. Students will become familiar with the theory of the Communicative Approach, the Task-Based Approach, and their use in the L2 classroom.

Semester(s) Traditionally Offered: Fall

LING 6400 - Second Language Teaching: Theory and Practice
3 credits

Survey of theories about memory, assigning meaning to recall, and methods L2 teachers and learners use to apply meaning to their teaching and learning. Social dynamics in the L2 classroom and issues of schooling students of diverse backgrounds are central to all course topics.

Semester(s) Traditionally Offered: Spring

LING 6410 - Teaching Modern Languages
3 credits

Methods course for graduate students seeking teacher licensure in any of the modern languages. Considers the context of the present secondary language classroom, effective teaching techniques that can be used in that context, and significant trends in teaching and learning languages.

Prerequisite/Restriction: Instructor permission

Corequisite: LING 6310

LING 6500 - Second Language Acquisition: Theory and Practice
3 credits

This course will introduce students to historical and contemporary theoretical perspectives on second language (L2) acquisition. Students will be encouraged to reflect on how L2 acquisition theory informs teaching methodologies in the L2 classroom.

Semester(s) Traditionally Offered: Spring

LING 6510 - Linguistic Analysis
3 credits

Comparative study of linguistic patterns across languages. Linguistic structures and language typology for teachers of modern languages.

Semester(s) Traditionally Offered: Spring

LING 6520 - Technology for Language Teaching
3 credits

Web- and disk-based technology for developing electronic course modules for the language learning classroom.

Cross-listed as: LING 4520.

Semester(s) Traditionally Offered: Summer

LING 6600 - Sociocultural Perspectives on Language Learning
3 credits

This course explores the Sociocultural theory of language learning. It focuses on how people learn a language and what the implications are for teaching.

Semester(s) Traditionally Offered: Spring

LING 6700 - Foundations of Dual Language and Immersion Education
3 credits

This course offers a historical overview and examination of the theoretical and research based foundations for dual language and immersion education.

Prerequisite/Restriction: Instructor permission

Cross-listed as: LING 4700
LING 6800 - Topics in Second Language Acquisition
3 credits
Advanced seminar in the acquisition and teaching of languages.
Repeatable for credit.

LING 6900 - Culture Teaching and Learning: Theory and Practice
3 credits
Examines culture learning and connection between development of communicative and cultural competence in the second language learner. Reviews theory, research, and practice in the field of intercultural communication as relating to second language learning and teaching.

LING 6910 - Exploring the Portfolio
1 credit
Investigation of the portfolio process, including distinguishing qualities of superior portfolios. Students write their teaching philosophy and gather artifacts for their portfolio. Must be taken during the first semester of the Master of Second Language Teaching program. First of a sequence of three required courses.

LING 6920 - Developing the Portfolio
1 credit
Further development of the portfolio including revision of the student’s teaching philosophy, given insights from courses taken. Reexamination and revision of artifacts gathered, as well as addition of new artifacts.
Prerequisite/Restriction: LING 6910

LING 6930 - Finishing the Portfolio
1 credit
Further work toward completion of the portfolio, including careful development of main themes in the teaching philosophy and artifacts; addition of final artifacts; and revision for coherence, clarity, and brevity. Must be taken during the final semester of the Master of Second Language Teaching program.
Prerequisite/Restriction: LING 6920

LING 6940 - Independent Study
1-3 credits
Individually directed readings and conference. Departmental permission required before registration.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.

LING 6990 - Continuing Graduate Advisement
1-9 credits
Allows students access to faculty and facilities to complete graduate thesis, project, and papers.
Repeatable for credit.
Pass/Fail only.

Machine Tool Technology (USU Eastern)
MACH 0798 - Special Problems
1-360 contact hours
Individual work approved by the department instructor. Time and membership hours to be arranged.
Campus: USU Eastern only

MACH 0799 - Special Problems
1-360 contact hours
Individual work approved by the department instructor. Time and membership hours to be arranged.
Campus: USU Eastern only

MACH 1010 - Machine Tool Technology I
3 credits
An introductory course to machining. Designed to
develop skills needed to safely operate various hand tools, power equipment and precision measuring instruments related to the machining field.

Campus: USU Eastern only

MACH 1020 - Machine Tool Technology II
3 credits

Second class in the machining program. Designed to develop skills needed to safely operate various power equipment and precision measuring instruments related to the machining field. Coursework will include: blueprint reading, developing skills in decision making to ensure that productivity and quality is obtained in a safe manner. Additional work on the Turning Machines will entail learning how to setup and operate manual lathes, perform basic and advanced machining operations, lathe cutting tools, all threading operations both internal and external as well as work on drill presses and related tooling.

Prerequisite/Restriction: MACH 1010

Campus: USU Eastern only

MACH 1030 - Machine Tool Technology III
3 credits

Intermediate/advanced course to machining. Designed to develop skills needed to safely operate various power equipment and precision measuring instruments related to the machining field. Students will learn to read blueprints, setup and operate manual machines, perform basic and advanced machining operations, develop skills in decision making to ensure that productivity and quality is obtained in a safe manner.

Prerequisite/Restriction: MACH 1020

Campus: USU Eastern only

MACH 1040 - Machine Tool Technology IV
3 credits

Advanced course to machining. Designed to develop skills needed to safely operate various power equipment and precision measuring instruments related to the machining field. Students will learn to read blueprints, setups and operate manual machines, perform basic and advanced machining operations, develop skills in decision making to ensure that productivity and quality is obtained in a safe manner. Students will learn advanced work on the Turning machine, manual lathes, as well as an introduction to CNC lathes and mills. Theory and practice of the vertical milling machine, vertical milling machine construction and operation, and machine setup and milling will also be covered.

Prerequisite/Restriction: MACH 1030

Campus: USU Eastern only

MACH 1050 - Machine Tool Technology V
3 credits

Advanced machining course designed for students who have reached a level of proficiency in a machine shop environment. Covers specialized machining processes with an emphasis on advanced milling operations. Students will read blueprints, setup and operate manual machines, perform basic and advanced machining operations, continue to develop skills in decision making to ensure that productivity and quality is obtained in a safe manner.

Prerequisite/Restriction: MACH 1040 or equivalent skills

Campus: USU Eastern only

MACH 1140 - Engine Machining Theory
2 credits

Instructs students on the techniques of drilling, honing, boring, grinding, etc., using the machines, measuring tools and gauging associated with MACH 1160. Casting inspection and guidelines for re-use is also explained.

Corequisite: MACH 1160

Campus: USU Eastern only

MACH 1160 - Engine Machining Lab
2 credits

Provides hands on experience operating the special equipment used to perform the machine processes done to automotive and diesel engine castings during overhaul. Students will recondition rods, cylinder heads, valve guides and valves, block deck surfaces, cylinder bores, and main bearing bores. Students will also use all precision measuring tools and gauging associated with these processes.
Corequisite: MACH 1140
Campus: USU Eastern only

MACH 2977 - Cooperative Education
1-3 credits

Provides on-the-job machine shop work experience which is coordinated through the instructor/coordinator to determine learning objectives, hours of work, and credit.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Eastern only

MACH 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

Management

MGT 1050 - Foundations of Business and Leadership
3 credits

This academically rigorous course will serve as a platform to introduce students to the broad cross-section of disciplines that constitute the study of markets, commerce, and leadership, while emphasizing ethical decision making throughout.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 1350 - Introduction to Business
3 credits

Investigation of the role of business in contemporary society, including an introduction to the general problems of business operation.

Semester(s) Traditionally Offered: Fall

MGT 2050 - Business Law
2 credits

Surveys the legal and ethical environment of business. Introduction to elementary legal research and writing

Prerequisite/Restriction: GPA of 2.5 or higher and completion of 30 credit hours

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 2350 - Small Business Management
3 credits

Provides practical overview of management principles and practices as they apply to the small business enterprise. For nonbusiness majors.

MGT 3000 - Entrepreneurship: Starting Your Own Business
3 credits

This survey course examines all aspects of starting your own business. The course will explore opportunity recognition, marketing, finance, management, obtaining resources, developing a value network, operations, feasibility analysis and the start-up business plan. Credit will not be given for both MGT 3000 and MGT 3510.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits, or instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3110 - Managing Organizations and People (DSS)
DSS Depth Social Sciences
3 credits

Overview of the role of management, and an introduction to leadership theory and practice. Includes defining of mission and goals, organizing work, and managing human performance.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3200 - Business Career Management
2 credits

This course teaches students the skills necessary to develop an in-depth understanding of the career they are pursuing (or would like to pursue) through dedicated
research. The course will teach how to prepare a targeted resume and cover letter. Students will develop the skills required to build and manage a network, successfully interview, including business etiquette and how to properly prepare for an interview. Finally, students will learn the steps and elements required to enter and manage a career throughout their lifetime, in short how to build a career more than simply landing a job. (Required to be taken during the junior year)

Prerequisite/Restriction: Admission to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3250 - Introduction to Human Resource Management
3 credits

Introduces the process of managing human resources, including human resource planning, recruitment, selection, training, performance evaluation, compensation, career management, labor relations, human resource strategy, and related ethical issues.

Prerequisite/Restriction: Admission to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 3300 - Contemporary Issues in International Trade
3 credits

Examines interrelated economic, political, and social issues faced by institutions and individuals at various points in the trade process.

Prerequisite/Restriction: Admission to Huntsman Scholars Junior Year Program

Corequisite: ECN 3300.

Semester(s) Traditionally Offered: Fall

MGT 3350 - Critical Analytical Thinking
3 credits

Business leadership and decision-making have become increasingly complex and important undertakings. This course prepares students for the type of critical analytical thinking necessary to be successful organizational leaders by building competencies in the construction, presentation, and critical evaluation of arguments, issues and decisions.

Prerequisite/Restriction: Admission to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits or instructor permission Enrollment limited to Huntsman Scholars

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3500 - Fundamentals of Marketing
3 credits

Overview of marketing function, emphasizing concepts and terminology. Includes basic marketing activities of product management, pricing, distribution, promotion, marketing research, and consumer behavior.

Prerequisite/Restriction: Admission to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3510 - New Venture Fundamentals
2 credits

Introduction to entrepreneurship and the processes of new ventures. The objective is to help students become familiar with entrepreneurship and ascertain the degree to which it represents a viable career path. Focuses on identifying, analyzing, and developing business opportunities. Credit cannot also be earned for BUS 3610 or MGT 3000.

Prerequisite/Restriction: Admission to a USU major, cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3520 - New Venture Management
2 credits

Development of the relationship and organizational competencies for entrepreneurs. Focuses on the development of persuasion, delegation, and organizational skills for individuals who launch businesses and/or play a key role in their growth. Credit will not be given for both MGT 3520 and BUS 3620.
Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3530 - New Venture Marketing
2 credits

This course teaches students how to develop and build the brand for the new enterprise. Strategies for gaining customer intelligence are taught, with particular attention to primary and secondary marketing research. Effective low-cost marketing strategies are taught. Students are taught how to use “the coin of the realm” to gain market presence for their ventures. Understanding and implementing social media in marketing and promotion of the opportunity will be learned in the course, as well as the role of traditional media: print, radio, television. This course will use well established research in marketing, strategy and psychology to support the tools, concepts and theory taught in the class.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3540 - New Venture Financing
2 credits

This course provides an overview of financial issues affecting entrepreneurial ventures. Emphasizes finance skills needed to develop the financial section of a business plan, make practical financial assessments of new business opportunities, and explore sources of new venture funding. Students will learn how to evaluate resource requirements, mobilize non-financial resources, develop strategies for bootstrapping and explore options for funding with debt and equity. The theory and tools of deal valuation will also be taught. Students will learn how to develop a resource and funding strategy, as well as cash and risk management.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3550 - Entrepreneur Leadership Series
1 credit (Pass/Fail only)

Discussion of the discovery, evaluation, and exploitation of entrepreneurial opportunities. Each week, an active or harvested entrepreneur is invited to share his or her story of new venture creation. Through discussion and a question and answer session, students interact with the entrepreneurs.

Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2016

MGT 3560 - New Venture Planning
2 credits

Theoretical and practical aspects of starting or buying a business are taught in this class. This includes the development of a business plan, as well as conducting due diligence for buying a business or extensive consulting with a start-up or growth business. Students learn that entrepreneurial planning is an ongoing process that is centered upon organizational mission, vision, values and goals. As part of the instruction, students learn how to create an annual execution plan and a Personal Placement Memorandum (PPM). Credit cannot also be earned for BUS 4620.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3570 - New Venture Social Responsibility
2 credits

This course focuses upon social enterprises including ventures with a social mission, non-governmental organizations (NGOs), and not-for-profit enterprises. Students learn about the growing interest in social entrepreneurship and why serving a broader purpose makes sense. Students learn how social venture business models differ from those of for-profit ventures. Theory underlying social capital, economics, micro venturing and philanthropy are taught in this course. Networking, governance, compliance, and business ethics are all examined.
Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3580 - New Venture Execution
2 credits

This capstone course of the entrepreneurship program is about launching the venture and students are assigned to various faculty and investment mentors. Mentors and students meet regularly throughout the course while students work on executing issues in their business plans. Mentors who are especially experienced in the specific industry of focus help students create networks of advisors and help students solve problems with implementation.

Prerequisite/Restriction: Instructor permission, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3670 - Employee Relations and Contract Negotiations
3 credits

Surveys union-management relations, including labor markets, labor history, labor law, union organization and governance, contract negotiations, and grievance processing. Includes cases and simulations to develop negotiating and grievance processing skills.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3700 - Operations Management
2 credits

Covers concepts and tools related to managing a business operation. Topics include: operations strategy, process management, lean systems, supply chain management, demand forecasting, and inventory management.

Prerequisite/Restriction: STAT 2000 or STAT 2300 or STAT 3000; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Winter, Spring, Summer

MGT 3710 - Team Management
2 credits

Experientially-driven course focusing on the role of teams in organizations and on developing skills which individuals and teams need to be effective. Topics include self-awareness, supportive communication, problem solving, and conflict management.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 3720 - Leading Organization Change (DSS)
DSS Depth Social Sciences
3 credits

Explores the topic of organizational change and transformation, with special emphasis on the role of leadership, vision, and organization culture in change programs. Extensive use of case studies and experiential exercises. Also covers the history of organization development, change facilitation, and dealing with resistance to change.

Prerequisite/Restriction: MGT 3110; admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

MGT 3800 - Leadership
2 credits

This course fosters leadership development through a focus on integrity, authenticity, and commitment to a purpose higher than oneself. Students become more effective leaders by removing constraints and allowing leadership to emerge as natural self-expression.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

MGT 3810 - Employment Law and Policy Development (DSS)
DSS Depth Social Sciences
Examines laws related to employment, labor relations, civil rights, compensation, safety, health, and retirement. Provides hands-on experience in drafting and reviewing human resource policies in a business setting. Addresses implementing and influencing public policy.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 3820 - International Management (DSS)
DSS Depth Social Sciences
2 credits

Exploration of international culture and context of management, the impact of globalization on businesses today, and the pressures and complexities of operating in global markets, including the processes of managing multi-cultural human resources.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 3830 - International Law
2 credits

This course examines business transactions in the international political-legal environment. The course will include interrelationships among the laws of different countries and trading blocks and their affect on individual companies. By the conclusion of the course, students will have an understanding of conceptual framework of international law and the world legal system, how to minimize risks and avoid litigation, mechanisms for enforcement of international business law, realities behind international treaties, agreements or laws, practicalities of international business transactions and the complexities, ambiguities, and many “gray” areas of law that impacts an international business. They will also have an understanding of the U.N. Convention on contracts for international Sale of Goods. Students will be able to construct a path for making business decisions necessary to operate a business in an international legal environment.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Spring

MGT 3850 - Sports Management
2 credits

The sports management course is designed to introduce students to various topics within the sports industry. Business, marketing, and financial tools and concepts will be examined in the sporting context. Students will develop and implement an effective sports sales and marketing plan for a sports organization.

Corequisite: Admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 3890 - Systems Strategy and Problem Solving
2 credits

This course examines the concepts, models, and procedures for identifying and addressing functional level problems and opportunities. The course examines the necessary coordination and synergy of functional units within a firm for optimal firm performance.

Prerequisite/Restriction: ACCT 2010, ACCT 2020, MIS 2100, MGT 2050, MGT 3500, MGT 3700, FIN 3400; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 3900 - Strategic Marketing in Hospitality and Tourism
3 credits

This course describes the nature and scope of career opportunities in hospitality and tourism. It provides an introduction to the language of hospitality and tourism management, describes how to identify, understand and segment target audiences, and discusses the role of customer relationship management in hospitality and tourism management. Students also learn how to design and implement effective marketing communications, use market research in hospitality and tourism management, and review and evaluate best practices in the hospitality
Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

MGT 3910 - Revenue and Cost Management in Hospitality and Tourism
3 credits

This course provides a foundation for managing revenues and costs in the hospitality and tourism industry. Students will learn how to analyze financial statements in the industry and how to effectively use them in strategic/tactical decision-making. Strategies for optimizing sustainable profitability will be explored. The course will rely upon simulations, role-playing, and cases to analyze trends and develop effective revenue management strategies.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

MGT 3920 - Hospitality Management and Operations
3 credits

This course provides an overview of the logistics and operations of the tourism and hospitality industry including: lodging management practices, special events planning, food and beverage, housekeeping, etc. The day-to-day decisions that are part of the tactical side of the tourism and lodging industry will be taught. Special topics such as service recovery, impression management, and the use of social media will be examined. Finally, human resource management within the industry will be considered including recruiting and retaining a high quality workforce.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Spring

MGT 3930 - Tourism and Events Administration
3 credits

Core revenue drivers in the Tourism and Hospitality industry are special events, meetings, conferences, conventions, and tradeshows. This course teaches students how to effectively manage the regular operations of an organization and also successfully execute special events. The course teaches students how to successfully and simultaneously manage different types of customers with very different motivations and needs. This course will focus on managing special events properly and how to use events as a marketing tool for an organization by promoting customer companies or cause concerts, sporting events, street fairs, etc.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Spring

MGT 4050 - International Marketing
2 credits

Issues related to retailing in international markets, such as motivations, cultural influence on consumer behavior, and entry strategies.

Prerequisite/Restriction: Grade of B-(2.67) or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

MGT 4070 - Retail Management (CI)
CI Communications Intensive
3 credits

Basic issues related to retail management, such as merchandising, location, promotion, store management, and retail image.

Prerequisite/Restriction: Grade of B-(2.67) or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits (Prerequisites do not apply to students taking MGT 6070)

Cross-listed as: MGT 6070.

Semester(s) Traditionally Offered: Spring

MGT 4240 - Merchandise Planning and Control
3 credits
Issues related to pricing, budgeting, open-to-buy, and planning inventory.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

MGT 4250 - Management Internship
1-3 credits

Provides management internship experience in a career related position approved by the department of Management. No more than three credits can be applied to fulfill major requirements.

Prerequisite/Restriction: Grade of B- or better in MGT 3500 or MGT 3700 or MGT 3800 and advisor approval; admittance to a USU major, GPA of 2.67 or higher, and completion of at least 40 credits

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring
Summer Effective Term
Summer 2016

MGT 4510 - Buyer Behavior
2 credits

Marketing analysis of the decision processes of individuals, households, businesses, and not-for-profit institutions. Builds on concepts from psychology, sociology, anthropology, and economics.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3500, any Breadth Social Sciences (BSS) course, admittance to a USU major, GPA of 2.67 or higher, and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4525 - New Product Development
2 credits

The purpose of this course is to explore issues and problems in the marketing of new products and services. The processes of new product marketing including identification, concept selection, product design, pre-test and test marketing, launching and profit management will be taught. Formal models and approaches involving new product marketing will be demonstrated and students will apply the models on business cases.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

MGT 4530 - Marketing Research
3 credits

Management of marketing research function. Basic vs. decisional research, survey research, cost vs. value of information, research design, experimentation, and analysis techniques.

Prerequisite/Restriction: Grade of B- (2.67) or better MGT 3500; one of the following statistics courses: STAT 1040, STAT 1045, STAT 2000, STAT 2300, STAT 3000, or PSY 3010; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

MGT 4535 - Promotional Strategy
2 credits

This course introduces the student to the area of marketing campaigns by exploring areas essential for the communication strategies necessary for the successful marketing of products and services. The course focuses on various elements of campaign strategy, including advertising, promotions, point-of-purchase communications, direct techniques, and other topics. The course will focus on the development of marketing campaigns from conception to implementation.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4540 - Social and New Media
2 credits

This course takes an in-depth look at social networks, social media platforms and online advertising. The course will explore how social networking tools have dramatically altered the ways we live, work, learn, shop, share and consume content and develop relationships. The course will especially emphasize promotional tools used by marketers in order to gain brand awareness,
loyalty, and market share.

Prerequisite/Restriction: MGT 4535; Grade of B- or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4545 - Digital Marketing
2 credits

This course integrates the technological and managerial aspects of information technology with the business environment. Successful technology implementation efforts have to keep both technological and managerial perspectives in mind. Utilizing a combination of cases and technology, this course will examine the fit of technology into business and how its deployment changes interactions and processes within organizations, across organizations, within industries, and across society.

Prerequisite/Restriction: B- or better in MGT 3500, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Spring

MGT 4550 - Brand Management
2 credits

Examines role of promotion concepts in development of a communication strategy. Based on an introduction to the nature of communications, course covers advertising, personal selling, and sales promotion, emphasizing the competitive and strategic value of communications in both the marketplace and society.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4560 - Strategic Sales
2 credits

This course focuses on the development and management of strategic accounts. Emphasis paid to understanding and practicing all phases of the key account process including prospecting, contacting, qualifying, proposal presentation and closing.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4570 - Consumer Choice Modeling
2 credits

This course explores and defines the specific attributes of consumer choice and its relationship to consumer marketing. The course builds on theory and research in psychology, marketing, and economics to examine both conscious and non-conscious consumer motivations, emotions, and other decision drivers. Students will be capable of conceptualizing, operationalizing, and developing marketing tools, models, and strategies to improve the marketing performance of an enterprise.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3500; one of the following statistics courses: PSY 3010, STAT 1040, STAT 1045, STAT 2000, STAT 2300, or STAT 3000; admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4590 - Marketing Strategy
3 credits

Analytical approach to strategic marketing problems facing the firm competing in global markets. Emphasizes key analytical and decision-making frameworks concerning the global marketing environment and the marketing mix and their impact on the firm's performance.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4600 - Negotiations
2 credits

This course is designed to teach the skills necessary to complete successful negotiations while maintaining both
integrity and relationships. It is based on a series of simulated negotiations in a variety of situations including candidate-employer negotiations, resolving conflicts and cross-cultural.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4630 - Human Resource Strategy
3 credits

Integrative human resource course, designed as the last course for graduating senior Human Resource Management minors. Covers current aspects of human resources. Includes case studies, real-world exercises, and team-based projects.

Prerequisite/Restriction: MGT 3110, grade of B- or better in MGT 3250; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Spring

MGT 4710 - Senior Leadership Project
3 credits

Students plan and complete advanced leadership projects, present results, and document accomplishments. Students gain practical experience and demonstrate ability to manage complex projects, contributing to organizational goals and their own career objectives.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring

MGT 4720 - Production Planning and Control
2 credits

Examines concepts and tools used in the planning and control of production activity and material flow. Topics include production scheduling, capacity analysis, and push versus pull production.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3700; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Examines the relationship of business enterprises with their external environment and helps students to develop an analytical framework for addressing the business and society relationship over one’s career in business or government. Helps students recognize, formulate, and analyze moral issues, as well as trace decisions forward to personal, cultural, and societal consequences.

Prerequisite/Restriction: Admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4730 - Business and Society
2 credits

Examines concepts and tools used to identify, diagnose, and correct quality problems in manufacturing and service processes. Topics include the PDCA cycle, root cause analysis, statistical quality control, and design of experiments.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3700; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Fall

MGT 4740 - Quality Management
2 credits

Effective Term

Spring

MGT 4750 - Managing Complexity
3 credits

Introduces concepts and tools used to facilitate systems thinking within organizations. In addition, simulation games and modeling are used to increase student understanding of how actions in one area of a business impact other areas and overall organizational performance.
Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3700; admittance to a USU major; cumulative GPA of 2.67 or higher; completion of at least 40 credits

Semester(s) Traditionally Offered: Spring

MGT 4790 - Managing Global Value Chains
2 credits

Examines strategies and tactics used to manage global supply chains. Topics include supply chain design, product development, strategic sourcing, information flow, and supply chain risk.

Prerequisite/Restriction: Grade of B- (2.67) or better in MGT 3700; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MGT 4800 - Independent Research and Readings
1-3 credits

Provides opportunity for student to pursue special interests under tutorship of faculty.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits and instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 4890 - Strategic Planning and Execution (CI)
CI
3 credits

Integrative capstone course dealing with challenges and strategies associated with international business. Students develop global business judgment and perspective through addressing problems related to global market entry and growth, finance, operations, strategic alliances, social responsibility, and business-government relationships.

Prerequisite/Restriction: Senior standing; FIN 3400; MGT 3500, MGT 3700, MGT 3800; admittance to a USU major; cumulative GPA of 2.67 or higher

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 4950 - Senior Honors Thesis/Project
3 credits

Creative project that will then be written up, and presented, as a Senior Thesis as required for an Honors Plan.

Semester(s) Traditionally Offered: Spring

MGT 5210 - Management of Philanthropy
3 credits

Explores application of business practices to philanthropy, nonprofit organizations, and social enterprises. Examines principles of corporate social responsibility and its relationship to meeting broad stakeholder interests.

MGT 5310 - Non-Profit Management
3 credits

Non-Profit Management focuses on the development, management and leadership of non-profit organizations. Specifically, this course discusses the role and scope of non-profits, both in the U.S. and globally; introduces management theory and practice for achieving non-profit effectiveness and sustainability; and explores different leadership models relevant to non-profit organizations.

MGT 5640 - Selected Topics in Management and Human Resources
1-3 credits

Selected topics in management and/or human resources are pursued in depth. Topics and instructor may vary.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits and instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 5730 - Problem Solving and Continuous Improvement
3

Application of continuous improvement concepts, systems, and techniques throughout the organization.
Analysis of contemporary methods of management and continuous improvement. Topics include: continuous flow, scientific thinking and the continuous improvement cycle, value stream mapping, root cause analysis, mistake proofing, and creative problem-solving.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 90 credits (Prerequisites do not apply to students taking MGT 6730)

Cross-listed as: MGT 6730

Semester(s) Traditionally Offered: Fall, Spring

Effective Term

Spring

MGT 6000 - Business Fundamentals
3 credits

This course is designed to provide an understanding of essential, fundamental business principles. The course will review concepts, theory and models that lie at the core of operations management, economics, business statistics, spreadsheet design and analysis and business law. This course is required by all MBA students.

Prerequisite/Restriction: ACCT 2010, FIN 3400, MGT 3500 or business undergraduate degree or director approval

Semester(s) Traditionally Offered: Fall

MGT 6010 - Advanced Business Law
3 credits

Detailed investigation of business law, including law of contracts, torts, property, secured transactions, commercial paper, and business organizations.

Prerequisite/Restriction: MGT 2050

MGT 6020 - Value Based Management
1-3 credits

This is an intensive course that prepares students for their Master of Business Administration program of study by framing the functional areas of business, defining the firm from a systems perspective and examines value based management from the perspective of firm stakeholders. By the end of the course the students will have a strong understanding of the importance of the synergistic fit of the functional areas of an organization. They will also understand the importance of resource bundling and value networks both for the firm and their careers.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6050 - International Retailing
3 credits

Issues related to retailing in international markets, such as motivations, cultural influence on consumer behavior, and entry strategies.

MGT 6055 - Management Principles
1.5 credits

Introduction of management principles for students entering a master’s degree program in the Huntsman School of Business.

Prerequisite/Restriction: Acceptance into a Huntsman School of Business master’s degree program

Semester(s) Traditionally Offered: Summer

MGT 6070 - Retail Management
3 credits

Basic issues related to retail management, such as merchandising, location, promotion, store management, and retail image.

Cross-listed as: MGT 4070.

Semester(s) Traditionally Offered: Spring

MGT 6075 - Fundamentals of Business Law
1.5 credits

Introduction of business law principles for students entering a master’s degree program in the Huntsman School of Business.

Prerequisite/Restriction: Acceptance into a Huntsman School of Business master’s degree program

Semester(s) Traditionally Offered: Summer

MGT 6180 - Intrasession MBA Workshop
0.5-1 credit
Intensive workshops designed to enhance the MBA experience.

Repeatable for credit.

MGT 6200 - Negotiation for Executives
1-3 credits

This course is designed to improve students’ understanding and skills in all phases of negotiation, the development of negotiation strategy and to the management of integrative and distributive aspects of the negotiation process. The course is based on a series of simulated negotiations in a variety of contexts including dyadic, buyer-seller transactions, dispute resolution, cross-cultural and third-party.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6250 - Graduate Internship
1-6 credits

Graduate-level internship in a career-related position for graduate students wishing to develop or expand their occupational experience. Maximum of 6 credits.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6300 - Leadership and Organizational Effectiveness
2 credits

This course involves an in-depth study of leadership, leadership development and organization design. Students will read extensively in the leadership literature. Further, they will study corporate strategies for identifying and developing leadership talent. Students will participate in a 360 degree leadership assessment, and will practice leadership coaching skills in working with classmates in leadership development plans. The final component of the course looks at theory, strategy and practice in organization structure and design.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6310 - Career and Professional Development
1-3 credits

Explores theory and literature of careers, including orientation, as well as early-, mid-, and late-career issues.

MGT 6320 - Leadership and Operational Excellence in a Global Context
3 credits

Provides students with a powerful, transformative learning experience within the framework of global leadership and operational excellence. While participating in an international experience, students critically analyze operational excellence in a variety of global companies at various stages of implementation.

Semester(s) Traditionally Offered: Spring

MGT 6325 - Global HR Leadership
1 credit

This course introduces the complexities and opportunities associated with managing a global workforce. Students study global business strategy, global talent management, expatriate and impatriate assignments, global compensation and reward strategies and global teams. Associated with this course is a study abroad experience where students meet with senior HR professionals in global firms to see how HR is addressed in these organizations.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6330 - Applied Human Resources Research
3 credits

This course addresses the application of research design in the workplace. Students explore research principles and strategies through completion of an applied HR research project. Specific attention is placed on focus group and survey research, statistical analysis, content analysis and skills for analyzing and reporting study results.

Semester(s) Traditionally Offered: Fall, Summer

MGT 6340 - Principles of Operational Excellence
1 credit
This course is designed to provide students with an understanding of the principles of operational excellence and how to implement them in their professional careers. This course will explore the disciplines of Lean, Six Sigma, and the Theory of Constraints. It will discuss their interoperability and their application to leadership and HR. Students will become familiar with the Shingo Prize Model, learn the importance of principle based leadership, and how to use principles to drive systems and tools.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6350 - Managing a Diverse Workforce
1 credit

This course examines issues and challenges related to managing a workforce that is diverse with regard to race, ethnicity, gender, age, sexual orientation, and disabilities and explores contemporary organizational strategies for managing workplace diversity. Provides a basis to gain greater self-awareness of our own cultural values, biases, and behaviors and how they may influence our interpersonal behavior and interactions in organizations in order to better develop competencies and skills for working effectively with people from diverse backgrounds and orientations.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6370 - Project Management
3 credits

Teaches concepts of project management, while intensively involving students in entrepreneurship-related projects such as initiating a start-up or consulting with management of an emerging business. Requires integrative organizational and industry research and a professional report.

MGT 6410 - Enterprise Creation
2 credits

Focuses on development of new ventures, including entrepreneurial competencies, venture teams, recognizing business opportunities, gathering resources, new venture finance, entry strategies, legal structure, licensing and regulatory requirements, patents, copyrights, and product liability.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6430 - Enterprise Growth and Management
2-3

Analyzes the growth phase of business development. Topics include organizational competencies and systems, growth strategies, growth finance and staging, cash-flow, franchising, estate and family business issues, harvest strategies including buyouts and public offerings, and employment law for small employers.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Summer 2016

MGT 6470 - Project Planning and Execution
3 credits

Teaches concepts of project management, while intensively involving students in entrepreneurship-related projects such as initiating a start-up or consulting with management of an emerging business. Requires integrative organizational and industry research and a professional report.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6500 - Managing Individuals and Groups
3 credits

Focuses on development of interpersonal and team skills. Includes development of organizational systems supporting effective use of human resources, including performance management, motivation, selection, training, rewards, and career development.

Semester(s) Traditionally Offered: Fall

MGT 6510 - Marketing Techniques
1.5 credits

Introduction of marketing principles for students entering a master's degree program in the Huntsman School of Business.

Prerequisite/Restriction: Acceptance into a Huntsman School of Business master's degree program

Semester(s) Traditionally Offered: Summer

MGT 6520 - Enterprise Branding and Marketing
3 credits
Advanced case approach to current marketing management problems. Emphasizes concepts, research, techniques, decision making, and marketing strategy development.

Prerequisite/Restriction: Grade of C or better in MGT 3500 or equivalent

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6525 - Marketing Channels and Social Media
3 credits

This course introduces graduate students to the field of marketing communications. It will cover a number of topics and areas essential for understanding how to design and evaluate the communication strategies that are necessary for the successful marketing of products and services. The course strikes a balance between the theoretical and practical aspects of marketing communications as a means of gaining a deeper understanding of relevant topics. Toward this end, theories, concepts, and principles employed by scholars and practitioners to explain marketing communications will be examined as a means of uncovering the foundations of effective communication efforts.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6540 - Special Topics in Marketing
3 credits

Selected topics in marketing pursued in depth. Topics and instructors vary semester to semester. Current topics include: Marketing Communications and Supplemental Aspects of Electronic Commerce, The Changing Environment of Marketing Institutions, and Buyer Behavior.

Prerequisite/Restriction: MGT 6520

Semester(s) Traditionally Offered: Spring

MGT 6550 - Talent Acquisition and Retention
3 credits

Focuses upon creation of competitive advantage through strategic human resources planning and staffing. Topics include job analysis, preparing candidate specifications, recruitment, assessment, and placement. Also covers pertinent laws/regulations and applicable descriptive/inferential statistics.

Semester(s) Traditionally Offered: Fall

MGT 6560 - Market Analysis and Decision Making
3 credits

Develops skills necessary to plan and implement an effective marketing strategy. Focuses on role of marketing information in managerial decision making. Uses marketing cases and/or simulation games throughout the course.

Semester(s) Traditionally Offered: Fall, Spring

MGT 6620 - Training and Organizational Development
3 credits

Provides advanced treatment of employee, management, and organizational development. Specific topics include: historical background, needs assessment, program design and implementation, outcomes evaluation, and how individuals and organizations change.

Semester(s) Traditionally Offered: Spring

MGT 6630 - Total Rewards and Employee Performance
3 credits

Strategic analysis and design of compensation, benefits, and performance management systems. Key topics include performance assessment; employee motivation, discipline, and performance improvement; and design and implementation of compensation and benefit systems to attract and retain talent, while facilitating achievement of the strategic objectives of the organization.

Semester(s) Traditionally Offered: Spring

MGT 6640 - Selected Topics in Management and Human Resources
.5-3 credits

Selected topics in management and/or human resources are pursued in depth. Topics and instructor may vary.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6650 - Team and Interpersonal Effectiveness
3 credits
Experiential course designed to develop team effectiveness, and specific managerial and leadership skills contributing to interpersonal competence and effectiveness in work groups and organizations.

Semester(s) Traditionally Offered: Fall

MGT 6670 - Employee Relations and the Labor Movement
2 credits

Comprehensive survey of union-management relationships, including labor markets and the labor movement, labor history and law, union organization and government, and contract negotiation and administration. Includes exercises and cases in negotiations and grievance processes.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6675 - Negotiation and Mediation
2-3 credits

This course is designed to improve students’ understanding and skills in all phases of negotiation and mediation including the development of strategy and the management of integrative and distributive aspects of the negotiation process. The course is based on a series of simulated negotiations and mediations that human resource managers are likely to encounter and covers a variety of contexts including dyadic, candidate-employer negotiations, dispute resolution and cross-cultural.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Spring 2016

MGT 6680 - Human Resource Analytics
3 credits

This course focuses on the use of human capital and other business data for the purpose of describing, predicting, and improving business performance. Specific objectives include gaining a working knowledge of human resource information systems, learning to calculate ROI for HR programs, and developing and testing casual models of the linkages between human resource management practices and various business unit outcomes.

Semester(s) Traditionally Offered: Fall

MGT 6685 - Strategic Human Capital Management
2 credits

This is an advanced leadership course designed to prepare MBA students with critical skills associated with attracting, developing, and mobilizing human talent in support of organizational vision, strategy, and key customer and performance outcomes. Key topics include fundamentals of employment law, recruitment, developing a talent pipeline, pay and reward structures, performance management, leadership, engagement, and the development of high performance work systems.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6690 - Human Resource Strategy
3 credits

Capstone course in Human Resource Management, designed to integrate concepts learned in specialized courses to the management of a total Human Resource function, with integration from both strategic and tactical perspectives. Covers domestic and international issues, as well as organizational change and development.

Semester(s) Traditionally Offered: Fall

MGT 6710 - Essentials of Operations Management
1.5 credits

Introduction of operations management principles for students entering a master's degree program in the Huntsman School of Business.

Prerequisite/Restriction: Acceptance into a Huntsman School of Business master's degree program

Semester(s) Traditionally Offered: Summer

MGT 6720 - Strategic Supply Chain Management
3 credits

Study of basic process functions in managing a production or service organization, such as inventory control, production control, procurement, quality control, production planning, forecasting, etc.

Semester(s) Traditionally Offered: Fall Spring

Effective Term
Fall 2016
MGT 6730 - Problem Solving and Continuous Improvement
3

Application of continuous improvement concepts, systems, and techniques throughout the organization. Analysis of contemporary methods of management and continuous improvement cycle, value stream mapping, root cause analysis, mistake proofing, and creative problem solving.

Cross-listed as: MGT 5730

Semester(s) Traditionally Offered: Fall Spring
Effective Term
Summer 2016

MGT 6735 - Continuous Improvement in a Lean Environment
2

Introduce tools and systems of continuous improvement including, but not limited to, Six Sigma, 5S, Mistake Proofing, Policy Deployment, Idea Systems, and Value Stream Mapping.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

MGT 6740 - Decision Making in Operations Management
3 credits

Selected topics in operations management pursued in depth. Topics and instructors vary from semester to semester.

Prerequisite/Restriction: MGT 6720

Semester(s) Traditionally Offered: Spring

MGT 6750 - Leadership and Human Capital in a Lean Environment
2 credits

Introduce principles of leadership, human capital development, and organizational culture including, but not limited to, creating a lean culture, managing culture change, motivation, and creating effective team based environments.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

MGT 6755 - Managing in a Lean Environment
2 credits

Examine the roles and responsibilities of management including, but not limited to, strategy deployment, business level strategic A3’s, daily management, Gemba Walks, and leader standard work.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

MGT 6756 - Managing the Supply Chain in a Lean Environment
2 credits

Introduce supply chain principles: establishing customer-based pull, production leveling, managing material flow based on Kanban, including suppliers in the value stream, and using information and metrics to achieve intra/inter-organization alignment.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

MGT 6757 - Measurement and Reporting in a Lean Environment
2 credits

Introduce principles of measurement and accounting, including but not limited to, lean accounting, target costing, transaction reduction, value engineering/analysis, and the balanced scorecard.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

MGT 6758 - Quality Systems in a Lean Environment
2 credits

Examine quality systems including, but not limited to, work instruction documents (WID), standard operating procedures (SOP), validation procedures, design of experiments (DOE), root cause analysis, voice of the customer, and quality roadmaps.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

MGT 6759 - Work Systems in a Lean Environment
2 credits

Introduce systems used to design and implement work activities consistent with the principle of waste reduction, including standard work, go-and-see walks, cell design, one-piece flow, Jidoka, and total productive maintenance.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

MGT 6760 - Employment Law
3 credits

Examines laws related to employment, labor relations, civil rights, compensation, safety, health, and retirement. Provides experience in dispute resolution techniques in a nonunion employment setting, including negotiation, mediation, and arbitration.

Semester(s) Traditionally Offered: Fall

MGT 6765 - Business Law and Ethics
3 credits

This course aims to provide students with: 1) a basic understanding of the organization and operation of the American legal system; 2) a basic understanding of the role of ethics in business; and 3) insight into a selection of legal and ethical issues of particular importance to modern business administration. Specific legal and ethical issues will be presented primarily by guest lecturers with unique, real-world experience. After completing the course, students should understand the function and limitations of the legal system and the advantages of ethical business practices. Students should also leave with a framework for making ethical business decisions and practical insight into the areas of law and ethics highlighted by the guest lecturers.

Semester(s) Traditionally Offered: Fall Spring Summer
Effective Term
Fall 2016

MGT 6770 - Ethics for the Business Professional
1.5 credits

Taking a stakeholder perspective on business, this course introduces students to several moral and ethical frameworks. Current case analyses and experiential activities allow students to confront ethical dilemmas and work through acceptable alternatives.

Semester(s) Traditionally Offered: Fall

MGT 6780 - Ethics and Business in a Global Society
2-3 credits

Considers relationship between business and its societal context, including a discussion of how business enterprises maintain their legitimacy and mandate. Helps students develop an analytical framework for addressing issues at the intersection of business and society, including the personal, cultural, and societal consequences of business decisions.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6800 - Shingo Model Practicum
3 credits

Introduce the Shingo Model, Shingo Guiding Principles, and how understanding the model and principles help drive enterprise excellence. Learn to identify and address behavioral gaps in an organization. Students completing this course will receive Shingo Certification. They will work on a project associated with their work and apply the Shingo principles to the project.
Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Summer 2016

MGT 6860 - Business Research Methods
3 credits

Explores the fundamentals of qualitative and quantitative data collection and analysis. Students design and implement small, integrated research activities, then use the results to make business strategy recommendations.

Semester(s) Traditionally Offered: Spring

MGT 6870 - Global Strategic Thinking
.5-.3 credits

This course provides students with exposure to the international dimensions of business, including the cultural, economic, political, and legal environments which influence business strategy with the goal to enhance their agility in responding to dynamic global business conditions. The course includes an international study abroad seminar during the Spring semester.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $2,500.00

MGT 6890 - Advanced Strategy
2-3 credits

Integrative capstone course, taking a CEO's perspective, addressing global competitiveness, strategic assessment, policy development, and strategy execution.

Prerequisite/Restriction: Must be taken at end of advanced MBA program

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6891 - System Thinking and Advanced Tactics
2 credit

This course is a deep-dive, strategic management course designed as an experiential exercise for students to use the accumulated knowledge from the MBA courses completed to date, as well as their company experience.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6892 - Systems Thinking and Advanced Tactics II
1 credit

This course builds upon the concepts taught in MGT 6891 and is a deep-dive, strategic management course designed as an experiential exercise for students to use the accumulated knowledge from all MBA courses. Students will be working directly with executives in a comprehensive quasi-consulting arrangement. Along with some additional concepts and techniques developed at the beginning of the course, each student will be required to advise the company on which way it should proceed AND then advise them on how this can be implemented in the organization.

Semester(s) Traditionally Offered: Spring

MGT 6900 - Independent Research and Reading
1-3 credits

Provides opportunity for students to pursue special interests under tutorship of the faculty.

Prerequisite/Restriction: Approval of faculty member and department head

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6960 - Professional Paper
3 credits

Preparation of paper of professional quality, designed to demonstrate ability to complete a major project and effectively present the results.

MGT 6970 - Thesis
1-4 credits
Designed for students preparing a master's degree thesis.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MGT 6990 - Continuing Graduate Advisement
1-3 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Management Information Systems

MIS 2100 - Principles of Management Information Systems
3 credits
Covers principles of management information systems including how to use and manage information technology to improve business processes, improve decision making, and gain competitive advantage. Includes MIS concepts and vocabulary, as well as information technology.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 3200 - Business Communication (CI)
CI Communications Intensive
3 credits
Development and application of effective oral, interpersonal and written business communication skills using critical thinking skills to analyze business-related situations and apply appropriate communication frameworks. Polished communication skills will be fostered through various communication approaches and technologies.
Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits and a grade of C or better in ENGL 2010
Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 3300 - Big Data Analytics (QI)
QI Quantitative Intensive
3 credits
Provides an introduction to business intelligence and analytics, which includes the use of data, statistical and quantitative analysis, exploratory and predictive models, and evidence-based methods to inform business decisions and actions.
Prerequisite/Restriction: C or better in MIS 2100 and either STAT 2000 or STAT 2300, admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Fall 2016

MIS 3330 - Database Management
3 credits
Theory and application of designing, developing, and maintaining database systems. Principles of management of data resources to support effective information systems in organizations.
Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits, and MIS 2100 or OSS 2450 or instructor permission
Semester(s) Traditionally Offered: Fall, Spring

MIS 3450 - Designing Graphical User Interfaces for Electronic Commerce
3 credits
Application of current web standards, techniques, and web design principles to develop graphical user interfaces using an integrated development environment (IDE).
Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits, and MIS 2100 or OSS 2450
Semester(s) Traditionally Offered: Fall

MIS 3500 - Introduction to Business Applications Programming
3 credits
Creation of applications to solve business problems or support business functions related to financial, personnel, sales, and information systems management. Students create working systems using widely used Windows software and standard programming principles.
Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MIS 3800 - IT Infrastructure
3 credits

Provides an introduction to IT infrastructure issues. Covers topics related to both computer and systems architecture and communication networks, with an overall focus on the services and capabilities that IT infrastructure solutions enable in an organizational context.

Prerequisite/Restriction: MIS 2100, admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Semester(s) Traditionally Offered: Fall, Spring

MIS 4250 - Management Information Systems Internship
1-3

Provides management information systems internship experience in a career related position approved by the department of Management Information Systems. No more than three credits can be applied to fulfill major requirements.

Prerequisite/Restriction: MIS 3330, and MIS 3500 or CS 1400 and CS 1405, and instructor approval; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer Effective Term
Spring

MIS 4330 - Advanced Database and Database Analytics
3 credits

This course covers advanced database topics such as concurrency control, XML databases, and web-based databases. A heavy advanced SQL and analytics focus is also a part of the course.

Prerequisite/Restriction: MIS 3330 or equivalent

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

MIS 4350 - Introduction to Performance Improvement Projects
3 credits

Introductory course in performance improvement projects. Includes analysis of current business processes in order to devise appropriate training and development programs or information systems applications. Students learn the systems approach to designing and implementing programs or applications in business.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Cross-listed as: MIS 6350.

Semester(s) Traditionally Offered: Spring

MIS 4550 - Principles of International Business Communications (CI)

CI Communications Intensive
3 credits

Culture-general and culture-specific study of business communication in the diverse world of international business from both theoretical and applied perspectives.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits

Semester(s) Traditionally Offered: Spring

MIS 4800 - Security of Business Information Systems
3 credits

In-depth exploration of security issues in business information systems. Includes workstation, work-groups, intranet, and wide-area network security. Covers development of security policies and procedures.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits, and MIS 2100 or OSS 2450

Cross-listed as: MIS 6800.
Semester(s) Traditionally Offered: Spring
MIS 4950 - Senior Honors Thesis/Project
3 credits
Creative project that will then be written up and presented as a Senior Thesis as required for an Honors Plan.

Semester(s) Traditionally Offered: Spring
MIS 5050 - Advanced Web-Based Management Information Systems Development
3 credits
Students learn how to design, develop, and implement an Internet-based commerce website. Includes instruction in architecture and building of a data-driven web application.

Prerequisite/Restriction: MIS 3330, MIS 3800 and CS 1400 or MIS 3500, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits OR admittance to the MMIS program

Cross-listed as: MIS 6050

Semester(s) Traditionally Offered: Fall, Spring
MIS 5150 - Special Topics: Emerging Technologies in Management Information Systems
3 credits
Special topics in Management Information Systems not covered in regular course offerings. Course is repeatable for credit only when students enroll for a topic for which they have not previously received credit. This course is offered from time to time, but usually only when the instructor has a special topic or project.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits, and MIS 3330

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, every other year
MIS 5300 - Advanced Data Communications
3 credits
Principles of data communications, local and wide-area networks, hardware, software, media standards, management, and business applications. Management and strategic use of local-area networks (LANs) and wide-area networks (WANs) to solve business problems.

Prerequisite/Restriction: MIS 2100 and MIS 3800; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits OR admittance to the MMIS program

Semester(s) Traditionally Offered: Fall
MIS 5350 - Data Modeling and Analytics
3 credits
Developing modeling skills in business analytics for effective problem formulation and data analysis. Programming, computational and modeling systems will be used extensively to apply numerical, decision analysis, optimization and simulation techniques on a variety of complex business problems.

Prerequisite/Restriction: MIS 2100

Semester(s) Traditionally Offered: Fall, Spring, Summer
MIS 5650 - Advanced Website Development
3 credits
Creating e-commerce websites using a combination of the following technologies: XHTML, PHP, JavaScript, and DBMSs such as Oracle, MySQL, SQL server 2005, etc. This technical course maintains a business focus as a transaction-oriented commercial site.

Prerequisite/Restriction: MIS 3330, MIS 3800 and CS 1400 or MIS 3500, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits OR admittance to the MMIS program

Cross-listed as: MIS 6650

Semester(s) Traditionally Offered: Fall
MIS 5700 - Internet Management and Electronic Commerce (DSS)
DSS Depth Social Sciences
3 credits
Familiarizes students with concepts and technologies relating to business and the Internet. Focuses on the new business environment that has evolved through the
Internet, as well as associated technologies and strategies.

Prerequisite/Restriction: Admittance to a USU major, cumulative GPA of 2.67 or higher, and completion of at least 40 credits. Some programming experience is helpful.

Semester(s) Traditionally Offered: Fall

MIS 5900 - Systems Design and Implementation (CI)
CI Communications Intensive
3 credits

Work with a client to cover the entire systems development life cycle, from initiation of a project to final delivery of a functional system. Apply analysis, design, and project management concepts to the project.

Prerequisite/Restriction: MIS 2100, MIS 3800 and MIS 3500 or CS 1400, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits

Corequisite: MIS 5910

Semester(s) Traditionally Offered: Fall, Spring

MIS 5910 - Systems Design Laboratory
1 credit

Required laboratory for MIS 5900, allowing students to complete assigned team projects.

Corequisite: MIS 5900.

Semester(s) Traditionally Offered: Fall, Spring

MIS 5950 - Independent Readings
1-5 credits

Designed for individual student projects as approved by the department.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MIS 6050 - Advanced Web-Based Management Information Systems Development
3 credits

Students learn how to design, develop, and implement an Internet-based commerce website. Includes instruction in architecture and building of a data-driven web application.

Prerequisite/Restriction: MIS 3330, MIS 3800 and CS 1400 or MIS 3500, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits OR admittance to the MMIS program

Cross-listed as: MIS 5050

Semester(s) Traditionally Offered: Fall, Spring

MIS 6110 - Workshop
1-3 credits

Intensive workshops.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 6150 - Communication for Business
3 credits

In-depth study of the process for preparing written business communications and related oral presentations. Preparation of reports relevant to student's major.

Prerequisite/Restriction: MIS 3200 or equivalent

Semester(s) Traditionally Offered: Fall

MIS 6180 - Intrasession MBA Workshop
0.5-1 credit

Intensive workshops designed to enhance the MBA experience.

Repeatable for credit.

MIS 6200 - Business Data Communication Systems
3 credits

Introduction to business data communications, including concepts, network architecture, data communication software and hardware, distributed information systems, and business communication system services.

Semester(s) Traditionally Offered: Fall

MIS 6230 - Management of Database Systems
3 credits

Theory and application of designing, developing, and
maintaining database systems. Principles of management of data resources to support effective information systems in organizations.

Prerequisite/Restriction: All MMIS prerequisites including ACCT 2010, FIN 3400, STAT 2300, and MIS 3500 or CS 1400

Semester(s) Traditionally Offered: Fall, Spring

MIS 6250 - Graduate Internship
1-6 credits

Graduate-level internship in business, industry, or government position approved by department. Requires written learning objectives, performance evaluation, and a final internship written report. Requires 75 hours internship per 1 semester credit.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Page: 1 <- Back 10 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 ... Forward 10 -> 64

Management Information Systems

MIS 6330 - Advanced Database Implementation
3 credits

Application of advanced database concepts using enterprise-wide database products. Includes advanced structured query language (SQL) development, database programming development, database administration basics, integration of database tools within a project context, introduction of data mining and data warehousing, reporting tools, and database and XML integration.

Prerequisite/Restriction: MIS 6230

Cross-listed as: MIS 4330.

Semester(s) Traditionally Offered: Spring

MIS 6400 - Local Area Network Management for Business
3 credits

Application of networking concepts related to the management of local area networks. Includes topics related to setup, management, and maintenance of local area networks and installation of electronic mail-handling systems.

MIS 6410 - Human-Computer Interface Design
3 credits

Integrates aspects of industrial psychology, work physiology, human environments, job analysis, and hardware/software engineering in the study of designing effective, efficient input/output interfaces for business information systems.

MIS 6440 - Information and Decision Making
3 credits

Case-based approach to learning role of information technology when making quantitative and qualitative analyses, including statistical techniques to solve business problems through the use of information technology.

Prerequisite/Restriction: At least one graduate or undergraduate class in statistics

MIS 6450 - Human-Computer Interface Design
3 credits

Application of human-computer interface design principles for e-commerce projects using an integrated development environment (IDE).

Semester(s) Traditionally Offered: Fall

MIS 6500 - Data Mining
3 credits
This course provides an introduction to data mining and business intelligence technologies. Upon completing this course, students should be able to utilize a clustering algorithm for customer segmentation, an association rule algorithm for cross-selling/web site optimization, single and ensemble classifiers for churn prediction/fraud detection/targeted ads, and visualization tools for data and output representation.

Prerequisite/Restriction: Knowledge of database and spreadsheet software

Semester(s) Traditionally Offered: Fall, Spring

MIS 6510 - Information Systems Strategy
2-3 credits

Introduction to information systems at general management level. Includes strategic look at needs of an organization and how the function of information systems can help the organization become more effective.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 6550 - International Business Communication
3 credits

Culture-general and culture-specific study of business communication in the diverse world of international business from both theoretical and applied perspectives.

MIS 6610 - MIS Strategy for IT Professionals
3 credits

Designed for IT leaders, managers, directors, and aspiring CIO's responsible for enterprise and/or business unit information systems and technology.

Prerequisite/Restriction: All MMIS prerequisites including ACCT 2010, FIN 3400, STAT 2300, and MIS 3500 or CS 1400

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 6640 - E-Commerce Data Interchange Using XML
3 credits

Designed to build e-commerce applications using XML (Extensible Markup Language) as the underlying technology. Students will also learn to parse XML documents, use Extensible Style Sheet language, and use XSQL (an Oracle technology) to tie XML with its database.

Prerequisite/Restriction: BUS 3100, MIS 3330, and MIS 3500

MIS 6650 - Advanced Website Development
3 credits

Creating e-commerce websites using a combination of the following technologies: XHTML, PHP, JavaScript, and DBMSs such as Oracle, MySQL, SQL server 2005, etc. This technical course maintains a business focus as a transaction-oriented commercial site.

Prerequisite/Restriction: MIS 3330, MIS 3800 and CS 1400 or MIS 3500, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits OR admittance to the MMIS program

Cross-listed as: MIS 5650

Semester(s) Traditionally Offered: Fall

MIS 6660 - The Adult Business Learner
3 credits

Focuses on the adult business learner, the concept of the “learning organization,” and the different types of postsecondary institutions that provide adult training and education in business.

MIS 6700 - Information Systems Strategies for Electronic Commerce
3 credits

A management-oriented treatment of general information systems principles and topics relating to information systems strategies for electronic commerce, such as business models, mass customization, market research, security and assurance, entrepreneurship, intelligent agents, virtual corporations, electronic payments, and customer service.

Semester(s) Traditionally Offered: Spring

MIS 6750 - Business Process Reengineering Using Information Technology
3 credits

Examines methodologies and state-of-the-art thinking in the area of business process reengineering. Designed to help students understand how organizations manage
change in contemporary global business environments by utilizing the latest information systems and technology techniques.

MIS 6770 - Competency-based Instruction
3 credits

Business teachers learn how to develop competency-based instruction by completing a CBI project.

MIS 6800 - Advanced Topics in Information Security
3 credits

Examination of contemporary topics in information security management, including preventative and analytics-based security measures.

Semester(s) Traditionally Offered: Spring

MIS 6810 - Introduction to the Research Process
3 credits

Essential scientific research concepts of theory development and data collection and the technology of research, including writing and funding proposals, experimental and study design, and project management. Includes a hands-on research project conducted by the student.

Repeatable for credit.

MIS 6860 - Business Intelligence and Analytics
2-3 credits

Provides a conceptual and practical overview of analytical tools, techniques, and practices used to support data-driven decision making in an organization.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 6861 - Business Intelligence and Analytics Laboratory
1 credit

Laboratory for MIS 6860 allowing students to complete assigned class projects (required only for MIS Masters students who enroll in MIS 6860).

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 6900 - IS Development
3 credits

Information systems development, including analysis, design, and implementation. Students develop a working application to solve a real-world business problem. This is the capstone course for the MSMIS program.

Prerequisite/Restriction: MIS 6230; Prerequisite or corequisite: MIS 5050 or MIS 6650

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 6950 - Independent Readings
1-3 credits

Specialized projects for graduate students.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 6970 - Master’s Paper
1-6 credits

Master’s-level thesis or Plan B research credit.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 6990 - Continuing Graduate Advisement
1-3 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 7250 - Graduate Research Internship
1-3 credits

For doctoral students desiring to improve their research capability. Prior approval required. Repeatable to a maximum of six credits.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 7600 - Historical Foundations of Information Systems
3 credits

Provides in-depth analysis and review of foundation literature, important topics, latest results, and emerging areas of information systems research.
Semester(s) Traditionally Offered: Spring

MIS 7610 - Critical Analysis of Issues
3 credits

Examines critical analysis/thinking techniques, creative problem solving, and the identification of issues and trends in the field.

MIS 7950 - Independent Readings
1-3 credits

Independent readings for graduate students. Repeatable to a maximum of 6 credits.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 7970 - Doctoral Dissertation
1-12 credits

Doctoral-level dissertation research credit. Independent readings for graduate students. Repeatable to a maximum of 6 credits.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MIS 7990 - Continuing Graduate Advisement
1-9 credits

Prerequisite/Restriction: Enrollment restricted to doctoral-level students only Signature of department head required

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Mathematics

MATH 0920 - Math Skills Review of Math 0990
0 credit

Review of mathematics skills for MATH 0990 for USU students returning from extended absences from USU, or for students whose prerequisites for courses are more than one year (three consecutive semesters) old.

Remedial

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $100.00

MATH 0921 - Math Skills Review of Math 1010
0 credit

Review of mathematics skills for MATH 1010 for USU students returning from extended absences from USU, or for students whose prerequisites for courses are more than one year (three consecutive semesters) old.

Remedial

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $100.00

MATH 0922 - Math Skills Review of Math 1050 and 1060
0 credit

Review of mathematics skills for MATH 1050 and MATH 1060 for USU students returning from extended absences from USU, or for students whose prerequisites for courses are more than one year (three consecutive semesters) old.

Remedial

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $100.00

MATH 0923 - Mathematics Skills Review
0 credit

A review of mathematics skills for MATH 0990 through MATH 1220 for USU students returning from extended absences from USU, or students whose prerequisites for courses up to MATH 2210 are more than one year (three consecutive semesters) old.

Remedial

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $100.00

MATH 0950 - Pre-algebra
4 credits

Developmental course in arithmetic. Calculations involving whole numbers, decimals, fractions, proportions, ratios, percents and exponents; order of operations; elementary statistics; English and metric measurement systems and conversions; perimeter, area and volumes of geometric figures; and an introduction to the basic concepts of algebra. MATH 0950 is a remedial class not carrying USU or transfer credit. Remedial fee required.
MATH 0990 - Beginning Algebra
3 credits

A first course in algebra. Real numbers; algebraic expressions; graphing and solving equations and inequalities; operations on polynomials; factoring polynomials; rational expressions and equations; and systems of equations. Remedial class not carrying USU or transfer credit. Remedial fee required.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): Grade of C- or better in MATH 0950 or satisfactory score on the Math Placement Exam

Remedial
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $90.00

MATH 0995 - College Mathematics Preparation
4 credits

Review of introductory algebra concepts. Topics include: manipulating and simplifying expressions; solving equations and inequalities; graphing equations and inequalities. Real world applications including linear, quadratic, polynomial, rational, exponential, and radical functions.

Math 0995 is a remedial class not carrying USU or transfer credit. Remedial fee required.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of 16 or higher or equivalent SAT Math score, Grade of C- or better in MATH 0950, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $120.00

MATH 1010 - Intermediate Algebra
4 credits

Review of introductory algebra concepts. Topics include manipulating and simplifying expressions, solving equations and inequalities, graphing equations, and inequalities. Real world applications including linear, quadratic, polynomial, rational, exponential, and radical functions.

Math 0995 is a remedial class not carrying USU or transfer credit. Remedial fee required.

The Department of Mathematics and Statistics is not currently offering this course.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of 16 or higher or equivalent SAT Math score, Grade of C- or better in MATH 0950, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $125.00

MATH 1020 - Trade Mathematics
Mathematics
3 credits

Designed to cover the basic skills needed by students who are enrolled in auto mechanics, diesel mechanics, electronics, machine tool technology, and welding. It is not intended to prepare the student for calculus. Topics to be covered include a review of basic arithmetic, precision and accuracy, significant figures, English and metric measurement systems and conversions, ratio and proportion, variation, operations with formulas, solving linear and quadratic equations, systems of equations in two and three variables, fractional equations, perimeter, area and volume of geometric figures, the Pythagorean theorem, basic trigonometry, graphs of linear, quadratic and exponential functions, logarithms, polar coordinates, and the complex number system. Throughout the course, emphasis is placed on solving problems related to the technical fields.

Prerequisite/Restriction: ACT Math score of 17 or higher or equivalent SAT Math score, Grade of C- or better in MATH 0950, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Spring
Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

MATH 1030 - Quantitative Reasoning (QL)
QL Quantitative Literacy
3 credits
A general education class intended for non-science students, but open to all students. Topics include logic; problem solving; Numeration Systems; geometry, measurements; probability; statistics; and some algebra. A term paper or research paper will be required.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of at least 21 or equivalent SAT Math score, Grade of C or better in MATH 0995 or MATH 1010, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring

MATH 1050 - College Algebra (QL)
QL
4 credits


Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of at least 23 or equivalent SAT Math score, AP Calculus AB score of at least 3, Grade of C- or better in MATH 0995, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Spring 2017

MATH 1060 - Trigonometry
2 credits

Trigonometric functions, equations, identities, and applications. Graphing calculator required.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of at least 23 or equivalent SAT Math score, AP Calculus AB score of at least 3, Grade of C- or better in MATH 0995 or MATH 1050, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Spring

MATH 1100 - Calculus Techniques (QL)
QL Quantitative Literacy
3 credits

Techniques of elementary calculus, differentiation, integration, elementary optimization, and introduction to partial derivatives. Applications in business, social science, and natural resources. Graphing calculator required.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of at least 25 or equivalent SAT Math score, AP Calculus AB score of at least 3, Grade of C- or better in MATH 1050, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 1210 - Calculus I (QL)
QL Quantitative Literacy
4 credits

Analytic geometry, differential and integral calculus,
transcendental functions, and applications. Graphing calculator required.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of at least 27 or equivalent SAT Math score, AP Calculus AB score of at least 3, Grade of C- or better in BOTH MATH 1050 AND MATH 1060 within the last year or three consecutive semesters (including summer), or satisfactory score on the Math Placement Exam.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring

MATH 1220 - Calculus II (QL)
QL Quantitative Literacy
4 credits

Integration, infinite series, introduction to vectors, and applications. Graphing calculator required.

Prerequisite/Restriction: C- or better in MATH 1210, or AP score of at least 4 on Calculus AB exam or at least 3 on Calculus BC exam.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 2010 - Algebraic Thinking & Number Sense for Elementary Education School Teachers (QI)
QI Quantitative Intensive
3 credits

This course is for pre-service elementary school teachers. Students develop a deep conceptual understanding of foundations of algebra and numeration necessary for them to teach elementary school students mathematics in a manner consistent with NCTM's Principles and Standards of School Mathematics.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): MATH 2010 or equivalent, or Grade of C- or better in MATH 1050, or ACT score of 25 or higher or equivalent SAT Math score, or AP Calculus AB score of at least 3, or Satisfactory score on the MATH Placement Exam.

Declared major in Elementary Education, Special Education, Pre-Elementary Education, or Pre-Special Education

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $20.00

MATH 2210 - Multivariable Calculus (QI)
QI Quantitative Intensive
3 credits

Vector calculus, multiple integration, partial derivatives, line and surface integrals. The theorems of Green, Gauss, and Stokes.

Prerequisite/Restriction: C- or better in MATH 1220 or AP Calculus score of 5 on BC exam.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 2250 - Linear Algebra and Differential Equations (QI)
QI Quantitative Intensive
4 credits
Linear systems, abstract vector spaces, matrices through eigenvalues and eigenvectors, solution of ode’s, Laplace transforms, first order systems.

Prerequisite/Restriction: C- or better in MATH 1220; or AP Calculus score of 5 on BC exam and C- or better in MATH 2210

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 2260 - Internship and Cooperative Studies
1-6 credits

Lower-division internship/cooperative work experience.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 2270 - Linear Algebra (QI)
QI Quantitative Intensive
3 credits

Solutions of linear systems, matrix operations, matrix factorization, vector spaces, subspaces, linear independence, bases, linear transformations, eigensystems, orthogonality, Gram-Schmidt orthogonalization, and projections.

Prerequisite/Restriction: C- or better in MATH 1220; or AP Math score of 5 on calculus BC exam and C- or better in MATH 2210

Semester(s) Traditionally Offered: Fall, Spring

MATH 2280 - Ordinary Differential Equations (QI)
QI Quantitative Intensive
3 credits


Prerequisite/Restriction: C- or better in MATH 2270

Semester(s) Traditionally Offered: Fall, Spring

MATH 2910 - Directed Readings and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in mathematics. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreement.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in mathematics. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreement.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 3110 - Modern Geometry
3 credits

Euclidean and non-Euclidean geometry, with emphasis on historical significance of parallel postulate. Axiomatic development of geometry and theorems.

Prerequisite/Restriction: C- or better in MATH 1220

Semester(s) Traditionally Offered: Spring

Course Fee: $20.00

MATH 3300 - School Laboratory for Mathematics Teachers Level I
1 credit

Provides preservice mathematics teachers with supervised experiences working with teachers and students in middle and secondary schools. Activities coordinated with other Level I professional education courses.

Prerequisite/Restriction: Admission into Teacher Education
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $50.00

MATH 3310 - Discrete Mathematics
3 credits

Logic and axiomatics, sets, functions, counting methods, recurrence relations, graph theory, Boolean algebras, combinatorial circuits, automata, grammars, and
languages.

Prerequisite/Restriction: C- or better in MATH 1220

Semester(s) Traditionally Offered: Fall, Spring

MATH 4200 - Foundations of Analysis (CI)
CI Communications Intensive
3 credits

Fundamental concepts of analysis studied from a rigorous point of view. Rigorous development of the real number system and calculus. Emphasis on learning how to construct proofs.

Prerequisite/Restriction: C- or better in MATH 2210 and MATH 2250; or C- or better in MATH 2210, MATH 2270, and MATH 2280

Semester(s) Traditionally Offered: Fall, Spring

MATH 4230 - Applied Mathematics in Biology (QI)
QI Quantitative Intensive
3 credits

Formulation, analysis, and experimental tests of mathematical models in biology. Combines mathematics, computing, experimental design, and statistical analysis while applying the scientific method to biological systems. Lectures, recitations, and a laboratory.

Prerequisite/Restriction: C- or better in BIOL 1620 and MATH 2250; or instructor permission Programming experience recommended

Cross-listed as: BIOL 4230.

Semester(s) Traditionally Offered: Taught as needed

Course Fee: $40.00

MATH 4250 - Advanced Internship/Co-op
1-6 credits

An internship/cooperative work experience which has been determined by the department to be at the 4000-level.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 4300 - School Laboratory for Mathematics Teachers Level II

1 credit

Provides preservice mathematics teachers with supervised experiences working with teachers and students in middle and secondary schools. Activities coordinated with other Level II professional education courses.

Prerequisite/Restriction: Admission into Teacher Education

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $50.00

MATH 4310 - Introduction to Algebraic Structures (CI)
CI Communications Intensive
3 credits

First course in theory of algebraic structures. Topics include elementary group and ring theory.

Prerequisite/Restriction: C- or better in MATH 2210, MATH 2270, and MATH 2280; or C- or better in MATH 2210, and MATH 2250

Semester(s) Traditionally Offered: Fall, Spring

MATH 4400 - History of Mathematics and Number Theory
3 credits

Chronological parallel of math history with civilization, evolution of mathematical thought, historical foundations of numbers, computation, geometry, algebra, trigonometry, and calculus. Introduction to number theory.

Prerequisite/Restriction: At least one of MATH 4200 and MATH 4310 with a C- or better, and concurrent enrollment in the other

Semester(s) Traditionally Offered: Spring

MATH 4500 - Methods of Secondary School Mathematics Teaching
3 credits

A teaching methods course required of all prospective secondary school mathematics teachers. To receive graduate credit for the dual-listed MATH 6500 course, students must complete an extra project. Students having
Methods of Secondary Math Teaching Methods course on their transcripts will not be allowed to apply MATH 6500 credit toward a master's degree.

Prerequisite/Restriction:
MATH 3110
MATH 4200 or MATH 4310

Cross-listed as: MATH 6500.

Semester(s) Traditionally Offered: Fall, Spring

MATH 4700 - Engineering Mathematics and Statistics
3 credits

Advanced engineering mathematics and statistics including: random variables; distributions; central limit theory; hypothesis testing; Anova; quality control; Fourier series; introductory analytic and numerical methods for elliptic, parabolic, and hyperbolic PDEs; and modern software packages.

Prerequisite/Restriction: C- or better in MATH 2210; C- or better in MATH 2250 or MATH 2280

Semester(s) Traditionally Offered: Fall, Spring

MATH 4910 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 5010 - Capstone Mathematics, Statistics, and Technology for Teachers
3 credits

Builds on competencies gained from prior courses and incorporates technologies available for teaching and learning mathematics to analyze and interrelate mathematical concepts. Applications in secondary school mathematics curricula.

Prerequisite/Restriction:
MATH 3310 with a C- or better
Successful completion of, or concurrent enrollment in:
MATH 3110
MATH 4200
MATH 4310

Course Fee: $20.00

MATH 4400
MATH 5710

Semester(s) Traditionally Offered: Fall

Course Fee: $20.00

MATH 5020 - Mathematical Cognition and Assessment of Mathematical Achievement
3 credits

Pre-service and in-service mathematics teachers (1) examine cognitive principles relevant to learning mathematics, (2) apply research-based principles for designing, validating, and interpreting measures of mathematical achievement, and (3) interpret the results of standardized and high-stakes tests, and communicate those results to mathematics students and their parents.

Prerequisite/Restriction: Completion of an upper-level mathematics or statistics course (3000-level or higher)

Semester(s) Traditionally Offered: Fall

MATH 5110 - Differential Geometry
3 credits

Introduction to geometry of curves and surfaces in three dimensions, using graphic and symbolic software.

Prerequisite/Restriction: C- or better in MATH 2210 and MATH 2250; or C- or better in MATH 2210, MATH 2270, and MATH 2280

Semester(s) Traditionally Offered: Fall

MATH 5210 - Introduction to Analysis I
3 credits

One and several variable calculus from an advanced point of view. Proofs of all main theorems in calculus.

Prerequisite/Restriction: C- or better in MATH 4200 or MATH 5510

Semester(s) Traditionally Offered: Fall

MATH 5220 - Introduction to Analysis II
3 credits

Continuation of MATH 5210. Rigorous development of multivariable advanced calculus.
MATH 5270 - Complex Variables
3 credits
Basic theory and applications of complex variables for mathematics, physics, and engineering students. Topics include analytic functions, contour integration, and residue theorem conformal mappings.

Prerequisite/Restriction: C- or better in MATH 5210

Semester(s) Traditionally Offered: Spring

MATH 5310 - Introduction to Modern Algebra
3 credits
Continuation of MATH 4310. Topics include: Sylow theory for finite groups, factorization theory for commutative rings, and Galois theory.

Prerequisite/Restriction: C- or better in MATH 4310

Semester(s) Traditionally Offered: Spring

MATH 5340 - Theory of Linear Algebra
3 credits
Vector space theory, linear transformations and matrices, eigenvalues and eigenvectors, inner product spaces, orthogonality, canonical forms, and Hermitian matrices.

Prerequisite/Restriction: C- or better in MATH 2270, C- or better in MATH 4310, or instructor permission

Semester(s) Traditionally Offered: Spring

MATH 5410 - Methods of Applied Mathematics
3 credits
Basic modeling and qualitative understanding, including dimensional analysis (Buckingham Pi theorem). Asymptotic solutions, perturbation approaches, boundary layers in differential equations, variational calculus, Hamilton's principle, and conservation of energy. Emphasizes practical approaches to science and engineering problems.

Prerequisite/Restriction: C- or better in MATH 2210 and MATH 2250, or C- or better in MATH 2210, MATH 2270, and MATH 2280

Semester(s) Traditionally Offered: Fall

MATH 5420 - Partial Differential Equations
3 credits
Modeling with partial differential equations, diffusion, and wave equations. Classical solution techniques including: maximum principles, separation of variables (eigenfunctions), method of characteristics, Fourier and Laplace transforms, and singularity methods (Green's Functions). Emphasizes understanding and solving physical equations.

Prerequisite/Restriction: C- or better in MATH 2250 or MATH 2280

Semester(s) Traditionally Offered: Fall

MATH 5460 - Introduction to the Theory and Application of Nonlinear Dynamical Systems
3 credits
Qualitative behavior of nonlinear maps and ordinary differential equations. Stability of solutions, bifurcation theory, chaos, and applications.

Prerequisite/Restriction: C- or better in MATH 2250 or MATH 2280

Semester(s) Traditionally Offered: Spring

MATH 5510 - Introduction to Topology
3 credits
Elementary point-set topology, topological spaces, separation axioms, metric spaces, compactness, connectedness, order topology, countability axioms, continuity, and homeomorphisms.

Prerequisite/Restriction: C- or better in MATH 4200

Semester(s) Traditionally Offered: Fall, Alternate Years

MATH 5560 - Actuarial Financial Mathematics
3 credits
Introduces fundamental concepts of financial
mathematics, focusing on applications to non-life insurance. Topics include interest theory, cash flows and yield rates, annuities, portfolio insurance, and derivatives. Also includes discussion of probability models for underlying assets.

Prerequisite/Restriction:
MATH 1220
STAT 3000

Semester(s) Traditionally Offered: Spring, Odd Years

MATH 5570 - Actuarial Math I
3 credits

Introduction to theory of risk and its application to construction and analysis of models for insurance systems.

Prerequisite/Restriction:
MATH 5710 with a C- or better
STAT 3000
Instructor permission

Semester(s) Traditionally Offered: Taught as needed

MATH 5580 - Actuarial Math II (CI)
CI Communications Intensive
3 credits

Continuation of MATH 5570.

Prerequisite/Restriction: C- or better in MATH 5570

Semester(s) Traditionally Offered: Taught as needed

MATH 5610 - Computational Linear Algebra and Solution of Systems of Equations
3 credits

Numerical solutions of systems of linear and nonlinear equations, methods for eigensystems, least squares problems, finding roots of functions and nonlinear systems, constrained and unconstrained optimization.

Prerequisite/Restriction:
MATH 2210 with a C- or better
MATH 2250 or MATH 2270 with a C- or better
A high-level programming language

Semester(s) Traditionally Offered: Fall

MATH 5620 - Numerical Solution of Differential Equations
3 credits

Numerical solution of differential equations, initial and boundary value problems, finite difference, finite element, and spectral methods (FFT) applied to ODEs and PDEs.

Prerequisite/Restriction:
C- or better in MATH 2210
C- or better in MATH 2250 or MATH 2270
C- or better in MATH 2280
A high-level programming language

Semester(s) Traditionally Offered: Spring

MATH 5640 - Optimization
3 credits

One-semester introductory survey of optimization, including both continuous and combinatorial problems. Topics include: linear programming, constrained and unconstrained optimization, network models, dynamic programming, and integer programming.

Prerequisite/Restriction:
C- or better in MATH 2210
C- or better in MATH 2250 or MATH 2270
A high-level programming language

Semester(s) Traditionally Offered: Taught as needed

MATH 5710 - Introduction to Probability
3 credits

Discrete and continuous probability, random variables, distribution and density function, joint distributions, conditional probabilities and expectations, Bayes’ theorem, moments, moment generating functions, inequalities, convergence in probability and distribution, and central limit theorem.

Prerequisite/Restriction:
C- or better in MATH 2210
C- or better in MATH 2250 or MATH 2270
MATH 5720 - Introduction to Mathematical Statistics
3 credits
Basic theory of point and interval estimation and hypothesis testing. Topics include: sufficiency and completeness; method-of-moments, best unbiased, maximum likelihood, Bayes’, and empirical Bayes’ estimators; Neyman-Pearson lemma; and likelihood ratio tests.
Prerequisite/Restriction: C- or better in MATH 5710

MATH 5760 - Stochastic Processes
3 credits
Application of stochastic processes to engineering and science. Topics include Markov chains, Poisson processes, renewal theory, and Brownian motion.
Prerequisite/Restriction: C- or better in MATH 5710

MATH 5810 - Topics in Mathematics
1-3 credits
Prerequisite/Restriction: Instructor permission
Repeatable for credit.

MATH 5820 - Topics in Mathematics
1-3 credits
Prerequisite/Restriction: Instructor permission
Repeatable for credit.

MATH 5910 - Directed Readings and Conference
1-3 credits
Prerequisite/Restriction: Prior arrangement with a specific instructor
Repeatable for credit.

MATH 5950 - Honors Senior Project
1-4 credits
A senior project required for completion of the departmental honors program.
Prerequisite/Restriction: Instructor permission

MATH 6110 - Differential Geometry
3 credits
Topics include manifolds, calculus on manifolds, tensor calculus and differential forms, Lie groups, Riemannian geometry, deRham’s Theorem, and Hodge theory.
Prerequisite/Restriction: C- or better in MATH 5110 or MATH 5220; MATH 6110 must be completed prior to MATH 6120

MATH 6120 - Differential Geometry
3 credits
Topics include manifolds, calculus on manifolds, tensor calculus and differential forms, Lie groups, Riemannian geometry, deRham’s Theorem, and Hodge theory.
Prerequisite/Restriction: C- or better in MATH 5110 or MATH 5220; MATH 6110 must be completed prior to MATH 6120

MATH 6210 - Real Analysis
3 credits
Measure theory, abstract integration, differentiation, introduction to functional analysis, Hilbert and Banach spaces.
Prerequisite/Restriction: C- or better in MATH 5210; MATH 6210 must be completed prior to MATH 6220

MATH 6220 - Real Analysis
3 credits
Measure theory, abstract integration, differentiation, introduction to functional analysis, Hilbert and Banach spaces.
Prerequisite/Restriction: C- or better in MATH 5210;
MATH 6210 must be completed prior to 6220

Semester(s) Traditionally Offered: Fall, Spring

MATH 6250 - Graduate Internship/Cooperative Studies
1-6 credits

Graduate internship/cooperative work experience.
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 6270 - Complex Variables
3 credits

Analytic functions, singular points, conformal maps, harmonic functions, analytic continuation, Residue theory.

Prerequisite/Restriction: C- or better in MATH 5210 or MATH 5270

MATH 6300 - Practicum in Mathematics/Statistics Instruction for Graduates Pursuing Secondary Licensure
1 credit

A practicum which provides graduate students pursuing a Secondary Mathematics Teaching License with supervised experiences working with secondary students and teachers. To justify graduate credit, students must integrate the extra period required by MATH 6500 with this clinical experience. Students who have credit for a similar practicum at the undergraduate level may not apply credit for this experience toward a graduate degree. Should be taken concurrently with MATH 6500.

Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

MATH 6310 - Modern Algebra
3 credits

Algebraic structures, including vector spaces, groups, rings, algebras, and modules. Topics include: category theory, elementary commutative ring theory, and algebraic geometry.

Prerequisite/Restriction: C- or better in MATH 5310; MATH 6310 must be completed prior to 6320

Semester(s) Traditionally Offered: Fall, Spring

MATH 6340 - Multilinear Algebra and Matrix Theory
3 credits

Permutation groups and representations, tensor spaces, symmetry classes of tensors, generalized matrix functions, matrices and graphs, and combinatorial matrix algebra.

Prerequisite/Restriction: C- or better in MATH 5340; MATH 6340 must be completed prior to 6350

Semester(s) Traditionally Offered: Fall, Spring

MATH 6350 - Multilinear Algebra and Matrix Theory
3 credits

Permutation groups and representations, tensor spaces, symmetry classes of tensors, generalized matrix functions, matrices and graphs, and combinatorial matrix algebra.

Prerequisite/Restriction: C- or better in MATH 5340; MATH 6340 must be completed prior to 6350

Semester(s) Traditionally Offered: Fall, Spring

MATH 6410 - Ordinary Differential Equations I
3 credits

Existence-uniqueness theory, linear equations and systems, nonlinear equations, and stability.

Prerequisite/Restriction: C- or better in MATH 5210

Semester(s) Traditionally Offered: Fall
MATH 6420 - Partial Differential Equations I
3 credits
Introduction to the theory of partial differential equations, including existence and uniqueness.
Prerequisite/Restriction: C- or better in MATH 5220 or MATH 6410
Semester(s) Traditionally Offered: Spring

MATH 6440 - Ordinary Differential Equations II
3 credits
Asymptotic behavior, periodicity, boundary value problems, and perturbation methods.
Prerequisite/Restriction: C- or better in MATH 6410
Semester(s) Traditionally Offered: Spring

MATH 6450 - Partial Differential Equations II
3 credits
Advanced existence and uniqueness theorems, behavior of solutions, Sobolev spaces.
Prerequisite/Restriction: C- or better in MATH 6210; and C- or better in MATH 5420 or MATH 6420
Semester(s) Traditionally Offered: Spring

MATH 6470 - Advanced Asymptotic Methods
3 credits
Prerequisite/Restriction: C- or better in MATH 5420
Semester(s) Traditionally Offered: Spring

MATH 6500 - Methods of Secondary School Mathematics Teaching
3 credits
A teaching methods course required of all prospective secondary school mathematics teachers. To receive graduate credit, students must complete an extra project. Students having a Methods of Secondary Math Teaching Methods course on their transcripts will not be allowed to apply credit for this course toward a master's degree.
Prerequisite/Restriction: Matriculation into the Master's of Education Plan C program, the Master's of Mathematics program, or the USOE Alternative Route to Licensure Program
Cross-listed as: MATH 4500.
Semester(s) Traditionally Offered: Fall, Spring

MATH 6510 - Topology
3 credits
Homotopy theory, fundamental groups, covering spaces, singular homology with applications to spheres and Euclidean spaces, CW complexes, cohomology ring, and Poincare duality.
Prerequisite/Restriction: C- or better in MATH 4310, MATH 5510; and C- or better in MATH 5310 or consent of instructor MATH 6510 must be completed prior to MATH 6520
Semester(s) Traditionally Offered: Fall, Spring

MATH 6520 - Topology
3 credits
Homotopy theory, fundamental groups, covering spaces, singular homology with applications to spheres and Euclidean spaces, CW complexes, cohomology ring, and Poincare duality.
Prerequisite/Restriction: C- or better in MATH 4310, MATH 5510; and C- or better in MATH 5310 or consent of instructor MATH 6510 must be completed prior to MATH 6520
Semester(s) Traditionally Offered: Fall, Spring

MATH 6610 - Matrix Computations
3 credits
Computational aspects of matrix theory, focusing on numerical methods for solving linear systems, least squares problems, and eigenvalue problems.
Prerequisite/Restriction: C- or better in MATH 5210 or MATH 5610, and experience with a high-level programming language
Semester(s) Traditionally Offered: Taught as needed
MATH 6620 - Numerical Analysis
3 credits

Numerical solution of ordinary and partial differential equations.

Prerequisite/Restriction: C- or better in MATH 6610 or consent of instructor

Semester(s) Traditionally Offered: Spring

MATH 6640 - Optimization
3 credits

Unconstrained problems, smooth function methods, linearly constrained problems, linear and quadratic programming, nonlinearly constrained methods, and practicalities.

Prerequisite/Restriction: C- or better in MATH 5220 or consent of instructor

Semester(s) Traditionally Offered: Spring

MATH 6650 - Probability Theory
3 credits

Probability spaces, random variables, distribution functions, expectations, independence, modes of convergence, limit theorems, and applications.

Prerequisite/Restriction: C- or better in MATH 5210; MATH 6750 must be completed prior to MATH 6760

Semester(s) Traditionally Offered: Fall, Spring

MATH 6660 - Probability Theory
3 credits

Probability spaces, random variables, distribution functions, expectations, independence, modes of convergence, limit theorems, and applications.

Prerequisite/Restriction: C- or better in MATH 5210; MATH 6750 must be completed prior to 6760

MATH 6670 - Thesis
1-9 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 6680 - Thesis
1-9 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 6810 - Topics in Mathematics (Topic)
3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6820 - Topics in Mathematics (Topic)
3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6910 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6920 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6930 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6940 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6950 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6960 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6970 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6980 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 6990 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MATH 7110 - Geometry (Topic)
3 credits

Repeatable for credit.

MATH 7120 - Geometry (Topic)
3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MATH 7130 - Geometry (Topic)
3 credits

Repeatable for credit.

MATH 7140 - Geometry (Topic)
3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MATH 7210 - Analysis (Topic)
3 credits

Repeatable for credit.

MATH 7220 - Analysis (Topic)
3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MATH 7230 - Analysis (Topic)
3 credits

Repeatable for credit.

MATH 7240 - Analysis (Topic)
3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MATH 7310 - Algebra (Topic)
3 credits

Repeatable for credit.

MATH 7320 - Algebra (Topic)
3 credits

Repeatable for credit.
Repeatable for credit.

MATH 7320 - Algebra (Topic)
3 credits

Repeatable for credit.

MATH 7410 - Differential Equations (Topic)
3 credits

Repeatable for credit.

MATH 7420 - Differential Equations (Topic)
3 credits

Repeatable for credit.

MATH 7510 - Topology (Topic)
3 credits

Repeatable for credit.

MATH 7520 - Topology (Topic)
3 credits

Repeatable for credit.

MATH 7610 - Numerical Analysis (Topic)
3 credits

Repeatable for credit.

MATH 7620 - Numerical Analysis (Topic)
3 credits

Repeatable for credit.

MATH 7750 - Probability (Topic)
3 credits

Repeatable for credit.

MATH 7760 - Probability (Topic)
3 credits

Repeatable for credit.

MATH 7810 - Topics in Mathematics (Topic)
3 credits

Repeatable for credit.

MATH 7820 - Topics in Mathematics (Topic)
3 credits

Repeatable for credit.

MATH 7910 - College Teaching Internship
3 credits

Repeatable for credit.

MATH 7970 - Dissertation Research
1-15 credits

Repeatable for credit.

MATH 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.

Mechanical and Aerospace Engineering

MAE 1010 - Introduction to Mechanical Engineering
3 credits

Introduction to the field of mechanical engineering, engineering computational and programming tools, extracurricular engineering opportunities, and engineering documentation standards.

Prerequisite/Restriction: acceptance into the College of Engineering

Corequisite: MATH 1210

Semester(s) Traditionally Offered: F, Sp

Effective Term

Fall

MAE 1200 - Engineering Graphics
2 credits
Introduction to technical sketching, solid modeling, and engineering graphics. Concurrent engineering design process applied to a project. Students start with hand sketches, then move through variational geometry solid models, with tolerance analysis and control, until they have produced a complete set of manufacturing drawings conforming to the ASME standard.

Prerequisite/Restriction: MATH 1060, Math ACT score of 27 or higher, AP Calculus score of 3 or higher, and must be accepted into the College of Engineering or have instructor permission

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $53.00

Effective Term
“Spring”, “Summer”

MAE 2160 - Material Science
3 credits

Study of atomic and microscopic structures of metals, polymers, ceramics, and composite materials, and how these structures affect material properties.

Prerequisite/Restriction: CHEM 1210 and ENGR 2140 (both may be taken concurrently)

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $30.00

MAE 2165 - Material Science Laboratory
1 credit

Laboratory sessions held weekly where the mechanical and thermal properties of metals, polymers, ceramics, and composite materials are studied.

Prerequisite/Restriction: MAE 2160 (prerequisite or corequisite)

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

MAE 2300 - Thermodynamics I
3 credits

First and second laws of thermodynamics; analysis of open and closed systems; equations of state; power and refrigeration cycles; and problem solving methodology.

Prerequisite/Restriction: MATH 1220; MATH 2210 (may be taken concurrently)

Semester(s) Traditionally Offered: Spring, Summer
Course Fee: $30.00

MAE 2650 - Manufacturing Processes
3 credits

Introduction to manufacturing processes and CAD/CAM. Material forming, machining, finishing, and joining. Integration of manufacturing and CAD, plus the fundamentals and application of statistical process control.

Semester(s) Traditionally Offered: Spring

MAE 3040 - Mechanics of Solids
3 credits

Stress, strain, and deflection due to flexure and shear. Combined stresses, instability, nonsymmetric bending, torsion, and energy methods.

Prerequisite/Restriction: ENGR 2140 Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall

MAE 3210 - Engineering Numerical Methods
3 credits

Explores basic tools of numerical analysis, solution to ordinary and partial differential equations; software development using C language.

Prerequisite/Restriction: CS 1400 (USU only and C or better grade), MATH 2210, MATH 2250 (may be taken concurrently) Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

MAE 3320 - Advanced Dynamics
3 credits


Prerequisite/Restriction: ENGR 2030 Student must be in
the Professional Engineering Program

Semester(s) Traditionally Offered: Fall

MAE 3340 - Instrumentation and Measurements
3 credits

Principles and application of mechanical instrumentation and experimentation. Sensing elements, signal conditioning, data acquisition, statistical analysis of data, and instrumentation system design.

Prerequisite/Restriction: ENGR 2140, ENGR 2210, MAE 3420 Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

MAE 3420 - Fluid Mechanics
3 credits

Application of fluid dynamic theory to inviscid and viscous, incompressible and compressible, and external and internal fluid flows, with emphasis on laminar and turbulent boundary layers.

Prerequisite/Restriction: ENGR 2030, MAE 2300, CS 1400 (USU only and C grade or better–may also be taken concurrently) Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall

MAE 3440 - Heat Transfer (QI)
QI Quantitative Intensive
3 credits


Prerequisite/Restriction: MAE 2300, MAE 3420 Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

MAE 3600 - Engineering Professionalism and Ethics
1 credit

Seminar course introducing engineering students to the professional skills required in engineering practice.

Topics address professional issues in ethics, legal responsibilities, economics, business, management, safety, environmental and societal impacts, contemporary issues, and lifelong learning.

Prerequisite/Restriction: Student must be in the Professional Engineering Program.

Semester(s) Traditionally Offered: Fall

MAE 4300 - Machine Design
3 credits

Computer-aided design and synthesis of mechanisms, mechanical linkages, cams, fasteners, welds, gears, bearings, power transmission components, and lubrication. Component failure analysis based on metal fatigue related to dynamic loading.

Prerequisite/Restriction: MAE 3040 Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Spring

MAE 4400 - Fluids/Thermal Laboratory (CI)
CI Communications Intensive
2 credits

Laboratory experiences in observation and measurement of fundamental fluid and thermal phenomena.

Prerequisite/Restriction: MAE 3340, MAE 3440 Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall

MAE 4800 - Capstone Design I (CI)
CI Communications Intensive
3 credits

First course in the senior design sequence. Includes design process, teaming skills, engineering economics, project selection and management, proposal writing, technical writing, and technical presentations.

Prerequisite/Restriction: MAE 3440, MAE 4300 (both of which may be taken concurrently) Student must be in the Professional Engineering Program

Semester(s) Traditionally Offered: Fall, Spring
MAE 4810 - Capstone Design II
3 credits
Second course in the senior design sequence. Includes design reviews, technical reporting, and design realization.
Prerequisite/Restriction: MAE 4800 Student must be in the Professional Engineering Program
Semester(s) Traditionally Offered: Fall, Spring

MAE 5020 - Finite Element Methods in Solid Mechanics I
3 credits
Introduction to finite element methods and their application to the analysis and design of mechanical engineering systems.
Prerequisite/Restriction: MAE 3040 Student must be in the Professional Engineering Program or have Graduate Standing
Cross-listed as: CEE 5020
Semester(s) Traditionally Offered: Fall

MAE 5060 - Mechanics of Composite Materials I
3 credits
Stress-strain relations for nonisotropic composites, such as fiber-reinforced plastic laminates, properties and their uses, strength and life determination, and methods for design using composite materials.
Prerequisite/Restriction: MAE 3040 Student must be in the Professional Engineering Program or have Graduate Standing
Cross-listed as: CEE 5060
Semester(s) Traditionally Offered: Spring

MAE 5300 - Vibrations
3 credits
Prerequisite/Restriction: ENGR 2030, ENGR 2140 Student must be in the Professional Engineering Program or have Graduate Standing
Semester(s) Traditionally Offered: Fall

MAE 5310 - Dynamic Systems and Controls
3 credits
Study of continuous-time systems, classical and modern systems design methods, transfer function models, state space, dynamics of linear systems, and frequency domain analysis and design techniques. Introduction to controllability and observability, and full-state pole placement controller design. Laboratory work required.
Prerequisite/Restriction: MAE 3340 Student must be in the Professional Engineering Program or have Graduate Standing
Semester(s) Traditionally Offered: Fall

MAE 5320 - Mechatronics
4 credits
Principles, modeling, interfacing, and signal conditioning of motion sensors and actuators. Hardware-in-the-loop simulation and rapid prototyping of real-time closed-loop computer control of electromechanical systems. Modeling, analysis, and identification of discrete-time or sampled-data dynamic systems. Commonly used digital controller design methods. Introduction to nonlinear effects and their compensation in mechatronic systems. Laboratory work and a design project required. Three lectures and one lab.
Prerequisite/Restriction: ECE 5310 or MAE 5310 and student must be in the Professional Engineering Program or have Graduate Standing
Cross-listed as: ECE 5320
Semester(s) Traditionally Offered: Spring

Effective Term
Spring 2016

MAE 5350 - Kinematics
3 credits
The study of the motion of rigid bodies and systems of rigid bodies. This includes the kinematic analysis of
linkages, cams and gear trains.

Prerequisite/Restriction: ENGR 2030 and student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring
Fall 2016

MAE 5410 - Design and Optimization of Thermal Systems
3 credits

Discussion of the basic considerations that occur in the design of thermal systems, including problem formulation, appropriate modeling and solution methodologies, optimization techniques, and economic analysis.

Prerequisite/Restriction: MAE 3440 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

MAE 5420 - Compressible Fluid Flow
3 credits

Application of conservation of mass, momentum, and energy to the design and analysis of compressible fluid systems.

Prerequisite/Restriction: MAE 2300 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

MAE 5440 - Computational Fluid Dynamics
3

Introduction to computational fluid dynamics and heat transfer using the finite-volume method. Extensive code development. Application of a commercial CFD solver to a problem of interest.

Prerequisite/Restriction: MAE 3420 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring

Effective Term
Fall 2016

MAE 5450 - Renewable Energy
3 credits

Fundamentals of thermodynamics, fluid mechanics, and systems analysis applied to alternative energy systems; analysis of energy conversion and storage in thermal, mechanical, chemical, and electrochemical processes in power and transportation systems, with emphasis on efficiency, performance, and environmental impact.

Prerequisite/Restriction: MAE 3440 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

MAE 5500 - Aerodynamics
3 credits

Fundamentals of incompressible, inviscid flow; aerodynamic forces and moments; airfoil characteristics; incompressible flow around two-dimensional airfoils and finite wings; three-dimensional incompressible flow; and introduction to aircraft performance.

Prerequisite/Restriction: MAE 3420 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

MAE 5510 - Dynamics of Atmospheric Flight
3 credits

Aircraft equations of motion; aerodynamic forces and moments; aircraft stability and control in roll, pitch, and yaw; aircraft motion with six degrees of freedom; aircraft performance and design; and design project.

Prerequisite/Restriction: MAE 5500 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring

MAE 5520 - Elements of Space Flight
3 credits

Introduction to astrodynamics and orbital design.
Spacecraft systems engineering including spacecraft subsystems (e.g., attitude control, communications, power, structures). Introduction to propulsion and launch vehicles.

Prerequisite/Restriction: MAE 3320 or PHYS 3550; or both ECE 2290 and ECE 2700 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

MAE 5530 - Space System Design
3 credits

Students in teams perform a space system design involving all aspects, including technical, cost, and schedule. Class is linked to national design competitions and/or current USU spacecraft design projects.

Prerequisite/Restriction: ECE 5230 or MAE 5520 Student must be in the Professional Engineering Program or have Graduate Standing

Cross-listed as: ECE 5240.

Semester(s) Traditionally Offered: Spring

MAE 5540 - Propulsion Systems
3 credits

Fundamentals of rocket and air breathing propulsion, including space flight dynamics, nozzle theory, combustion processes, and flight performance. Rocket propulsion systems, including solid, liquid, hybrid, and combined cycles. Air breathing propulsion systems, including ramjet, scramjet, turbojet, and turbofan engine concepts.

Prerequisite/Restriction: MAE 5420 or consent of instructor Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Spring

MAE 5560 - Dynamics of Space Flight
3 credits

Fundamentals of spacecraft dynamics, including Keplerian orbits, orbital position as a function of time, three-dimensional orbits, orbital determination, orbital maneuvers, satellite attitude dynamics, and rocket vehicle dynamics.

Prerequisite/Restriction: MAE 3320 or instructor permission Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

MAE 5580 - Aircraft Design
3 credits

Design and optimization of aircraft systems. Students work in teams to design and optimize an aircraft to satisfy a specific set of mission requirements, including mission effectiveness, cost, and scheduling. Class is linked to national design competitions and/or current USU aircraft design projects.

Prerequisite/Restriction: MAE 5500 and MAE 5510 Student must be in the Professional Engineering Program or have Graduate Standing

MAE 5670 - Fracture Mechanics
3 credits

Covers linear elastic and elastic-plastic fracture mechanics; micro-mechanisms of fracture in metals, polymers, ceramics, composites, and concrete; and failure analysis of engineering. Enrollment limited to students accepted into College of Engineering.

Prerequisite/Restriction: Grade of C- or better in MAE 2160 and grade of D or better in MAE 3040 Student must be in the Professional Engineering Program or have Graduate Standing

Semester(s) Traditionally Offered: Fall

MAE 5900 - Cooperative Practice
3 credits

Planned work experience in industry. Detailed program must have prior approval. Written report required.

Prerequisite/Restriction: Student must be in the Professional Engineering Program or have Graduate Standing

Pass/Fail Only

Semester(s) Traditionally Offered: Fall, Spring, Summer
MAE 5930 - Special Problems
1-3 credits

Formulation and solution of practical or theoretical problems.

Prerequisite/Restriction: Permission of department head
Student must be in the Professional Engineering Program
or have Graduate Standing

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MAE 6010 - Finite Element Methods in Solid Mechanics II
3 credits

Advanced theory and applications of finite element
methods to both static and dynamic solid mechanics
problems.

Prerequisite/Restriction: MAE 5020
Semester(s) Traditionally Offered: Spring

MAE 6040 - Continuum Mechanics and Elasticity
3 credits

Mechanics of continuous media; tensors, stress, strain,
deformation, rate equations, and constitutive equations.
Plane stress, plane strain, torsion, and bending theories,
as well as problem solutions, investigated for linear
elastic materials.

Prerequisite/Restriction: MAE 3040, MATH 2210, MATH
2250
Semester(s) Traditionally Offered: Fall

MAE 6070 - Mechanics of Composite Materials II
3 credits

Second course in composite materials. Stress-strain
states of laminated composite structures, including
interlaminar stresses, failure criteria, and hygrothermal
stresses.

Prerequisite/Restriction: MAE 5060
Cross-listed as: CEE 6070
Semester(s) Traditionally Offered: Fall

MAE 6080 - Boundary Element Method
3 credits

Presents introduction to boundary element method to
solve fluid and solid mechanics problems.

Prerequisite/Restriction: FORTRAN programming skills,
MAE 3040, MAE 5020
Semester(s) Traditionally Offered: Spring

MAE 6090 - Theory of Plates and Shells
3 credits

Introduction to plate and shell theories. Development of
bending and buckling of plates and shells through
classical theory.

Prerequisite/Restriction: MAE 3040
Cross-listed as: CEE 6090.

Semester(s) Traditionally Offered: Fall

MAE 6130 - Structural Dynamics and Seismic Design
3 credits

Development and solutions for equations of motion for
single- and multi-degree of freedom systems. Dynamic
analysis by Modal Superposition and Response Spectra.
Design of structures for seismically active areas.

Cross-listed as: CEE 6130
Semester(s) Traditionally Offered: Spring

MAE 6180 - Dynamics and Vibrations
3 credits

Fundamentals of two-dimensional and three-dimensional
rigid body dynamics, including Newtonian, Lagrangian,
and Leavit Energy Methods. Equations of motion, mode
shapes, and natural frequencies for continuous media
and multi degree-of-freedom systems.

Prerequisite/Restriction: MAE 5300 or CEE 6130/MAE
6130
Cross-listed as: CEE 6180.
Semester(s) Traditionally Offered: Spring
MAE 6320 - Linear Multivariable Control
3 credits

Modeling, analysis, and design of multi-input, multi-output control systems, including both state space and transfer matrix approaches, with an emphasis on stability.

Prerequisite/Restriction: ECE 5310 or MAE 5310

Cross-listed as: ECE 6320.

Semester(s) Traditionally Offered: Fall

MAE 6340 - Spacecraft Attitude Control
3 credits

Spacecraft attitude dynamics and controls. Spin stabilized, three axis, and dual spin modes. Attitude determination techniques.

Prerequisite/Restriction: ECE 5310 or MAE 5310

Cross-listed as: ECE 6340.

Semester(s) Traditionally Offered: Spring

MAE 6410 - Fluid Dynamics
3 credits

Basic laws of fluid motion, Navier Stokes equations, kinematics of the flow field, fundamental exact solutions of viscous flow, and elements of turbulence.

Prerequisite/Restriction: MAE 3420 or CEE 3500

Semester(s) Traditionally Offered: Fall

MAE 6420 - Mechanical Engineering Experiments
3 credits

Topics include experimental design, digital data acquisition, Fourier transforms, uncertainty analysis, writing and presentation, and some specific measurement techniques of interest to mechanical engineers.

Prerequisite/Restriction: MAE 3340

Semester(s) Traditionally Offered: Spring

MAE 6430 - Boundary Layer Theory and Convection Heat Transfer
3 credits


Prerequisite/Restriction: MAE 3440, MAE 6410

Semester(s) Traditionally Offered: Spring

MAE 6440 - Advanced Computational Fluid Dynamics
3 credits

Advanced topics in computational fluid dynamics using the finite-volume method, compressible flow algorithms including body-fitted nonorthogonal grids, linear solvers, turbulence modeling, and parallel computing. Includes extensive code development.

Prerequisite/Restriction: MAE 5440 and MAE 6410

Semester(s) Traditionally Offered: Spring

MAE 6450 - Thermodynamics
3 credits

Topics in classical and statistical thermodynamics, including distribution functions, free molecular flow, electron and photon gas modeling, derived properties of solids, and thermodynamic applications in areas of current research interest.

Prerequisite/Restriction: MAE 3440

Semester(s) Traditionally Offered: Fall

MAE 6460 - Conduction Heat Transfer
3 credits

Integral, differential, and numerical methods for solving engineering problems associated with the diffusion of heat in a rigid solid.

Prerequisite/Restriction: MAE 3440

Semester(s) Traditionally Offered: Spring
MAE 6480 - Radiation Heat Transfer
3 credits
Radiation theory and applications. Includes utilization of computer software.
Prerequisite/Restriction: MAE 3440
Semester(s) Traditionally Offered: Fall

MAE 6490 - Turbulence
3 credits
Fundamentals of turbulent fluid flow, with emphasis on providing student with sufficient physical and mathematical background to critically evaluate current literature and make original research contributions. Topics include stochastic tools, the governing equations, transition to turbulence, isotropic turbulence, measurement techniques, and free and wall bounded turbulent shear flows.
Prerequisite/Restriction: MAE 6410 or instructor permission
Semester(s) Traditionally Offered: Spring

MAE 6500 - Potential Flow
3 credits
Inviscid, irrotational fluid flow with emphasis on aircraft analysis and design. Exact solutions with complex variables and conformal mapping; perturbation methods; singularity elements and influence coefficients; lifting-line method; numerical vortex lattice method; numerical panel methods; and software design and development.
Prerequisite/Restriction: MAE 5500
Semester(s) Traditionally Offered: Fall

MAE 6510 - Aircraft Dynamics and Flight Simulation
3 credits
Aircraft control and maneuverability, control response and transfer functions, nonlinear dynamics with gyroscopic and aerodynamic coupling, Euler angle formulations, direction cosine formulation, quaternion formulation, numerical integration methods, software design and development.
Prerequisite/Restriction: MAE 5510

MAE 6530 - Propulsion Systems
3 credits
Fundamentals of turbine and rocket propulsion, including nozzle theory and thermodynamic relations, combustion processes, and flight performance. Rocket propulsion topics, including solid, liquid, and hybrid rocket engines; and advanced engine concepts. Turbine engine propulsion systems, including turbojets, turbofans, afterburners, and advanced unducted fan concepts.
Prerequisite/Restriction: MAE 5420
Semester(s) Traditionally Offered: Spring

MAE 6540 - Advanced Astrodynamics
3 credits
Advanced topics in astrodynamics to include: general and special perturbations, universal variables, methods of orbit determination, Lambert's theorem, the restricted three-body problem, and space mission planning.
Prerequisite/Restriction: MAE 5560
Semester(s) Traditionally Offered: Fall

MAE 6550 - Advanced Structural Analysis
3 credits
Explores advanced structures in modern civil, mechanical, and aerospace systems. Emphasizes concepts through problem solving, and fosters an in-depth understanding of the subject. Provides understanding of the fundamental principles to analyze and design advanced structures.
Prerequisite/Restriction: MAE 6040
Semester(s) Traditionally Offered: Spring

MAE 6560 - Spacecraft Navigation
3 credits
stochastic systems.

Prerequisite/Restriction: MAE 5310 or ECE 5310 or equivalent

Cross-listed as: ECE 6560.

Semester(s) Traditionally Offered: Spring

MAE 6570 - Optimal Spacecraft Guidance
3 credits


Prerequisite/Restriction: MATH 2210 and MATH 2250 or equivalents

Semester(s) Traditionally Offered: Summer

MAE 6630 - Transport Phenomena in Materials Processing
3 credits

Analysis of various engineering processes through the development of physically-based mathematical models and associated experimental descriptions. Diffusion mass transfer, heat transfer, and fluid flow. Quantitative analysis and simulation of materials processing.

Prerequisite/Restriction: MAE 3420, MAE 3440

Semester(s) Traditionally Offered: Spring

MAE 6950 - Design Project
3 credits

Individual projects involving the design, development, and/or testing of components, devices, or systems. Formal report required.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MAE 6970 - Thesis Research
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MAE 7040 - Elasticity
3 credits

Energy theorems, variational techniques, complex variable solutions, and three-dimensional solutions for linear elastic materials.

Prerequisite/Restriction: MAE 6040 or instructor permission

Semester(s) Traditionally Offered: Spring

MAE 7050 - Plasticity
3 credits

Analysis of stresses, deformation, and collapse in devices constructed of plastic material.

Prerequisite/Restriction: MAE 6040 or CEE 6080/CEE 5080 or instructor permission

Cross-listed as: CEE 7050.

Semester(s) Traditionally Offered: Spring

MAE 7080 - Advanced Plate and Shell Theory
3 credits

Analysis of plate and shell structures by classical and
numerical methods. Emphasis on numerical solutions.

Prerequisite/Restriction: Instructor permission

Cross-listed as: CEE 7080.

Semester(s) Traditionally Offered: Fall

MAE 7330 - Nonlinear and Adaptive Control
3 credits

Methods of nonlinear and adaptive control system design and analysis. Includes qualitative and quantitative theories, graphical methods, frequency domain methods, sliding surface design, linear parameter estimation methods, and direct and indirect adaptive control techniques.

Prerequisite/Restriction: ECE 6320/MAE 6320

Cross-listed as: ECE 7330.

Semester(s) Traditionally Offered: Spring

MAE 7340 - Advanced Aerospace Controls
3

The application of multi-variable optimal control techniques to aircraft, missiles and spacecraft.

Prerequisite/Restriction: ECE 6320/MAE 6320

Cross-listed as: ECE 7340

Semester(s) Traditionally Offered: Spring

Effective Term
Fall 2016

MAE 7360 - Optimal and Robust Control
3 credits

Advanced methods of control system analysis and design. Operator approaches to optimal control, including LQR, LQG, and L1 optimization techniques. Robust control theory, including QRT, H-infinity, and interval polynomial approaches.

Prerequisite/Restriction: ECE 6320/MAE 6320 or instructor permission

Cross-listed as: ECE 7360.

Semester(s) Traditionally Offered: Fall

MAE 7380 - Advanced Dynamics and Vibrations
3 credits

Advanced techniques in dynamics and vibrations.

Prerequisite/Restriction: CEE 6180/MAE 6180

Semester(s) Traditionally Offered: Fall

MAE 7540 - Advanced Astrodynamics Techniques and Applications
3 credits

Classical perturbation techniques, special perturbation techniques (regularization), and numerical techniques with applications to nonuniformly distributed mass models, third-body problems, cis-lunar trajectories, and orbit maneuver targeting. Other topics include Encke’s method and state-transition/sensitivity matrices. Advanced numerical integration and optimization techniques.

Prerequisite/Restriction: MAE 5560

Semester(s) Traditionally Offered: Fall

MAE 7560 - Optimal Estimation for Aerospace Systems
3 credits

Probability theory, stochastic system models, optimal estimation for linear systems, optimal smoothing, and optimal estimation for nonlinear systems. Applications include orbit determination, real-time position, velocity, and attitude determination for rockets, aircraft, and spacecraft.

Prerequisite/Restriction: MAE 5310 or MAE 6320

Semester(s) Traditionally Offered: Summer

MAE 7570 - Monte Carlo and Linear Covariance Techniques for Closed-Loop GN&C System Analysis
3

Theory and applications of Monte Carlo and Linear Covariance techniques to closed-loop aerospace systems.

Prerequisite/Restriction: ECE 6560, MAE 6560
MAE 7580 - Advanced Finite Element Analysis in Fluid Mechanics
3 credits

Application of the finite element method of analysis to problems in fluid mechanics. Use of higher order element to two- and three-dimensional flows.

Prerequisite/Restriction: CEE 3510 or MAE 3420, CEE 5020/MAE 5020

Cross-listed as: CEE 7580.

Semester(s) Traditionally Offered: Spring

MAE 7930 - Special Problems
1-3 credits

Independent or group study of engineering problems not covered in regular course offerings.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MAE 7970 - Dissertation Research
1-12 credits

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MAE 7990 - Continuing Graduate Advisement
1-12 credits

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Medical Laboratory Technician (USU Eastern)

MLT 1010 - Medical Laboratory Techniques
3 credits

Focuses on introducing students to the professional and technical responsibilities of the medical laboratory technician. Topics include laboratory organization, instrumentation, legal and ethical issues, certification and licensure, communication and computational skills, and quality control. In addition, technical areas of laboratory science (hematology, immunology and serology, urinalysis, clinical chemistry, clinical microbiology and parasitology) will be explore in a laboratory setting. Basic instruction in phlebotomy, specimen collection and processing, and laboratory instrumentation will also be part of the course.

Prerequisite/Restriction: Admission to the MLT program or instructor permission

Campus: USU Eastern only

MLT 2230 - Clinical Laboratory Practices
2 credits

Discusses the science, theory, and ethics of common laboratory practices. Focuses on the theory and application of a proper sample collection, preparation, and identification of simple bodily fluids obtained by invasive and noninvasive procedures. Also discusses the overall demeanor of the work environment and the student.

Prerequisite/Restriction: Admission to the MLT program or instructor permission

Campus: USU Eastern only

MLT 2240 - Hematology
4 credits

Discusses the anatomy, physiology, and pathology of the circulatory system with a specific course of instruction in form, function, and identification of blood cells. Major emphasis in the course is teaching the theory and application of a proper sample collection, preparation, and identification of the formed elements of the human blood.

Prerequisite/Restriction: Admission to the MLT program or instructor permission

Campus: USU Eastern only

MLT 2270 - Immunology/Serology
3 credits

Provides an introduction to the study of the immune system, the nature of immune responses and its application to clinical laboratory testing, health and disease. Students will learn the functions of the immune system, immune response, principles of antigen-antibody
Lecture and laboratory will focus on an introduction to the immunological aspect of the circulation system including the theory behind patient compatibility. This will include, but not limited to, blood grouping, Rh typing, compatibility testing, donor screening, and quality assurance issues.

Prerequisite/Restriction: Admission to the MLT program or instructor permission

Campus: USU Eastern only

MLT 2430 - Clinical Chemistry I
3 credits

Covers the theory and performance of the basic concepts of Clinical Chemistry laboratory procedures. Analysis of body fluids (blood, urine, and spinal fluid) for electrolytes, carbohydrates, pH, bilirubin, protein, non-protein nitrogen, and enzymes will be performed in the laboratory. Reasons for increased or decreased levels of these chemicals will be discussed in relation to diseases such as diabetes, jaundice, nephritis, muscular dystrophy, cardiovascular disorders, and others. Use of laboratory instrumentation, quality control, and interpretation and presentation of results will be taught.

Prerequisite/Restriction: Successful completion (C or better grade) of courses included in the first year of the MLT program or instructor permission

Campus: USU Eastern only

MLT 2450 - Clinical Chemistry II
3 credits

Continuation of MLT 2430, Clinical Chemistry I, and will cover the theory and practice of Clinical Chemistry with a special emphasis on endocrinology, therapeutic drug monitoring, and toxicology. Additional topics will include vitamin analysis, tumor markers, pancreatic and gastrointestinal function, hemoglobin and myoglobin analysis, porphyrins and porphyrias, quality control and laboratory instrumentation.

Prerequisite/Restriction: Successful completion (C or better grade) in MLT 2430 or instructor permission

Campus: USU Eastern only

MLT 2570 - Clinical Microbiology I
3 credits

Introduces instruction in theory practical application and pathogenesis of clinical microbiology. Covers the collection, setup, identification, susceptibility testing, and reporting procedures. Laboratory exercises will include emphasis on the identification of clinically significant microorganisms. Students will participate in Standard Microbiological testing including the culture, staining and antibiotic testing of various organisms.

Prerequisite/Restriction: Admission to the MLT program or instructor permission

Campus: USU Eastern only

MLT 2580 - Clinical Microbiology II
2 credits

Focuses on knowledge necessary to perform medical laboratory technician’s duties. Instruction will include
the theory, practical application and pathogenesis of clinical microbiology. Procedures including collection, set-up, identification and reporting procedures will be used throughout the course. Pathogenic microorganisms will be studied in relationship to disease. Includes examination of viral agents, medical mycology and parasitology. Routine medical microbiological procedures will be examined.

Prerequisite/Restriction: Admission to the MLT program or instructor permission

Campus: USU Eastern only

Military Science Leadership

MSL 1010 - Leadership and Personal Development
2 credits

Presents students with personal challenges and competencies that are critical for effective leadership. Students learn how personal development of life skills, such as goal setting, time management, physical fitness, and stress management, relate to leadership, officership, and the Army profession. Focuses on developing basic knowledge of Army Leadership Dimensions, while gaining a big-picture understanding of the ROTC program, its purpose in the Army, and its advantages for students.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall

MSL 1015 - Military Science Leadership Lab
1 credit

Enhances self-confidence, teamwork, and leadership. Allows prospective officers to practice essential leadership skills and receive feedback on their performances. In order to continue with aspects taught in the classroom, students participate in this lab for three hours per week.

Semester(s) Traditionally Offered: Fall

MSL 1020 - Foundations in Leadership
2 credits

Overview of leadership fundamentals, such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Explores dimensions of leadership values, attributes, skills, and actions in context of practical, hands-on, and interactive exercises. Promotes building of stronger relationships among cadets through common experiences and practical interaction.

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

MSL 1025 - Military Science Leadership Lab
1 credit

Enhances self-confidence, teamwork, and leadership. Allows prospective officers to practice essential leadership skills and receive feedback on their performances. In order to continue with aspects taught in the classroom, students participate in this lab for three hours per week.

Semester(s) Traditionally Offered: Spring

MSL 2010 - Innovative Tactical Leadership
2 credits

Explores dimensions of creative and innovative tactical leadership strategies and styles by studying historical case studies and engaging in interactive student exercises. Students practice aspects of personal motivation and team building. Focuses on continued development of knowledge of leadership values and attributes through understanding of rank, uniform, customs, and courtesies. Leadership case studies provide tangible context for learning the Soldier’s Creed and Warrior Ethos.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall

MSL 2015 - Military Science Leadership Lab
1 credit

Enhances self-confidence, teamwork, and leadership. Allows prospective officers to practice essential leadership skills and receive feedback on their performances. In order to continue with aspects taught in the classroom, students participate in this lab for three hours per week.

Semester(s) Traditionally Offered: Fall

MSL 2020 - Leadership in Changing Environments
2 credits
Examines challenges of leading in complex contemporary operational environments. Highlights dimensions of cross-cultural challenges as applied to practical Army leadership tasks and situations. As they practice communication and team-building skills, students should develop greater self-awareness.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

MSL 2025 - Military Science Leadership Lab
1 credit

Enhances self-confidence, teamwork, and leadership. Allows prospective officers to practice essential leadership skills and receive feedback on their performances. In order to continue with aspects taught in the classroom, students participate in this lab for three hours per week.

Semester(s) Traditionally Offered: Spring

MSL 2400 - Physical Readiness
1 credit

Physical conditioning course employing U.S. Army principles of fitness. Subjects include: body composition, nutrition, cardiorespiratory fitness, muscle endurance and strength, circuit training, and drills.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring

MSL 2420 - Ranger Preparation
2 credits

Participation in Army ROTC Ranger Challenge program. Advanced military training with practical application of skills taught in MSL 1010 and MSL 4020.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MSL 2430 - Air Assault
2 credits

Two-week course conducted at an Army installation in the continental U.S. Provides students with training in helicopter operations, including sling loading and rappelling.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Summer

MSL 2440 - Airborne Operations
2 credits

Three-week course conducted at Fort Benning, Georgia. Provides students with training in military skydiving techniques with practical applications.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Summer

MSL 2510 - Leader's Training Course
1-6 credits

Four-week training held at Fort Knox, Kentucky. Combines intense classroom learning with hands-on field training. This course is an accelerated version of the two years of leadership development training cadets receive in the Basic Course. Students completing this course qualify for enrollment in the Advanced Course.

Prerequisite/Restriction: Passing score on APFT exam and instructor's approval

Semester(s) Traditionally Offered: Summer

MSL 3010 - Adaptive Team Leadership
3 credits

Cadets study, practice, and evaluate leadership skills as they are presented with the demands of the ROTC Leader Development Assessment Course (LDAC). Challenging scenarios related to small-unit tactical operations are used to develop self-awareness and critical thinking skills. Cadets receive systematic and specific feedback on their leadership abilities. Cadets begin to analyze and evaluate their own leadership values, attributes, skills, and actions. Primary attention given to preparation for LDAC.

Prerequisite/Restriction: MSL 1010, MSL 1020, MSL 2010, and MSL 2020; or at least two years prior Military Service

Only contracted Army ROTC cadets are eligible for this course

Semester(s) Traditionally Offered: Fall
MSL 3015 - Military Science Leadership Lab
1 credit

Enhances self-confidence, teamwork, and leadership. Allows prospective officers to practice essential leadership skills and receive feedback on their performances. In order to continue with aspects taught in the classroom, students participate in this lab for three hours per week.

Semester(s) Traditionally Offered: Fall

MSL 3020 - Leadership Under Fire
3 credits

Cadets experience increasingly intense situational leadership challenges. Skills in decision-making, persuading, and motivating team members when “under fire” are explored, evaluated, and developed. Aspects of military operations are reviewed as a means of preparing for LDAC. Cadets are expected to apply basic principles of the Law of Land Warfare, Army training, and motivation to troop leading procedures. Emphasizes conducting military briefings and developing proficiency in Garrison operations orders.

Prerequisite/Restriction: MSL 1010, MSL 1020, MSL 2010, MSL 2020 and MSL 3010 OR at least two years prior Military Service. Only contracted Army ROTC cadets are eligible for the course

Semester(s) Traditionally Offered: Spring

MSL 3025 - Military Science Leadership Lab
1 credit

Enhances self-confidence, teamwork, and leadership. Allows prospective officers to practice essential leadership skills and receive feedback on their performances. In order to continue with aspects taught in the classroom, students participate in this lab for three hours per week.

Semester(s) Traditionally Offered: Spring

MSL 3110 - Staff Organization and Operations
1-3 credits

Special project staff work for joint Army/Air Force campus ceremonies, leadership labs, field training exercises, and training camps.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MSL 3210 - Independent Study
1-3 credits

Students select advanced topics of interest and arrange credit under program advisor supervision in areas related to military science.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MSL 4010 - Developing Adaptive Leaders (CI)
CI Communications Intensive
3 credits

Cadets develop proficiency in planning, executing, and assessing complex operations; functioning as a member of a staff; and in providing leadership-performance feedback to subordinates. They analyze, evaluate, coach, and instruct less-experienced cadets. Both their classroom and battalion leadership experiences are designed to prepare them for their first unit of assignment. Cadets identify responsibilities of key staff, coordinate staff roles, and use situational opportunities to teach, train, and develop subordinates.

Prerequisite/Restriction: MSL 1010, MSL 1020, MSL 2010, MSL 2020, MSL 3010, and MSL 3020; or at least two years prior Military Service. Only contracted Army Cadets are eligible for this course

Semester(s) Traditionally Offered: Fall

MSL 4015 - Military Science Leadership Lab
1 credit

Enhances self-confidence, teamwork, and leadership. Allows prospective officers to practice essential leadership skills and receive feedback on their performances. In order to continue with aspects taught in the classroom, students participate in this lab for three hours per week.

Semester(s) Traditionally Offered: Fall
MSL 4020 - Leadership in a Complex World
3 credits
Explores dynamics of leading in complex situations of current military operations. Examines customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. Significant emphasis placed on preparing cadets for their first unit of assignment. Case studies, scenarios, and “What Now, Lieutenant?” exercises used to prepare cadets to face complex ethical and practical demands of leading as commissioned officers in the United States Army.

Prerequisite/Restriction: MSL 1010, MSL 1020, MSL 2010, MSL 2020, MSL 3010, MSL 3020, and MSL 4010; or at least two years prior Military Service. Only contracted Army ROTC cadets are eligible for this course.

Semester(s) Traditionally Offered: Spring

MSL 4025 - Military Science Leadership Lab
1 credit
Enhances self-confidence, teamwork, and leadership. Allows prospective officers to practice essential leadership skills and receive feedback on their performances. In order to continue with aspects taught in the classroom, students participate in this lab for three hours per week.

Semester(s) Traditionally Offered: Spring

MSL 4110 - Advanced Staff Operations
1-3 credits
Special project staff work for joint Army/Air Force campus ceremonies, leadership labs, field training exercises, and training camps. Students in this course provide mentoring and guidance to students in MSL 3110.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MSL 4510 - ROTC Leader Development and Assessment Course
1-3 credits
The most important training event for an Army ROTC cadet, this 33-day training event incorporates a wide range of subjects designed to develop and evaluate leadership ability. The challenges are rigorous and demanding, both mentally and physically. Warrior Forge tests intelligence, common sense, ingenuity, and stamina. These challenges provide a new perspective on an individual’s ability to perform exacting tasks and make difficult decisions in demanding situations.

Prerequisite/Restriction: Successful completion of basic course requirements and instructor permission

Repeatable for credit
Pass/Fail only

Semester(s) Traditionally Offered: Summer

MSL 4520 - Cadet Troop Leadership Training
2 credits
Two-week course conducted at an Army installation in the continental U.S. or overseas. Provides firsthand experience in an Army unit. Students learn about military life and the duties of a lieutenant.

Prerequisite/Restriction: MSL 3010, MSL 3020, MSL 4510, and instructor permission

Semester(s) Traditionally Offered: Summer

Mining (USU Eastern)

MINT 0100 - Surface New Miner Orientation Coal
16 contact hours
A mandatory 16 hour orientation training class for potential surface new miners, which includes areas such as miner’s rights health and safety, first aid, transportation, fires and explosions, mining methods.

Campus: USU Eastern only

MINT 0110 - Surface Annual Refresher Coal M/NM
10 contact hours
An annual mandatory course for active miners covering areas in mine safety training including, accident prevention, first aid, roof and rib control, ventilation, rules and regulations, electrical hazards.

Campus: USU Eastern only
MINT 0115 - Surface New Miner Orientation Lab Coal M/NM
4 contact hours

A mandatory orientation training class for potential surface new miners, which includes areas such as miner’s rights health and safety, first aid, transportation, fires and explosions, mining methods.

Campus: USU Eastern only

MINT 0120 - Surface New Miner Orientation 24 Coal M/NM
24 contact hours

A mandatory 24 hour orientation training class for potential surface new miners, which includes areas such as miner’s rights health and safety, first aid, transportation, fires and explosions, mining methods.

Campus: USU Eastern only

MINT 0130 - Surface Annual Refresher Part 46 8 contact hours

An annual mandatory 8 hour course for active miners covering areas in mine safety training including, accident prevention, first aid, roof and rib control, ventilation, rules and regulations, electrical hazards, etc.

Campus: USU Eastern only

MINT 0140 - Surface New Miner Orientation M/NM 16 contact hours

A mandatory 16 hour orientation training class for potential surface new miners, which includes areas such as miner’s rights health and safety, first aid, transportation, fires and explosions, mining methods.

Campus: USU Eastern only

MINT 0150 - Surface Annual Refresher Coal M/NM - 8 hr 8 contact hours

An annual mandatory course for active miners covering areas in mine safety training including accident prevention, first aid, roof and rib control, ventilation, rules and regulations, electrical hazards.

Repeatable
Pass/Fail only

Effective Term
Spring

MINT 0160 - Surface Foreman 24 contact hours

This course is to prepare the student to take the Utah State Surface Coal Mine Foreman Certification. It includes mine gasses, testing and all applicable laws.

Campus: USU Eastern only

MINT 0300 - Underground New Miner Orientation Coal M/NM 32 contact hours

A mandatory 32 hour course designed to train inexperienced, potential miners in areas such as mining methods, mine gases and detecting instruments, mine ventilation, first aid and safety transportation systems, electricity, fires mine explosions, and mine equipment.

Campus: USU Eastern only

MINT 0310 - Underground Annual Refresher Coal M/NM 8 contact hours

An annual mandatory 8 hour course for active miners covering areas in mine safety training including, accident prevention, first aid, roof and rib control, ventilation, rules and regulations, electrical hazards, etc.

Campus: USU Eastern only

MINT 0320 - Surface/Underground Annual Refresher Coal M/NM 10 contact hours

An annual mandatory 8 hour course for active miners covering areas in mine safety training including, accident prevention, first aid, roof and rib control, ventilation, rules and regulations, electrical hazards.

Campus: USU Eastern only

MINT 0400 - Train the Trainer 24 contact hours

In this course students will study teaching techniques and lesson plan development. This course will cover types and sources of MSHA teaching materials. MSHA required forms will be covered. This course is taught in
In this course students will study teaching techniques and lesson plan development. This course will cover types and sources of MSHA teaching materials. MSHA required forms will be covered. This course is taught in accordance with MSHA regulations.

MINT 0500 - Initial Electrical
90 contact hours

This course will prepare students for the Utah State Mine electrician certification test. It follows both state and federal topics for electrical certification testing.

MINT 0520 - Electrical Recertification
8 contact hours

This is an annual, mandatory course approved by MSHA that is designed for MSHA qualified electricians to meet the requirements of Part 75.153 (g) of Title 30, Code of Federal Regulations. This meets the electrician’s needs for recertification, in order to retain qualification. An individual qualified in accordance with this section shall, certify annually to the District Manager, that he has satisfactorily completed a coal mine electrical retraining program.

MINT 0600 - Mine Foreman/Fire Boss
90 contact hours

This is a preparation course for the Utah State Coal Fire boss/Foreman certification examination. Topics that are covered include coal mine gases, ventilation, atmosphere detection, strata and methane control, coal mine dust and noise testing procedures, diesel regulations and compliance.

MINT 0700 - Mine Rescue
20 contact hours

The student will experience operation, wearing, and testing the four hour breathing apparatus. The properties of the Drager BG4 and the Bio-Pac breathing apparatus will be discussed. MSHA certificate will be awarded upon successful completion.

MINT 0710 - Advanced Mine Rescue
8 contact hours

Team building and team rescue methods. Use of mine rescue equipment in emergency procedures. Simulated rescue practice.

MINT 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

MINT 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

MINT 2210 - Initial Electrical (80 hour)
6 credits

Prepares students for the Utah State Mine electrician certification test. Follows both state and federal topics for electrical certification testing.

Repeatable for credit

MINT 2450 - Emergency Medical Technician (EMT)
8 credits

Intended primarily for personnel of companies and agencies who may be involved in providing paramedical assistance in the event of injury or illness. Course is held
in cooperation with the Utah State Emergency Medical System, local physicians and EMT instructors. A certificate of completion will be awarded at the completion of the course. A special EMT fee is required.

Campus: USU Eastern only

MINT 2460 - EMT Recertification or First Responder 1-3 credits

Designed primarily for company and agency personnel desiring recertification and will include emergency medical care of the patient leading to EMT recertification. Course could be adapted to a 40 hour First Responder course.

Campus: USU Eastern only

MINT 2988 - Special Problems 1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

Museum Studies

MUSM 1010 - Introduction to Museums 3 credits

Students are introduced to museums and the role museums play in society. Historical and theoretical framework for museums science will be established and museums will be placed in a global perspective. Students will become familiar with the broad-based implications of museum work as a science.

Campus: USU Eastern only

MUSM 1020 - Museum Administration 3 credits

Instruction in aspects of museum management and administration, including policies and procedures, personnel management, budget formulation, governance, and interaction with support organizations.

Campus: USU Eastern only

MUSM 1030 - Museum Collection Management and Ethics 3 credits

Course defines the role of museum collections and focuses on general museum concepts, procedures, and issues related to the management and care of collections. In addressing ethical considerations and legal obligations of museum collections and management, attention is given to international concerns as well as to state and national issues.

Prerequisite/Restriction: Previous or current museum experience or coursework helpful

Campus: USU Eastern only

MUSM 2010 - Museum Exhibitions I 3 credits

Designed to give students a background in the early aspects of exhibition preparation, this course will emphasize exhibit planning, research and writing.

Prerequisite/Restriction: Previous or current museum experience or coursework helpful

Campus: USU Eastern only

MUSM 2011 - Museum Exhibitions II 3 credits

Designed as a continuation of MUSM 2010. Emphasizes writing and preparing exhibit labels, fabrication of the exhibit, and exhibit evaluation.

Prerequisite/Restriction: MUSM 2010 or instructor permission

Campus: USU Eastern only

MUSM 2020 - Museum Preventative Conservation 3 credits

Introduction to the current methods and theories pertaining to museum collections care, with an emphasis on handling, storing, and exhibiting collections as safely as possible. Low cost ideas will be shared.

Prerequisite/Restriction: Previous or current museum experience or coursework helpful

Campus: USU Eastern only
MUSM 2090 - Museum Practicum
3 credits
Designed to meet the needs of individual students or museums. Involves individualized instruction under the supervision of faculty (or museum administrators at other locations) utilizing hands-on experiences in museum administration, collections, education, and exhibitions. It may be done at a student's local museum with approved supervision. A project or paper is required for completion of the course.

Prerequisite/Restriction: Instructor permission

Campus: USU Eastern only

MUSM 2977 - Cooperative Education
1-3 credits
Provides supervised on-the-job training in museum studies. Student meet with the instructor/coordinator periodically to determine and evaluate learning objectives, hours to be worked, and credit.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

MUSM 2988 - Independent Studies
1-3 credits
Individual work approved by instructor. Time and credit to be arranged.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

MUSM 2999 - Workshop
1-3 credits
Designed to meet the changing needs of the student in Museum Studies.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

MUSM 3310 - Introduction to Museum Studies (CI)
CI Communications Intensive
3 credits
Explores all aspects of museum work, from the acquisition and storage of collections to fundraising and educational programs. As part of the course requirements, students tour area museums and get firsthand perspectives on the challenges and rewards of museum work from professionals in the field. Course fee for field trip(s) required.

Cross-listed as: ANTH 3310

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

Music

MUSC 1010 - Introduction to Music (BCA)
BCA Breadth Creative Arts
3 credits
Nontechnical course to develop understanding and enjoyment of music. Through study of musical elements, as well as historical, cultural, and social influences, an awareness of the relationship between techniques and aesthetic values in world music can be developed.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MUSC 1100 - Fundamentals of Music for Non-Music Majors (BCA)
BCA Breadth Creative Arts
3 credits
In-depth look at the basic elements of music: notes, rhythm, scales, intervals, key signatures, chords, cadences, and chord progressions. Includes basic ear training.

Semester(s) Traditionally Offered: Fall, Spring

Effective Term
Spring 2016

MUSC 1105 - Fundamentals for Music Majors (BCA)
BCA Breadth Creative Arts
3 credits
In-depth look at the basic elements of music: notes, rhythm, scales, intervals, key signatures, chords, cadences, and chord progressions. Includes basic ear training.
Prerequisite/Restriction: Enrollment limited to pre-music and music majors only

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

MUSC 1110 - Music Theory I (BCA)
BCA Breadth Creative Arts
3 credits

Foundations of music theory for music majors.
Traditional diatonic harmony in four parts, using triads in root position, first inversion, and second inversion.

Prerequisite/Restriction: Completion of MUSC 1105 with a C- or better or faculty authorization

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

MUSC 1115 - Diatonic Harmony for Non-Music Majors
3 credits

Investigation of norms of harmony in different styles through melody harmonization, analysis of others' compositions, and compositions in defined styles.

Prerequisite/Restriction: MUSC 1100 or MUSC 1105

Effective Term
Spring 2017

MUSC 1120 - Music Theory II
3 credits

Traditional harmony in four parts, using nonchord tones, seventh chords, and secondary dominant functions.

Prerequisite/Restriction: Completion of MUSC 1110 with a C- or better or faculty authorization

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 1130 - Aural Skills I
1 credit

First in a three-semester sequence of aural skills (ear training) courses which develop the skills of sight singing, dictation, and the composite skill of critical listening.

Prerequisite/Restriction: Completion of MUSC 1105 with a C- or better or faculty authorization

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

MUSC 1140 - Aural Skills II
1 credit

Second in a three-semester sequence of aural skills (ear training) courses which develop the skills of sight singing, dictation, and the composite skill of critical listening.

Prerequisite/Restriction: Completion of MUSC 1130 with a C- or better or faculty authorization

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 1150 - Beginning Group Piano
1 credit

Group piano instruction for nonmusic majors.

Semester(s) Traditionally Offered: Spring

MUSC 1160 - Intermediate Group Piano
1 credit

Group piano instruction for nonmusic majors.

Semester(s) Traditionally Offered: Spring
Prerequisite/Restriction: Pre-music and music majors only or Instructor permission

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 1180 - Keyboard Harmony II
1 credit
Development of keyboard skills, in conjunction with MUSC 1110, for pre-music majors and music majors.

Prerequisite/Restriction: Completion of MUSC 1170 with a C- or better, or faculty authorization

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

MUSC 1185 - Group Piano for Music Therapy Majors
1
Instructs students in piano skills, reading lead sheets, creation of piano accompaniment, and other keyboard skills needed for success in music therapy clinical settings.

Prerequisite/Restriction: Completion of MUSC 1180 with a B- or better Enrollment limited to Music Therapy majors

Repeatable
Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2015

MUSC 1190 - World Music
3
Explores the diverse musical cultures of the world through an ethnographic perspective.

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring 2016

MUSC 1200 - Teaching Piano I
3 credits
Shows pianist how to set up an independent studio, acquire and set up equipment, schedule students, set fees, bill parents, and keep the books. Students learn how to write a studio policy and how to audition and interview prospective students. Survey of different methods and piano series affords opportunity for students to evaluate teaching materials. Includes teaching of basic music concepts to beginning piano students.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 1220 - Individual Harp Instruction for Nonmusic Majors
1-2 credits
Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private harp instruction at any and all stages of advancement.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1270 - Keyboard Harmony for Piano Majors I
1
Development of keyboard skills, catered to Piano Pedagogy and Piano Performance majors

Prerequisite/Restriction: Admitted into piano program or instructor permission

Effective Term
Fall 2016

MUSC 1280 - Keyboard Harmony for Piano Majors II
1
Development of keyboard skills, catered to Piano Pedagogy and Piano Performance majors

Prerequisite/Restriction: Admitted into piano program or instructor permission

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

MUSC 1310 - Introduction to Music Therapy
2 credits
Introduces students to the field of music therapy through lectures, readings, and experiential work.

**Prerequisite/Restriction:** Enrollment limited to music therapy majors; all others by instructor approval

**Semester(s) Traditionally Offered:** Fall
**Effective Term:** Summer 2016

**MUSC 1320 - Music Therapy Group Ensemble Facilitation**
1 credit

Instructs students on how to facilitate various group music therapy ensemble experiences in clinical settings.

**Prerequisite/Restriction:** Enrollment limited to Music Therapy majors

**Repeatable**
**Semester(s) Traditionally Offered:** Fall, Spring
**Effective Term:** Summer 2016

**MUSC 1420 - Pedagogy Practicum**
3 credits

Provides piano students with actual teaching situations for the practical application of principles studied in piano pedagogy. Supervised planning, presentation, and evaluation of lessons.

**Repeatable for credit.**
**Semester(s) Traditionally Offered:** Fall, Spring

**MUSC 1430 - Piano Pedagogy I**
3 credits

Designed to prepare qualified pianists to teach piano effectively and to acquaint them with new materials and techniques from the beginning to intermediate levels.

**Semester(s) Traditionally Offered:** Fall

**MUSC 1440 - Piano Pedagogy II**
3 credits

Designed to prepare qualified pianists to teach piano effectively and to acquaint them with new materials and techniques from the intermediate to early advanced levels.

**Semester(s) Traditionally Offered:** Spring

**MUSC 1460 - Organ Literature I**
3 credits

Examines the history of the organ, as well as composers and literature from the Romantic Period through the end of the Twentieth Century.

**Semester(s) Traditionally Offered:** Fall

**MUSC 1470 - Organ Literature II**
3 credits

Examines the history of the organ, as well as composers and literature from the Middle Ages through the Baroque Period.

**Semester(s) Traditionally Offered:** Spring

**MUSC 1480 - Individual Piano Instruction for Nonmusic Majors**
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private piano instruction at any and all stages of advancement.

**Repeatable for credit.**
**Semester(s) Traditionally Offered:** Fall, Spring, Summer
**Course Fee:** $300.00 per credit

**MUSC 1490 - Individual Organ Instruction for Nonmusic Majors**
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private organ instruction at any and all stages of advancement.

**Repeatable for credit.**
**Semester(s) Traditionally Offered:** Fall, Spring, Summer
**Course Fee:** $300.00 per credit

**MUSC 1500 - String Techniques**
1 credit
Designed to give non-string music education majors a basic playing experience and theoretical understanding of the string instruments.

Prerequisite/Restriction: Pre-major music and Music Majors only

Semester(s) Traditionally Offered: Fall, Spring

MUSC 1520 - Individual Viola Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private viola instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $300.00 per credit

MUSC 1530 - Individual Violin Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private violin instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $300.00 per credit

MUSC 1540 - Individual String Bass Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private string bass instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $300.00 per credit

MUSC 1550 - Beginning Group Guitar
1 credit

Fundamentals of guitar; basic chords, note reading, tablature reading, and accompaniment styles, including strumming and fingerpicking.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 1555 - Group Guitar for Music Therapists
1 credit

A Beginning Group Guitar course teaching repertoire, improvisation, transposition and accompaniment skills relevant to the duties of a Music Therapist.

Prerequisite/Restriction: Music Therapy majors or instructor permission

Semester(s) Traditionally Offered: Fall, Spring

MUSC 1560 - Intermediate Group Guitar
1 credit

Intermediate-level strumming and fingerpicking techniques, barre chords, and solos written in standard notation and tablature will be presented.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 1580 - Individual Guitar Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private guitar instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $300.00 per credit

MUSC 1600 - Voice Techniques
1 credit

Acquaints the nonvocal Music Education major with the vocal instrument; its mechanism, terminology, and techniques.

Prerequisite/Restriction: Pre-program music, music majors, music education majors, and music therapy majors only

Semester(s) Traditionally Offered: Fall, Spring
MUSC 1610 - Introduction to Musical Theatre
2 credits
Survey course dealing with history, evolution, influence, practice, and production of the American Musical Theatre.
Semester(s) Traditionally Offered: Spring

MUSC 1620 - Introduction to Opera
2 credits
Survey course tracing history and style of opera from Peri and Caccini’s “Euridice” of 1594 to contemporary works of John Eaton and Phillip Glass.
Semester(s) Traditionally Offered: Fall

MUSC 1630 - Individual Vocal Instruction for Nonmusic Majors
1-2 credits
Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private vocal instruction at any and all stages of advancement.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1640 - Individual Saxophone Instruction for Nonmusic Majors
1-2 credits
Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private saxophone instruction at any and all stages of advancement.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1700 - Individual Flute Instruction for Nonmusic Majors
1-2 credits
Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private flute instruction at any and all stages of advancement.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1710 - Individual Oboe Instruction for Nonmusic Majors
1-2 credits
Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private oboe instruction at any and all stages of advancement.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1720 - Individual Clarinet Instruction for Nonmusic Majors
1-2 credits
Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private clarinet instruction at any and all stages of advancement.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1730 - Individual Bassoon Instruction for Nonmusic Majors
1-2 credits
Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private bassoon instruction at any and all stages of advancement.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1740 - Individual Saxophone Instruction for Nonmusic Majors
1-2 credits
Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private saxophone instruction at any and all stages of advancement.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1800 - Percussion Techniques
1 credit
Provides basic playing experience and theoretical understanding of percussion instruments. Designed for Music Education majors.
Prerequisite/Restriction: Pre-program music, music
majors, music education majors, and music therapy majors only

Semester(s) Traditionally Offered: Fall, Spring

MUSC 1810 - Individual Trumpet Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private trumpet instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1820 - Individual Trombone Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private trombone instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1830 - Individual French Horn Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private French horn instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1840 - Individual Tuba/Euphonium Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private tuba/euphonium instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 1850 - Individual Percussion Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private percussion instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2110 - Music Theory III
3 credits

Traditional chromatic harmony in four parts, using modulation, mode mixture, and neapolitan and augmented sixth chords.

Prerequisite/Restriction: Completion of MUSC 1120 with a C- or better, or faculty authorization

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

MUSC 2120 - Music Theory IV
3 credits

Study of twentieth-century tonal, atonal, and avant-garde harmonies and compositional techniques.

Prerequisite/Restriction: Completion of MUSC 2110 and MUSC 3120 with a C- or better, or faculty authorization

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 2130 - Aural Skills III
1 credit

Third in a three-semester sequence of aural skills (ear training) courses which develop the skills of sight singing, dictation, and the composite skill of critical listening.
MUSC 2180 - Computer Applications in Music
1 credits
Presents operational knowledge of computer hardware and music software. Students use M101 work station to learn music notation, sequencing, and other select applications.
Prerequisite/Restriction: Enrollment limited to Pre-Music and Music majors only
Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Summer 2016

MUSC 2210 - Advanced Conducting Ensemble
1 credit
Lab ensemble for MUSC 4240. Music and non-music majors perform on major and secondary instruments or voice. Section 1 (Fall) is instrumental, Section 2 (Spring) is choral.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2017

MUSC 2220 - Individual Harp Instruction (Second Instrument) for Music Majors
1 credit
Designed to give music majors private harp instruction at any and all stages of advancement. One credit given for 30-minute lessons.
Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2240 - Introduction to Music Business
3 credits
This course provides a basic knowledge of the inner workings of the business of music. Record label management, marketing, product development, accounting principles, budget development and show/product concept management will be examined and business techniques as relating to music will be explored.
Semester(s) Traditionally Offered: Spring

MUSC 2310 - Music Therapy Treatment I
2 credits
Introduces and instructs students in the successful facilitation of methods and creation of materials utilized in music therapy treatment, as listed in the American Music Therapy Association Standards of Clinical Practice.
Prerequisite/Restriction: Enrollment limited to music therapy majors
Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 2320 - Music Therapy Treatment II
2 credits
Introduces and instructs students in the successful facilitation of methods and creation of materials utilized in music therapy treatment, as listed in the American Music Therapy Association Standards of Clinical Practice.
Prerequisite/Restriction: Completion of MUSC 2310 with a B- or better
Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

MUSC 2350 - Conducting
2 credits
Designed to provide students with basic conducting techniques.
Prerequisite/Restriction: Enrollment limited to Pre-Music and Music majors only
MUSC 2410 - Individual Organ Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private organ instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Course Fee: $300.00 per credit

MUSC 2420 - Piano Literature I
3 credits

Acquaints pianists with the standard piano composers and keyboard literature from the 14th Century to the Classical Period.

Semester(s) Traditionally Offered: Fall every other year

MUSC 2430 - Piano Literature II
3 credits

Acquaints pianists with the standard piano composers and keyboard literature from the Classical Period to the Romantic Period.

Semester(s) Traditionally Offered: Spring every other year

MUSC 2440 - Piano Literature III
3 credits

Acquaints pianists with the standard piano composers and keyboard literature from the Romantic Period to Impressionism.

Semester(s) Traditionally Offered: Fall every other year

MUSC 2450 - Piano Literature IV
3 credits

Acquaints pianists with the standard piano composers and keyboard literature from the Impressionist Period to the present day.

Semester(s) Traditionally Offered: Spring every other year

MUSC 2460 - Individual Jazz Piano Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private jazz piano instruction at any and all stages of advancement.

Repeatable for credit.

Course Fee: $300.00 per credit

MUSC 2470 - Individual Jazz Piano Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private jazz piano instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Course Fee: $300.00 per credit

MUSC 2490 - Individual Piano Instruction (Second Instrument) for Music Majors
1 credit

30-minute lessons designed to give music majors private piano instruction at any and all stages of advancement.

Prerequisite/Restriction: Enrollment limited to pre-music and music majors only

Repeatable
MUSC 2500 - Individual String Bass Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private string bass instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2510 - Individual Cello Instruction for Nonmusic Majors
1-2 credits

Variable credit offered, depending upon lesson time (1 credit equals 30 minutes). Designed to give nonmusic majors private cello instruction at any and all stages of advancement.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2520 - Individual Cello Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private cello instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2530 - Individual Viola Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private viola instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2540 - Individual Violin Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private violin instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2550 - Guitar Styles: Blues
2 credits

Designed to teach students to play blues guitar styles. Presentation of musical form and repertoire.
Prerequisite: Knowledge of basic chords and some standard notation and/or tablature.

Semester(s) Traditionally Offered: Fall

MUSC 2560 - Guitar Styles: Bluegrass/Folk
2 credits

Designed to teach students to play bluegrass and folk guitar styles. Presentation of musical form and repertoire. Prerequisite: Knowledge of basic chords and some experience reading standard notation and/or tablature.

Semester(s) Traditionally Offered: Spring

MUSC 2570 - Fingerboard Theory I
2 credits

Basic music theory course in which students use the guitar as a tool for learning the fundamentals of music.
MUSC 2580 - Fingerboard Theory II
2 credits

Follow-up to MUSC 2570. Examination of theoretical concepts of music and how they can be visualized and played on the guitar.

MUSC 2590 - Individual Guitar Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private guitar instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

MUSC 2600 - Women’s Choir
1 credit

Performance of choral works in a large choral organization open to all women without auditions.

Repeatable for credit.

MUSC 2610 - American Festival Chorus
1 credit

Large select mixed choir performing major works for chorus and orchestra.

Prerequisite/Restriction: Admission by audition only

Repeatable for credit.

MUSC 2640 - Individual Vocal Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private vocal instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

MUSC 2660 - Italian Diction for Singers
2 credits

Study of singing diction in Italian using International Phonetic Alphabet in spoken, sung, and written drills.

Semester(s) Traditionally Offered: Spring

MUSC 2670 - German Diction for Singers
2 credits

Study of singing diction in German using International Phonetic Alphabet in spoken, sung, and written drills.

Semester(s) Traditionally Offered: Fall

MUSC 2680 - French Diction for Singers
2 credits

Study of singing diction in French using International Phonetic Alphabet in spoken, sung, and written drills.

Semester(s) Traditionally Offered: Spring

MUSC 2690 - Concert Choir
1 credit

Concert Choir is a general choral class for singers of all interests and levels. Provides concerts for the college at large. Most students stay in the choir for the entire year. No audition is required.

Repeatable for credit

Campus: USU Eastern only

MUSC 2700 - Woodwind Techniques I: Flute, Clarinet
1 credit

Provides music education major with an introduction to
performance and pedagogy of the flute and clarinet.

Prerequisite/Restriction: Enrollment limited to majors, or with instructor permission

Semester(s) Traditionally Offered: Fall

MUSC 2710 - Woodwind Techniques II: Saxophone, Oboe, Bassoon
1 credit

Provides music education majors with an introduction to performance and pedagogy for the saxophone, oboe, and bassoon. Enrollment limited to pre-music and music majors.

Prerequisite/Restriction: Completion of MUSC 2700 with a grade of C- or better and instructor permission

Semester(s) Traditionally Offered: Spring

Effective Term Summer 2016

MUSC 2720 - Marching Band
1 credit

Preparation of musical entertainment and marching drills for football games.

Prerequisite/Restriction: Consent of director

Semester(s) Traditionally Offered: Fall

MUSC 2730 - Basketball Band
1 credit

Preparation of “pops” type music for basketball games. Audition necessary.

Prerequisite/Restriction: MUSC 3785

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

MUSC 2745 - Wind Symphony
1 credit

Wind Symphony provides experiences for woodwind, brass and percussion players in a concert band setting. Repertoire includes literature representing many traditional and contemporary styles. Performances are presented in various college and community venues.

Prerequisite/Restriction: Audition

Campus: USU Eastern only

Semester(s) Traditionally Offered: Fall, Spring

MUSC 2750 - Individual Flute Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private flute instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $300.00 per credit

MUSC 2760 - Individual Oboe Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private oboe instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $300.00 per credit

MUSC 2770 - Individual Clarinet Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private clarinet instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

**MUSC 2780** - Individual Bassoon Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private bassoon instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

**MUSC 2790** - Individual Saxophone Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private saxophone instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

**MUSC 2800** - Brass Techniques I: Trumpet, French Horn
1 credit

Designed to give prospective music teachers a basic playing experience and theoretical understanding of the high brass instruments.

Prerequisite/Restriction: Course limited to Pre-music and music majors

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

**MUSC 2810** - Brass Techniques II: Trombone, Tuba, Euphonium
1 credit

Designed to give prospective music teachers a basic playing experience and theoretical understanding of the low brass instruments.

Prerequisite/Restriction: Course limited to Pre-music and music majors

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

**MUSC 2850** - Individual Trumpet Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private trumpet instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

**MUSC 2860** - Individual Trombone Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private trombone instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

**MUSC 2870** - Individual French Horn Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private French horn instruction at any and all stages of advancement. One credit given for 30-minute lessons.
MUSC 2880 - Individual Tuba/Euphonium Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private tuba/euphonium instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2890 - Individual Percussion Instruction (Second Instrument) for Music Majors
1 credit

Designed to give music majors private percussion instruction at any and all stages of advancement. One credit given for 30-minute lessons.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in music. Students meet with the instructor/coordinator periodically to determine and evaluate learning objectives, hours to be worked, and credit.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

MUSC 2988 - Special Problems
1-3 credits

Independent study work for the serious musician to be approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

MUSC 3010 - Masterpieces of Music (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Acquaints students with great masterpieces of music representing all periods of music history. Examines lives and times of various composers.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 3020 - History of Jazz (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Designed to give students an understanding of the development of jazz, popular music, and contemporary idioms, and their contributions to music and culture.

Semester(s) Traditionally Offered: Spring

MUSC 3030 - Rock and Roll - Catalyst for Social Change (DHA/DSS)
DHA/DSS Depth Social Sciences
3 credits

A study of the cultural, economic, social and political impact of rock and other popular music on social groups and movements around the world. Students will be challenged to consider how various types of music influence their own cultural perspectives.

Prerequisite/Restriction: Completion of CL and BSS requirements

Semester(s) Traditionally Offered: Fall, Spring, Summer

MUSC 3100 - Motivation and Classroom Management Strategies in Secondary Classroom Music
3 credits

Provides experience in current materials, methods, and management of general music education program in secondary (grades 6-12) public schools. Designed for
Music education majors.

Prerequisite/Restriction: Enrollment limited to Pre-Music and Music majors only

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 3110 - Music History I: Origins through Baroque
3 credits

History and literature of early, Renaissance, and Baroque periods.

Prerequisite/Restriction: Enrollment limited to music majors having sophomore standing or higher

Semester(s) Traditionally Offered: Fall

MUSC 3120 - Music History II: Classical and Romantic Periods
3 credits

History and literature of the music of the classical and romantic periods.

Prerequisite/Restriction: Completion of MUSC 3110 with a C- or better, or instructor authorization

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

MUSC 3140 - Musical Form and Analysis
3 credits

Study of imitative, cantus firmus, ostinato, and free contrapuntal procedures of Western music. Explores techniques of Sixteenth Century counterpoint. Also includes study of phrase and period structure, small part fonts, theme and variations, rondo and sonata forms, and vocal forms.

Prerequisite/Restriction: MUSC 2110

MUSC 3180 - Orchestration
2 credits

Theoretical and practical study of scoring for orchestral instruments in various combinations, ranging from small ensembles to full orchestra.

Prerequisite/Restriction: MUSC 1110, MUSC 1120, MUSC 2110, MUSC 2180

Semester(s) Traditionally Offered: Fall, Spring, Summer

MUSC 3190 - Music History III: Music of the Twentieth Century (CI)
CI Communications Intensive
3 credits

Explores historical and cultural context of important composers and works of the modern and postmodern eras.

Prerequisite/Restriction: Completion of MUSC 3120 with a C- or better, or instructor authorization

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 3210 - Individual Harp Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private harp instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 for 1-2 credits

MUSC 3220 - Choral Methods and Materials
2 credits
Investigates factors relating to administration and teaching of choral music in middle and secondary schools. To be taken final Fall before Student Teaching.

Prerequisite/Restriction: Admission to STEP program; to be taken final Fall before Student Teaching Concurrent enrollment in SCED 3300 or SCED 4300

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 3230 - Choral Literature
2 credits

Survey of choral music from the Renaissance, Baroque, Classical, Romantic, and Twentieth Century suitable for middle and secondary school choirs.

Semester(s) Traditionally Offered: Spring

MUSC 3240 - Instrumental Methods and Materials
2 credits

Examination of teaching methods and materials related to wind and percussion pedagogy. Study of literature, organization and administration, and teaching techniques.

Prerequisite/Restriction: Admission to STEP program; to be taken final Spring before Student Teaching Concurrent enrollment in SCED 3300 or SCED 4300

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

MUSC 3260 - Elementary School Music
2 credits

Methods and materials in singing, rhythms, creating music, listening, using classroom instruments, fundamentals of music, and movement skills, with emphasis on contemporary approaches to music education.

Prerequisite/Restriction: Enrollment limited to students who have earned at least 45 credits and who have been accepted into one of the following majors: Pre-music, music education, music therapy, pre-early childhood education, pre-elementary education, early childhood education, special education, composite early childhood education/special education, composite early childhood education/elementary education, communicative disorders and deaf education, composite early childhood education/deaf education, elementary education, composite elementary education/special education, composite elementary education/early childhood education, or composite elementary education/deaf education MUSC 1010 (Recommended)

Semester(s) Traditionally Offered: Fall, Spring, Summer

MUSC 3310 - Music Therapy and the Exceptional Child
3 credits

Theoretical and clinical applications of working with individuals with intellectual, physical, and/or developmental disabilities in educational and medical settings.

Prerequisite/Restriction: Completion of MUSC 2320 with a B- or better

Semester(s) Traditionally Offered: Fall
Effective Term
Summer 2016

MUSC 3320 - Psychology of Music
2 credits

Psychological foundations of musical behavior, including psychoacoustics, rhythmic, melodic, and harmonic foundations; affective behaviors and music; musical preferences; functional music; musical ability; and music learning.

Semester(s) Traditionally Offered: Spring

MUSC 3331 - Music Therapy Practicum: Field Experience
1 credit

Supervised practicum experience in a community setting.

Prerequisite/Restriction: Completion of MUSC 2320 with a B- or better

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $464.00
Effective Term
Summer 2016
MUSC 3332 - Music Therapy Practicum: Field Experience II
2 credits
Supervised practicum experience in a community setting.
Prerequisite/Restriction: Completion of MUSC 3331 with a B- or better
Course Fee: $464.00
Effective Term
Summer 2016

MUSC 3333 - Music Therapy Practicum: Field Experience III
3 credits
Supervised practicum experience in a community setting.
Prerequisite/Restriction: Completion of MUSC 3332 with a B- or better
Course Fee: $464.00
Effective Term
Summer 2016

MUSC 3334 - Music Therapy Practicum: Field Experience IV
3 credits
Supervised practicum experience in a community setting.
Prerequisite/Restriction: Completion of MUSC 3333 with a B- or better
Course Fee: $464.00
Effective Term
Summer 2016

MUSC 3360 - Audio Engineering I
3 credits
This course introduces students to modern studio recording techniques using the latest computer programs and technological advances in microphones, acoustics and sound modification.
Semester(s) Traditionally Offered: Fall

MUSC 3370 - Audio Engineering II
3 credits
This course presents advanced recording techniques involving sound/tone manipulation; multi-track recording; sound tracks for video and film; sound editing; and other state-of-the-art processes using sound studio applications.
Prerequisite/Restriction: MUSC 3360
Repeatable for credit
Semester(s) Traditionally Offered: Spring

MUSC 3400 - Individual Piano Instruction for Music Majors
1-2 credits
Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private piano instruction at any and all stages of advancement.
Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 for 1-2 credits

MUSC 3410 - Ensemble and Accompanying
1-2 credits
Accompanying vocal and instrumental works. Ensemble music for two pianos and four hands. Sight reading and repertoire development. Instructor approval required to register for 2 credits.
Prerequisite/Restriction: Admission by audition only
Repeatable
Semester(s) Traditionally Offered: Fall, Spring

MUSC 3420 - Keyboard Skills I
3 credits
Study of sightreading, transposing, improvising, figured bass, scales, chords, and score rendering.
Semester(s) Traditionally Offered: Fall every other year
MUSC 3430 - Keyboard Skills II  
3 credits  
Continuation of MUSC 3420, with further study of sightreading, transposing, improvising, figured bass, scales, chords, and score reading.  
Semester(s) Traditionally Offered: Spring every other year

MUSC 3440 - Individual Jazz Piano Instruction for Music Majors  
1-2 credits  
Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private jazz piano instruction at any and all stages of advancement.  
Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  
Course Fee: $464.00 for 1-2 credits

MUSC 3460 - Church Music for Organists I  
3 credits  
Teaches students to read open scores, transpose hymns, and read scores using alto and tenor clefs. Explores history of hymnody, as well as history of church worship services.  
Semester(s) Traditionally Offered: Fall

MUSC 3470 - Church Music for Organists II  
3 credits  
Teaches students to read open scores, transpose hymns, and read scores using alto and tenor clefs. Explores history of hymnody, as well as history of church worship services.  
Semester(s) Traditionally Offered: Spring

MUSC 3480 - Individual Organ Instruction for Music Majors  
1-2 credits  
Provides 60-minute lessons, for either 1 or 2 credits. Number of credits granted depends upon practice time and extent of literature required. Flexible course of study leading to enhanced musical and technical skills on the instrument.  
Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  
Course Fee: $464.00 for 1-2 credits

MUSC 3500 - Symphony Orchestra (DHA)  
DHA Depth Humanities and Creative Arts  
1 credit  
Provides experience in performing standard orchestral literature.  
Prerequisite/Restriction: Admission by audition only
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring

MUSC 3510 - Orchestra Literature  
2 credits  
Survey of materials, methods, and literature appropriate for elementary school, junior high/middle school, or high school level orchestra programs.  
Semester(s) Traditionally Offered: Spring

MUSC 3515 - Orchestral Auditions Seminar  
2  
This course is designed to prepare students for the unique and specific nature of excerpt study and the taking of professional orchestra auditions, while gaining familiarity with the standard orchestral literature. The instructor will usually be a member of the Utah Symphony, with extensive experience both taking and listening to auditions.  
Prerequisite/Restriction: Restricted to music majors who have been admitted into the string program, or by instructor permission

Effective Term  
Fall 2016
MUSC 3520 - String Pedagogy and Solo Literature
2 credits

For qualified string players whose interest is primarily in teaching stringed instruments. Materials and teaching techniques via actual teaching experience.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
 Semester(s) Traditionally Offered: Spring

MUSC 3530 - Cache Symphony Orchestra
1 credit

Provides experience for non-music majors in performing standard orchestral literature.

Prerequisite/Restriction: By audition only Contact the conductor
Repeatable
 Semester(s) Traditionally Offered: Fall, Spring
 Effective Term
 Fall 2016

MUSC 3540 - Guitar Performance Practicum
1 credit

On a weekly basis, students required to perform for other class members. Repertoire selected in consultation with the instructor. Community performances also required.

Repeatable for credit.
 Semester(s) Traditionally Offered: Fall, Spring

MUSC 3550 - Individual Guitar Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private guitar instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.
Repeatable for credit.
 Semester(s) Traditionally Offered: Fall, Spring, Summer
 Course Fee: $464.00 for 1-2 credits

MUSC 3560 - Guitar History and Literature
3 credits

Presents a history of the development of guitar from its earliest ancestors to the present, including study of composers of music for guitar, guitarists, and changes to the instrument itself.

Semester(s) Traditionally Offered: Fall
 Effective Term
 Fall 2015

MUSC 3570 - Guitar Pedagogy I
2 credits

Prepares qualified guitarists to teach beginning and intermediate level students. Familiarizes participants with "business" aspects of teaching, how to set up a private studio, available materials, and teaching techniques.

Semester(s) Traditionally Offered: Fall

MUSC 3580 - Guitar Pedagogy II
2 credits

Instruction in teaching various guitar styles. Experience in teaching class guitar and in private instruction. Review of available methods and materials.

Semester(s) Traditionally Offered: Spring

MUSC 3590 - Electric Guitar Ensemble
1 credit

Offers opportunity for guitarists to rehearse and perform ensemble music written for electric guitar. Ensemble includes bass and drums.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 3600 - Opera Theatre Production
1-3 credits

Techniques of musical theater, including participation as cast or crew in musical or operatic stage productions or excerpts.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 3610 - Vocal Repertory I
2
Survey of art song, opera, and oratorio in Italian and French, including history and performance practice.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

MUSC 3620 - Vocal Repertory II (CI)
CI Communications Intensive
2
Survey of art song, opera, and oratorio in German and English, including history, performance practice, and recital programming.

Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2016

MUSC 3630 - Vocal Pedagogy I
3 credits
Theoretical course studying anatomy and function of the voice, methods for teaching techniques, respiration, phonation, articulation, and support and health of the voice.

Semester(s) Traditionally Offered: Fall, Odd Years

MUSC 3640 - Vocal Pedagogy II
3 credits
Application of vocal theory to teaching of young, post-pubescent, and mature male and female voices, including challenges of teaching each particular type. Includes practicum in which students teach individual vocal lessons under instructor's supervision.

Semester(s) Traditionally Offered: Spring, Even Years

MUSC 3660 - Opera by Children
3 credits
Creative process of developing opera in a classroom for fine-arts and language-arts core instruction. Instruction in opera history, music, drama, art and dance elements, and necessary facilitation skills to build on individual's natural curiosity and creativity utilized in the process.

Semester(s) Traditionally Offered: Fall, Spring, Summer

MUSC 3670 - Individual Vocal Instruction for Music Majors
1-2 credits
Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private vocal instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

MUSC 3700 - Woodwind Ensemble
1-2 credits
Helps students gain knowledge and understanding of literature for woodwind ensemble, to gain knowledge of rehearsal techniques for perfecting chamber music, and to demonstrate mastery of these skills through performance.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

MUSC 3710 - Individual Flute Instruction for Music Majors
1-2 credits
Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private flute instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.
MUSC 3720 - Individual Oboe Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private oboe instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

MUSC 3730 - Individual Clarinet Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private clarinet instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

MUSC 3740 - Individual Bassoon Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private bassoon instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

MUSC 3750 - Individual Saxophone Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private saxophone instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

MUSC 3760 - Jazz Ensemble
1 credit

Select ensemble performing big band jazz music.

Prerequisite/Restriction: Admission by audition only

Repeatable for credit.

MUSC 3770 - Jazz Orchestra
1 credit

Preparation and performance of big band jazz music.

Prerequisite/Restriction: Admission by audition only

Repeatable for credit.

MUSC 3780 - Flute Ensemble
1 credit

Students play all members of the flute family to gain knowledge about flute ensemble repertoire, rehearsal techniques, and chamber music performance skills. No audition required, but students will be assigned to one hour rehearsal time based on playing ability.
Prerequisite/Restriction: Instructor approval
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 3785 - Marching Band (DHA)
DHA Depth Humanities/Creative Arts
1 credits

Preparation of musical entertainment and marching drills for football games.

Prerequisite/Restriction: Consent of director
Repeatable for credit.
Semester(s) Traditionally Offered: Fall

MUSC 3790 - Symphonic Band (DHA)
DHA Depth Humanities and Creative Arts
1 credit

Performance of significant works from symphonic band repertoire.

Prerequisite/Restriction: Previous experience on band instruments; audition for chair placement only
Repeatable
Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Summer 2016

MUSC 3800 - Trombone Ensemble
1 credit

Intended for trombone majors and nonmajors interested in performing music specifically written and/or arranged for four to twelve trombones.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 3810 - Individual Trumpet Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private trumpet instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $464.00 for 1-2 credits

MUSC 3820 - Individual Trombone Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private trombone instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $464.00 for 1-2 credits

MUSC 3830 - Individual French Horn Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private French horn instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $464.00 for 1-2 credits

MUSC 3840 - Individual Tuba/Euphonium Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private tuba/euphonium instruction at any and all stages of advancement.
Students will learn the musical elements which constitute the craft of songwriting. Song forms, rhythmic structures, developing lyrics and voice leading are taught within the context of chord progressions/structure.

**Prerequisite/Restriction:** MUSC 2180

**Semester(s) Traditionally Offered:** Fall, Odd Years

**MUSC 3890 - Song Writing II**

2 credits

Advanced songwriting techniques involving complex chord changes, key modulations, instrumentation considerations, and complex rhythmic styles. Musical styles will include Latin music and some World Music.

**Prerequisite/Restriction:** MUSC 3880

**Semester(s) Traditionally Offered:** Fall, Even Years

**MUSC 3900 - Improvisation I**

2 credits

Study of techniques of jazz improvisation applicable to all instruments.

**Prerequisite/Restriction:** MUSC 2110 and MUSC 2130; or instructor permission

**Semester(s) Traditionally Offered:** Fall

**MUSC 3905 - Improvisation II**

2 credits

This course is a continuation and development of Improvisation I. Advanced improvisational techniques including key change, complex chord progressions and improvisation in various periods and styles will be presented.

**Prerequisite/Restriction:** MUSC 3900

**Semester(s) Traditionally Offered:** Spring

**MUSC 3910 - Individual Composition Instruction**

1-2 credits

Individual study of techniques and procedures of music composition, emphasizing assistance in completing individual compositional projects, building composition
portfolio, and preparing for composition recitals.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $464.00 for 1-2 credits

MUSC 3920 - Marching Band Techniques
2 credits

Reviews methods and materials necessary for directing high school marching bands, including administration, music selection, drill design, and computer-assisted instruction.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

MUSC 3930 - Band Literature
2 credits

Study of literature appropriate for beginning, intermediate, and advanced level band programs.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

MUSC 3940 - Music and Media
2 credits

This course explores the complexities of music in film, video, gaming, TV, radio and other electronic media. The course includes copyright and licensing issues, computer technologies used in creating and interfacing media, and the creative processes involved with media production.

Prerequisite/Restriction: MUSC 2180

Semester(s) Traditionally Offered: Spring

MUSC 3950 - Jazz Choir
1 credit

Emphasizes vocal ability, harmonic ear training, and rhythmic understanding. Ability to vocally improvise is helpful, though not a necessary prerequisite. Auditions held during the first week of fall semester.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 3970 - Non-Profit Arts Management
3 credits

A practical study of non-profit arts organizations including Articles of Incorporation and Bylaws, Boards, long and short range planning, budgeting process, fundraising and event planning.

Prerequisite/Restriction: MUSC 2240

Semester(s) Traditionally Offered: Fall

MUSC 4210 - Advanced Music Form and Analysis
3 credits

Expands the contents and helps further develop the skills acquired in MUSC 3140, Musical Form and Analysis. Large and small sectional forms and contrapunatal procedures are further explored in works from the Classical, Romantic, and Modern eras.

Semester(s) Traditionally Offered: Fall

MUSC 4240 - Advanced Conducting
2 credits

Covers techniques, procedures, materials, and philosophies appropriate to the motor skill of conducting and the pedagogy of rehearsal techniques with a band/choir/string ensemble. Students will be able to demonstrate techniques in music selection, score analysis, conducting gesture, and pedagogy. (F—instrumental) (Sp—Choral).

Semester(s) Traditionally Offered: Fall - instrumental, Spring - choral

MUSC 4310 - Music Therapy with Adult Populations
3

Music therapy models, methods, techniques, and psychotherapeutic orientations informing clinical practice with adult populations including addictive disorders, older adults, medical settings, mental health, physical disabilities, and wellness.

Prerequisite/Restriction: Completion of MUSC 3310 with a B- or better
MUSC 4320 - Research in Music Therapy (CI)
CI Communications Intensive
2 credits

Research and laboratory course, emphasizing design, methods, and statistical procedures appropriate to research in music education and music therapy.

Prerequisite/Restriction: STAT 1040 and instructor permission

MUSC 4330 - Clinical and Professional Issues in Music Therapy
3 credits

Ethical considerations and issues related to private practice, marketing, and reimbursement, as well as continued exploration of psychotherapeutic models and MT methods with adults, specifically anxiety disorders and personality disorders.

Prerequisite/Restriction: Completion of MUSC 4310 with a B- or better Restricted to music therapy majors only

MUSC 4340 - Internship in Music Therapy
2 credits

Six-month resident internship in affiliated, approved clinical setting.

Prerequisite/Restriction: Requires concurrent registration in MUSC 4330 Pass/Fail only.

MUSC 4410 - Advanced Piano Pedagogy I
1-2 credits

Continuation of MUSC 1430 and MUSC 1440 with analysis, performance, and teaching of basic repertoire at intermediate to advanced levels. Instructor approval required to register for 2 credits.

Prerequisite/Restriction: MUSC 1430, MUSC 1440 with a grade of C- or higher

Repeatable

MUSC 4420 - Advanced Piano Pedagogy II
1-2 credits

Continuation of MUSC 4410, with analysis, performance, and teaching of basic repertoire at intermediate to advanced levels. Instructor approval required to register for 2 credits.

Prerequisite/Restriction: MUSC 4410 with a grade of C- or higher

Repeatable

MUSC 4500 - String Ensemble
1 credit

Offers opportunity for capable string players to study and perform music written for variety of small ensemble combinations.

Prerequisite/Restriction: Enrollment in music or pre-music major, or special instructor permission for nonmajors

Repeatable for credit

MUSC 4510 - Individual Violin Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private violin instruction at any and all stages of advancement.
Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $464.00 for 1-2 credits

MUSC 4520 - Individual Viola Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private viola instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $464.00 for 1-2 credits

MUSC 4530 - Individual Cello Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private cello instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $464.00 for 1-2 credits

MUSC 4540 - Individual String Bass Instruction for Music Majors
1-2 credits

Provides 60-minute lessons, for either 1 or 2 credits, for music majors only. Number of credits granted depends upon practice time and extent of literature required. Designed to give music majors private string bass instruction at any and all stages of advancement.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $464.00 for 1-2 credits

MUSC 4550 - Acoustic Guitar Ensemble
1 credit

Offers opportunity for guitarists to rehearse and perform intermediate and advanced music written for acoustic guitar.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 4600 - University Chorale (DHA)
DHA Depth Humanities and Creative Arts
1 credit

Select mixed choir performing a wide range of choral literature.

Prerequisite/Restriction: Admission by audition only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 4620 - Choral Conducting Practicum
1 credit

Application of principles of choral music education in public school setting.

Prerequisite/Restriction: Must be a pre-music major, music major, music education major, or music therapy major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 4650 - Chamber Singers (DHA)
DHA Depth Humanities and Creative Arts
1 credit

Select small ensemble performing a wide range of choral literature.

Prerequisite/Restriction: Admission by audition only

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring
MUSC 4700 - Wind Orchestra (DHA)
DHA Depth Humanities and Creative Arts
1 credit

Highly-selective group, performing important traditional and contemporary works from the wind band repertoire.

Prerequisite/Restriction: Admission by audition only
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 4710 - Jazz Combo
1-2 credits

Study and performance of the finest literature for the small jazz ensemble.

Prerequisite/Restriction: Audition and instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 4720 - Saxophone Quartet
1-2 credits

Study and performance of the finest classical, jazz, and popular music for the saxophone quartet.

Prerequisite/Restriction: Audition and instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 4730 - Directed Project in Instrumental Pedagogy and Literature (CI)
CI Communications Intensive
3 credits

This course will acquaint the student with curricular and business issues involved in setting up a private studio and with solo and chamber music repertoire, providing an opportunity for written analysis, interviews, and oral presentations.

Prerequisite/Restriction: ENGL 2010 and Music Performance Major or instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Summer

MUSC 4900 - Baroque Counterpoint
2 credits

Writing and analysis of tonal counterpoint in two, three, and four parts.

Prerequisite/Restriction: MUSC 1110, MUSC 1120 and MUSC 2110
Semester(s) Traditionally Offered: Spring

MUSC 4910 - Music Composition
2 credits

Instruction in principles of music composition, and guidance in completing individual composition projects. Also, analysis of selected Twentieth Century masterworks.

Prerequisite/Restriction: MUSC 1110, MUSC 1120 and MUSC 2110
Repeatable for credit.
Semester(s) Traditionally Offered: Taught Alternate Years

MUSC 4920 - Individual Recital
1-2

Performance of pieces selected by the student and approved by the instructor, for performance in accordance with specific music area requirements. Should be taken for 1 credit for the Junior Recital, 2 credits for the Senior Recital.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MUSC 4930 - Readings and Conference
1-6 credits

Undergraduate course designed to provide special interest study.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
MUSC 4940 - Senior Thesis
1-6 credits

As partial fulfillment of Honors Program requirements, students design and complete a major paper/project. Examples of projects include performance, composition, and musical analysis.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MUSC 5420 - Piano Literature I
2 credits

Provides comprehensive examination of piano literature, the history of the instrument, and performance practice.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 5980 - Introduction to Music Research
3 credits

Acquaints graduate students with music research, information science, and technical writing. Topics addressed include print and electronic resources, historical editions, manuscripts and holographs, period recordings, performance practice resources, writing styles, and bibliographic resources.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 6100 - Graduate Performance Ensemble
1-2 credits

Designed to give students opportunity for a high-level music experience in choral and instrumental performance ensembles.

Semester(s) Traditionally Offered: Fall, Spring

MUSC 6110 - Advanced Conducting
2 credits

Students master manual technique of conducting and improve score study procedures, resulting in analysis and communication of musical ideas.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 6120 - Advanced Rehearsal Techniques
2 credits

Provides students with conducting experience within their major performance areas; i.e., chorale, band, orchestra. This is accomplished through observation of rehearsal techniques and procedures, and by conducting rehearsals at the instructor's discretion.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 6130 - Music History Seminar
3 credits

Close study and discussion of a special topic in music history, emphasizing individual research and presentation. Since content differs each semester, course may be repeated for credit.

Prerequisite/Restriction: MUSC 5980
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 6140 - Music Theory Seminar
3 credits

Close study and discussion of a special topic in music theory, emphasizing individual analysis and presentation. Since content differs each semester, course may be repeated for credit.

Prerequisite/Restriction: MUSC 5980
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 6410 - Collaborative Artistry
2 credits

Helps graduate pianists to develop the skills needed for vocal and instrumental accompaniment. Addresses techniques in score analysis, transposition, ensemble skills, etc. Students receive coaching from piano, voice, and instrumental faculty.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
MUSC 6420 - Pedagogy Practicum  
2 credits  
Observation of master instructors, practice teaching (private and classroom), and supervised studio instruction.  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring  

MUSC 6430 - Advanced Piano Pedagogy  
2 credits  
Pedagogy of beginning, intermediate, and advanced methods of teaching piano, as well as strategies for developing a private studio.  
Semester(s) Traditionally Offered: Fall, Spring  

MUSC 6440 - Piano Literature II  
2 credits  
Provides comprehensive examination of piano literature, the history of the instrument, and performance practice.  
Semester(s) Traditionally Offered: Fall, Spring  

MUSC 6610 - Practicum in Music Performance  
1-4 credits  
Provides the graduate student with insight into advanced techniques and methods of preparing music ensembles for performance by rehearsing one of the University ensembles on assigned musical selections while being critiqued by the ensemble director.  
Repeatable for credit  
Semester(s) Traditionally Offered: Fall, Spring  

MUSC 6620 - Seminar in Musical Literature  
2 credits  
Designed to study and internalize principal forms of music through discussion of historical evolution and stylistic characteristics of the periods of music. Embraces significant choral functions of every style period.  
Semester(s) Traditionally Offered: Spring, Summer  

MUSC 6630 - Individual Instruction for Graduates  
1-2 credits  
Includes 60-minute lessons for either 1 or 2 credits. Number of credits granted depends upon practice time and extent of literature required. Designed to give graduate students private instruction at any and all stages of advancement.  
Prerequisite/Restriction: Instructor permission  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring  
Course Fee: $464.00  

MUSC 6900 - Independent Study  
1-6 credits  
Advanced course designed to meet specific problems of the music educator and the applied music specialist.  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

MUSC 6910 - Individual Recital  
1-3 credits  
Preparation and presentation of graduate recital, under supervision of major professor.  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

MUSC 6970 - Research and Thesis  
2-6 credits  
Individual work in thesis writing with guidance and criticism.  
Repeatable for credit.  
Pass/Fail only.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

NEPA 6200 - How to Manage the NEPA Process and Write Effective NEPA Documents  
2 credits  
Introduction to National Environmental Policy Act (NEPA) and the Council on Environmental Quality regulations. Explores various levels of NEPA documentation and the skills necessary to identify the actions needed for a thorough environmental analysis.
NEPA 6210 - Clear Writing for NEPA Specialists
2 credits
Teaches how to identify the writing and editing requirements unique to NEPA documents, including making graphics, writing chapters, and reviewing documents for accuracy.

NEPA 6220 - Reviewing NEPA Documents
2 credits
Focuses on how to review the full range of NEPA documents, including Environmental Impact Statements (EISs), Environmental Assessments (EAs), Findings of No Significant Impacts (FONSI), and Records of Decisions.

NEPA 6230 - Risk Communication for NEPA Specialists: Strategies and Implementation
1 credit
Explains meaning and application of risk communication. Explores full range of response communication, including development of a communication plan and strategy, standing before an audience, and responding to comments in writing.

Effective Term
Summer 2016

NEPA 6260 - Cultural and Natural Resource Management
2 credits
Identifies stewardship responsibilities included in major cultural and natural resource laws and regulations, including the Endangered Species Act and National Historic Preservation Act. Surveys cultural and natural resource legal compliance steps, and reviews how to integrate compliance into the agency mission.

NEPA 6270 - Environmental Compliance Overview
1 credit
Explores why environmental compliance is not only desirable and necessary, but is also a personal responsibility. Identifies key laws and regulations, with associated penalties affecting environmental compliance.

NEPA 6280 - Interdisciplinary Team Building
1 credit
Teaches general principles of interdisciplinary team building. Explores how information flows and how this can impact the success of a team. Students work as a team to apply the principles learned to scenarios of day-to-day actions.

NEPA 6300 - Effective Environmental Contracting
1 credit
Presents a systematic approach to the writing and reviewing of environmental Statements of Works (SOWs). Providing hands-on experience, course includes case studies and examples applying to actual environmental projects.

NEPA 6310 - NEPA Writing for Technical Specialists
1 credit
Designed to teach students how to use a “document management process” to become more efficient writers of NEPA documents.

NEPA 6320 - NEPA: Cumulative Impacts
1 credit
Explores scoping and public involvement strategies leading to sound cumulative impact analysis. Students assess various impact methodologies and learn to record cumulative impact information in ways that support clear, legally sufficient EAs/EISs.

NEPA 6330 - Conflict Management in the NEPA Process
1 credit
Trains students in NEPA conflict negotiation and management. Includes introduction to the nature of public conflict and management styles, along with environmental negotiation techniques.

NEPA 6350 - Socio-economic Impact Analysis for NEPA Specialists
1 credit
Provides students with necessary tools (templates, checklists, and materials) and knowledge (including data analysis) for conducting an effective socio-economic impact analysis, as required by NEPA and CEQ regulations.

NEPA 6360 - Overview of the Endangered Species Act
1 credit
NEPA 6370 - NEPA Capstone Experience
1 credit

Consists of a project, internship, or comprehensive examination to be negotiated by the student, based upon opportunities available at the time and preferences of the student. Helps USU to certify that students receiving the certificate have basic mastery of the material presented in the program coursework.

NEPA 6380 - NEPA Process Management
1 credit

Focuses on teaching students to be effective team leaders by understanding how to control the process of project and plan development. Introduces students to various models on time management, project management, team management, and decision-making methods. Students also learn how to frame problems in such a way that they can more clearly identify alternative solutions and develop cause-and-effect models showing how their actions impact resources.

NEPA 6390 - NEPA Climate Change Analysis
1 credit

Introduction to climate change in the NEPA analysis process. Discussion of science of climate change and impacts in regard to greenhouse gas emissions. Takes into account the effects of climate change on projects, as well as the resources that projects may impact. Students learn to use various methods for analyzing impacts and are exposed to several case studies and court decisions. Also includes guidance on preparation of legally adequate climate change analysis documents.

Natural Resources

NR 1010 - Humans and the Changing Global Environment (BSS)
BSS Breadth Social Sciences
3 credits

Introduction to historical nature and extent of human environmental transformation at global and regional levels. Examination of how socio-economic, political, and scientific factors influence past and current perceptions, use and conservation of natural environments in Western and other cultures, and future options available. For availability, check with the S.J. and Jessie E. Quinney College of Natural Resources Dean’s Office.

NR 4250 - Natural Resources Capstone Experience for Interdisciplinary Studies and General Studies
1-3 credits

Designed to synthesize the techniques, tools, and information learned in the individual program of study. Capstone experiences can include internships, service learning opportunities, undergraduate research, or other approved experiences.

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6430 - Natural Resource and Environmental Policy Cornerstone Seminar
3 credits

Interdisciplinary, team-taught cornerstone course for the Natural Resource and Environmental Policy Graduate Certificate Program. Introduces different disciplinary perspectives for analyzing natural resource and environmental policies and decision-making processes. Helps students understand the role of science in policy-making and how to integrate information from contentious perspectives.

Semester(s) Traditionally Offered: Spring

NR 6450 - Natural Resource and Environmental Policy Presentation
1 credit

In their last year of graduate school, certificate candidates make a presentation on policy dimensions of thesis or dissertation, as part of this student seminar series. Students receive one semester credit for this presentation. For availability, check with the S.J. and Jessie E. Quinney College of Natural Resources Dean’s Office.

NR 6510 - Biophysical and Human Dimensions of Ecosystems
4 credits

Intensive two-week course introducing key biophysical and socio-economic concepts through exploration of important concepts central to ecosystem management. Examines how ecosystem management differs from traditional approaches to the management of natural resources.

Prerequisite/Restriction: Instructor permission
Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6520 - Structure and Function of Ecological and Social Systems
4 credits

Two-week course examining specific processes of landscape development. Establishes the relationship of landscape structure to vegetation and watersheds. Scale and pattern of ecosystems and classification studied at several scales.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6530 - Integrated Inventory, Analysis, and Assessment of Ecosystems
4 credits

Course participants develop techniques and skills for assessing the biophysical and socio-political environment. Participants gain an understanding of measurement, predicting future conditions, and decision-making techniques in ecosystem management.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6535 - Leadership for Natural Resources Professionals
2 credits

Online course for students pursuing the professional Master of Natural Resources (MNR) degree. Primary objective is to develop knowledge of leadership techniques in the context of natural resources management through readings, discussions, and position papers.

Semester(s) Traditionally Offered: Fall

NR 6540 - Ecosystem Management Implementation
4 credits

Participants develop an integrated ecosystem assessment of a landscape unit in a capstone exercise. Assessment conducted with an interdisciplinary team during a two-week period in the field.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6550 - Intensive Silviculture
3 credits

Topics for this two-week comprehensive course in silviculture include: stand development and density management; growth and yield; silvicultural systems and reproduction methods; economic evaluation of systems; and relationships between practices and forest health, harvest systems, and forest soils.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6560 - Fire and Fuels Management
4 credits

Two-week course evaluating fire and fuels management programs, which incorporate realistically projected changes in vegetation, fuels, and fire behavior over time. Participants inventory fuels and vegetation, predict fire behavior, and predict change in vegetation structure.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6570 - Ecological Foundations of Natural Resource Management
3 credits

The overall aim of this course is to make direct links between principles of ecological theory and applied aspects of natural resource management.

Semester(s) Traditionally Offered: Fall

NR 6580 - Data Analysis and Programming for Natural Resource Managers
3 credits

The purpose of this course is to provide working professionals seeking a master's degree in Natural Resources with an introduction to applied statistics and programming. To achieve this, we will use an open source (freely available) program called "R". Undergraduate level programming, statistics, and calculus would be helpful, but are not required.

Semester(s) Traditionally Offered: Spring
NR 6600 - Natural Resources Integrative Experience
1-6 credits

Under the direction of the student's supervisory committee, student completes an integrative capstone experience in his or her specialty. During their program of study, students not allowed to take this course for more than 6 credits.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6900 - Directed Studies
1-3 credits

Offers credit for special assignments, readings, seminars, and symposiums beyond regularly scheduled courses

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

NR 6910 - Geographic Information Systems for Natural Resource Applications
3 credits

This course is designed for graduate students who need an introduction to GIS software and applications. Students will learn how to acquire geospatial data from various web sources as well as develop an understanding of how spatial data is created and collected in the field.

Semester(s) Traditionally Offered: Fall, Spring

NR 6930 - Advanced GIS for Natural Resource Applications
3 credits

Builds proficiency in GIS applications to solve spatial problems. Topics include: coordinate systems, morphometric analyses, suitability modeling, DEM construction, model building, cluster and hotspot analyses, complex raster/vector analyses, error analysis to demonstrate data quality limitations and quantify accuracy of results.

NR 6940 - Principles of Remote Sensing of Natural Resources
3 credits

Introduction to the fundamental concepts and basic skills necessary for using remote sensing data, with particular focus on natural resources data, including vegetation and habitat classification, soil mapping and land use/land cover.

NR 6950 - Geospatial Analysis
3 credits

Students with a background in geographical information systems enhance their statistics, modeling, and data analysis skills, and are introduced to interpolation and simulation modeling techniques. Students also learn how the form and structure of GIS data shape the use of univariate and multivariate statistics to compare spatial data sets.

Prerequisite/Restriction: NR 6910 or equivalent

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

Navajo

NAV 1010 - Beginning Navajo for Native Speakers
3 credits

Designed to introduce the native Navajo speakers to the written orthography of the Navajo language. Emphasis will be on developing reading and writing skills.

Prerequisite/Restriction: Native Navajo speaker

Campus: USU Eastern only

NAV 1030 - Beginning Navajo for Non-Native Speakers
3 credits

Designed to help students achieve basic functional communication skills in the Navajo language. These skills include vocabulary, listening comprehension, pronunciation, reading, writing, and cultural awareness.

Campus: USU Eastern only

NAV 2010 - Intermediate Navajo for Native Speakers
3 credits

Continuation of NAV 1010. Students will continue developing their reading and writing skills. Students are expected to have a fundamental knowledge of vocabulary and Navajo orthography.

Prerequisite/Restriction: NAV 1010
Campus: USU Eastern only

**NAV 2030** - Intermediate Navajo for Non-Native Speakers  
3 credits

Continuation of NAV 1030. Students will continue to develop speaking fluency, listening comprehension, reading, and writing skills, comprehension, pronunciation, reading, writing, and cultural awareness.

Prerequisite/Restriction: NAV 1030

Campus: USU Eastern only

**NAV 2070** - Navajo Literacy for Native Speakers  
3 credits

Assists the Native Navajo speaker in building communication skills of reading, writing, and speaking the Navajo language. Special emphasis will be given to utilizing the computer in desktop publishing, personal historical, cultural, and educational materials.

Prerequisite/Restriction: Native Navajo speaker

Campus: USU Eastern only

**NAV 2080** - Advanced Navajo for Native Speakers  
3 credits

Assists the Native speaker of Navajo in building advanced writing skills. Emphasis will be given to developing curriculum materials to be used in the public school classroom setting. Curriculum and writing assignments will be done on the computer.

Prerequisite/Restriction: Native Navajo speaker and NAV 2070

Campus: USU Eastern only

**NAV 2988** - Special Problems  
1-3 credits

An elective course intended for advanced students. Students will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Navajo culture will also be emphasized. Significant reading and work outside of class are required.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Campus: USU Eastern only

**NAV 3040** - Navajo Literacy and Grammar for Native Speakers  
3 credits

Designed to develop advanced skills in the grammar, comprehension, reading, and writing of Navajo. Integrates Diné holistic teaching concepts in accordance with the “Hózhóógo liná” four-direction Diné philosophy of learning paradigm.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring

**NAV 3050** - Navajo Descriptive and Narrative Writing  
3 credits

Presents reading and writing in the genres of Navajo narration and description. Prepares students to take the Navajo Language Proficiency Exam, and integrates holistic teachings in accordance with the “Hózhóógo liná” four-direction Diné philosophy of learning paradigm.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

**NAV 4400** - Teaching Navajo as a Second Language  
3 credits

Addresses major issues in the teaching/learning of second languages, with emphasis on Navajo as taught in the public schools. Integrates Diné holistic teaching concepts in accordance with the “Hózhóógo liná” four-direction Diné philosophy of learning paradigm.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring

**NAV 4410** - Teaching Navajo to Native Speakers  
3 credits

Addresses major issues and methods in teaching Navajo literacy and Navajo language arts to native speakers of
Navajo. Integrates Diné holistic teaching concepts in accordance with the “Hózhóogo liná” four-direction Diné philosophy of learning paradigm.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

Nursing (USU Eastern)

NURS 1000 - Nursing Assistant
5 credits

This course is offered to the student who is interested in preparing for work in a long term facility as a nursing assistant. It meets federal and state requirements and allows the student to apply and test for certification as a Utah Certified Assistant. It is separate from the nursing program. Serves as an elective.

Campus: USU Eastern only

NURS 1005 - Basic Life Support for Health Care Providers
1 credit

Prepares health care givers with the knowledge to implement life support measures in a variety of health care settings. Student may obtain Level C certification through the American Heart Association. Serves as an elective.

Campus: USU Eastern only

NURS 1008 - Medical Terminology
2 credits

Provides students with the building blocks of basic medical language. Such understanding will facilitate learning of scientific and medical principles encountered during more advanced career preparation. Relationship of word parts to their anatomical counterparts will be studied. Rules for combining word parts into complete medical terms will be stressed. Accurate pronunciation and spelling of word parts and complete terms will be emphasized throughout the course.

Campus: USU Eastern only

NURS 1010 - Introduction to Nursing
2 credits

An introduction to modern nursing with an emphasis on exploring foundations of knowledge, skills and attitudes needed to be successful as a practical nurse.

Prerequisite/Restriction: CHEM 1110, CHEM 1115, and MATH 1050 or higher mathematics course or AP Calculus AB score of 3 or higher; admission to Practical Nursing program

Campus: USU Eastern

Semester(s) Traditionally Offered: Fall

NURS 1015 - Introduction to Health Care I
2 credits

Introduction into the health care professions. Includes orientation to the health care occupations, personal care management and study habits, medical terminology, history of health care, ethical and legal responsibilities, cultural aspects, health care systems, and roles and issues of health care. Therapeutic communication techniques and basic elements of nursing process will be introduced. Special concerns related to caring for pediatric and geriatric clients will be explored.

Campus: USU Eastern only

Semester(s) Traditionally Offered: Fall, Spring

NURS 1016 - Introduction to Health Care II
3 credits

During the second semester specific health care occupations will be explored. Professionals from many fields will introduce the students to the educational and licensure requirements, job opportunities, and other issues related to specific professions. Students will spend approximately 2/3 of the second semester in job shadowing experiences. Evaluations of the experiences by both the student and the professional will be included in the student’s grade.

Prerequisite/Restriction: NURS 1015

Campus: USU Eastern only

NURS 1020 - Fundamental Concepts of Nursing
4 credits

An introduction to the principles of basic nursing concepts, skills, and interventions required to provide safe, holistic care across the lifespan.
NURS 1030 - Fundamental Concepts of Nursing Clinical  
4  
Hands on clinical experiences applying the basic nursing concepts, skills and interventions acquired in the fundamentals course.

Prerequisite/Restriction: BIOL 2320, FCHD 1500, and Admission to Practical Nursing Program

Corequisite: BIOL 2420, NURS 1110, NURS 1020

Campus: USU Eastern  
Semester(s) Traditionally Offered: Fall  
Effective Term  
Spring

NURS 1042 - Nursing Family Care 1  
1  
Focus on the nursing process as it relates to reproduction with emphasis on providing nursing care for mother, newborn, and family.

Prerequisite/Restriction: Admission to the practical nursing program

Campus: USU Eastern  
Semester(s) Traditionally Offered: Fall  
Effective Term  
Fall 2016

NURS 1110 - Pharmacology  
1 credits  
Basic principles of medication administration with emphasis on competency and safe pharmacological treatment.

Prerequisite/Restriction: BIOL 2420 with a B- or higher, admission to the Practical Nursing Program

Corequisite: NURS 1020, NURS 1030 and BIOL 2420

Campus: USU Eastern  
Semester(s) Traditionally Offered: Fall  
Effective Term  
Fall 2016

NURS 1115 - Pharmacology Lab  
1 credit  
This elective course provides additional activities and resources to support the theoretical principles regarding the administration of medications. The instructor leads the discussion of pharmacological concepts. In addition, the student uses self-study and web-based activities to examine pre-test results, develop a study plan, and complete a post-test that supports course outcomes.

Corequisite: NURS 1110

Campus: USU Eastern  
Semester(s) Traditionally Offered: Fall

NURS 1122 - Nursing Family Care 2  
1  
Focus on the nursing process as it relates to reproduction with emphasis on providing nursing care for mother, newborn, and family.

Prerequisite/Restriction: NURS 1042

Campus: USU Eastern  
Semester(s) Traditionally Offered: Spring  
Effective Term  
Fall 2016

NURS 1220 - Nursing Process 1  
3 credits  
Expands concepts learned in fundamentals course with increased emphasis on professionalism, critical thinking, and the nursing process.

Prerequisite/Restriction: NURS 1010, NURS 1020, NURS 1030, NURS 1040

Corequisite: NURS 1230, BIOL 2060

Campus: USU Eastern
NURS 1230 - Nursing Process 1 Clinical
4

Hands on clinical experiences with increased emphasis on developing competency in nursing process, skills, and interventions.

Prerequisite/Restriction: NURS 1010, NURS 1020, NURS 1030, NURS 1110

Corequisite: NURS 1220, BIOL 2060

Campus: USU Eastern
Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2016

NURS 1240 - Pharmacology 2
1

Principles related to holistic application of pharmacological and non-pharmacological care are applied to practice. Emphasis is placed on promoting health and safety.

Prerequisite/Restriction: NURS 1110

Campus: USU Eastern
Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2016

NURS 2020 - Nursing Process 2
5 credits

This course is designed to develop more in-depth knowledge and enables the student to provide care at the ADN level. Content focuses on critical thinking and problem solving skills, assessing human responses, establishing nursing diagnoses, and determining priorities for the implementation and evaluation of holistic nursing care, as well as functioning as a member of the interdisciplinary team. NANDA domains focus include: Health Promotion, Comfort, Activity/Rest, Safety/Protection.

Prerequisite/Restriction: CHEM 1110, CHEM 1115, and MATH 1050 or higher mathematics course or AP Calculus AB score of 3 or higher

Corequisite: NURS 2030 and NURS 2120

Campus: USU Price, Blanding, and Vernal
Semester(s) Traditionally Offered: Fall

NURS 2030 - Nursing Process 2 Clinical
5 credits

Service Learning
This clinical experience allows the AD nursing student to integrate theoretical knowledge with clinical application. The student is expected to demonstrate increased application of nursing care, and increased proficiency in the use of the nursing process. Clinical experiences include participation in acute care settings and community health care agencies.

Prerequisite/Restriction: CHEM 1110, CHEM 1115, and MATH 1050 or higher mathematics course or AP Calculus AB score of 3 or higher

Corequisite: NURS 2020 and NURS 2120

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

NURS 2120 - Family Nursing II
1 credit

This course is designed to address nursing care needs of the new family during the child birthing process. It builds upon theoretical concepts and skills of previous coursework. Family needs are addressed through the use of critical thinking and problem solving which address the holistic needs of the mother, father, and the newborn. The NANDA domains of Sexuality and Role Relationships provide the basis for nursing concepts, but other domains are included as appropriate.

Prerequisite/Restriction: CHEM 1110, CHEM 1115, and MATH 1050 or higher mathematics course or AP Calculus AB score of 3 or higher

Corequisite: NURS 2020 and NURS 2120

Campus: USU Price, Blanding, and Vernal
Semester(s) Traditionally Offered: Fall

NURS 2140 - Advanced Family Nursing Care 1
1
Holistic higher-level critical thinking and problem solving in complex nursing care for mother, newborn, and family.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

NURS 2220 - Manager of Care
5

Develop nursing leadership and professionalism in complex health alterations throughout the lifespan.

Prerequisite/Restriction: NURS 2020, NURS 2030, NURS 2120

Corequisite: NURS 2230

Campus: USU Price, Blanding, and Vernal
Semester(s) Traditionally Offered: spring
Effective Term
Fall 2016

NURS 2230 - Manager of Care Clinical
5

Hands on higher level clinical experiences to promote proficiency in nursing care with an emphasis on developing autonomy, management, and leadership.

Prerequisite/Restriction: NURS 2020, NURS 2030, NURS 2120

Corequisite: NURS 2220

Campus: USU Price, Blanding, and Vernal
Semester(s) Traditionally Offered: spring
Effective Term
Fall 2016

NURS 2240 - Advanced Family Nursing Care 2
1

We are adding this course to our nursing program in order to help students better grasp the concepts related to maternal health nursing care. Scores in this area have been low on the national boards and we hope to improve these by changing our curriculum.

Prerequisite/Restriction: NURS 2020, NURS 2030, NURS 2120

Semester(s) Traditionally Offered: Spring
Effective Term
“Fall”, “Spring”

NURS 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job experience for students in most aspects of nursing, record keeping and laboratory procedures. Students establish learning objectives, hours to be worked, and a credit agreement with the faculty/coordinator at the beginning of the semester. Students then meet with the faculty/coordinator to review progress.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Price, Blanding, and Vernal

NURS 2988 - Special Problems
1-3 credits

Individual or group work project relevant to nursing knowledge base arranged between a nursing faculty member and the student. Students establish learning objectives and goals, and a credit agreement with the faculty/coordinator at the beginning of the semester. Students then meet periodically with the faculty/coordinator to review progress.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Campus: USU Price, Blanding, and Vernal

NURS 3010 - Nursing Health Assessment
1 credit

Assessment and interconnectedness of cultural, emotional, environmental, physiologic, psychological, spiritual health throughout the lifespan. Using evidence-based methods for collecting and interpreting data to foster person-centered and culturally appropriate care.

Prerequisite/Restriction: Acceptance into BSN program
Semester(s) Traditionally Offered: Fall
Effective Term
Fall
NURS 3015 - Nursing Health Assessment Practicum
1 credit
Application and practice of comprehensive and focused assessment of individuals throughout the lifespan.
Prerequisite/Restriction: Acceptance in BSN Program
Semester(s) Traditionally Offered: Fall
Effective Term
Fall

NURS 3020 - Fundamentals of Nursing
2 credits
Builds a theoretical basis for nursing skills, medical terminology, medication calculation, nursing process, health promotion, and interprofessional communication related to holistic care of diverse people.
Prerequisite/Restriction: Accepted into BSN Program
Semester(s) Traditionally Offered: Fall
Effective Term
Fall

NURS 3025 - Fundamentals of Nursing Practicum
2 credits
Application and practice of nursing skills, medical terminology, medication calculation, nursing process, health promotion, and interprofessional communication related to holistic care of diverse people.
Interprofessional communication will focus on person-centered care planning and documentation using electronic medical records.
Prerequisite/Restriction: Accepted into BSN Program
Semester(s) Traditionally Offered: Fall
Effective Term
Fall

NURS 3030 - Nursing Management of Care I
4 credits
Nursing care of adult clients with a focus on wellness, restoring of health, and end of life care. Enhancing critical thinking and communication knowledge and skills necessary to provide holistic, person-centered care for diverse clients in various settings.
Prerequisite/Restriction: Accepted into BSN Program
Semester(s) Traditionally Offered: Fall
Effective Term
Fall

NURS 3035 - Nursing Management of Care I Practicum
3 credits
Application within a variety of settings of nursing care of adult clients with a focus on wellness, restoring health, and end of life care. Enhancing critical thinking and communication knowledge and skills necessary to provide holistic, person-centered care for diverse clients in various settings.
Prerequisite/Restriction: Accepted into BSN Program
Semester(s) Traditionally Offered: Fall
Effective Term
Fall

NURS 3040 - Pharmacology in Health Care
3 credits
Nursing care of adult clients with a focus on wellness, restoring of health, and end of life care. Enhancing critical thinking and communication knowledge and skills necessary to provide holistic, person-centered care for diverse clients in various settings.
Prerequisite/Restriction: Accepted into BSN Program
Semester(s) Traditionally Offered: Fall
Effective Term
Fall

NURS 3210 - Population Health and Prevention
3 credits
Provides theoretical and evidence-based strategies to improve the health and quality of life for populations within communities. Focuses on information pertaining to community assessment, epidemiology, finance, health education, environmental health, health policy, and legislation as it relates to the health care leader.
Prerequisite/Restriction: NURS 3010, NURS 3020, NURS 3025, NURS 3030, NURS 3035, and NURS 3040
Semester(s) Traditionally Offered: Spring
Effective Term
Spring
NURS 3220 - Family Nursing through the Lifespan
4 credits
Theoretical and evidence-based perspectives of care which promotes the health of families, women in the reproductive years, newborns, and children in a variety of settings.
Prerequisite/Restriction: NURS 3010, NURS 3015, NURS 3020, NURS 3025, NURS 3030, NURS 3035, and NURS 3040
Semester(s) Traditionally Offered: Spring

Effective Term
Spring
NURS 3225 - Family Nursing through the Lifetime Practicum
2 credits
Practical application of evidence-based, holistic nursing care of families, women in the reproductive years, newborns, and children, in a variety of settings.
Prerequisite/Restriction: NURS 3010, NURS 3015, NURS 3020, NURS 3025, NURS 3030, NURS 3035, and NURS 3040
Semester(s) Traditionally Offered: Spring

Effective Term
Spring
NURS 3230 - Evidence Based Health Care
3 credits
Focus on the use of research evidence in health care decision-making. Topics include analysis of health-related resources, biostatistics, and application of evidence-based practice to health care.
Prerequisite/Restriction: NURS 3010, NURS 3015, NURS 3020, NURS 3025, NURS 3030, NURS 3035, and NURS 3040
Semester(s) Traditionally Offered: Spring

NURS 3240 - Health Information Management & Technology
2 credits
Emphasis on the use of health informatics principles to transform data and information into knowledge to assure safe care. The course will include emerging informatics tools for practice, administration, research, education, quality improvement, and for population health.
Prerequisite/Restriction: NURS 3010, NURS 3015, NURS 3020, NURS 3025, NURS 3030, NURS 3035, and NURS 3040
Semester(s) Traditionally Offered: Spring

Effective Term
Fall
NURS 4010 - Leadership, Management, and Policy in Health Care
4 credits
Evidence-based knowledge of leadership and management theories and concepts to prepare professional nurses to function in a variety of health care settings. Includes emphasis on ethics, finance, health outcomes, organizational theory, personal career development, role transition, quality, and values.
Prerequisite/Restriction: NURS 3210, NURS 3220, NURS 3225, NURS 3230, and NURS 3240
Semester(s) Traditionally Offered: Fall

Effective Term
Spring
NURS 4015 - Leadership, Management, and Policy in Health Care Practicum
2 credits
Application of leadership and management theories and concepts in the clinical environment.
Prerequisite/Restriction: NURS 3210, NURS 3220, NURS 3225, NURS 3230, and NURS 3240
Semester(s) Traditionally Offered: Fall
NURS 4020 - Nursing Management of Care II
4 credits
Nursing care of aging adult with an emphasis on acute and chronic health problems as well as end of life issues. There is an emphasis on the communication, critical thinking, patient safety, and use of evidence in leading holistic, person-centered care for diverse individuals.

Prerequisite/Restriction: NURS 3210, NURS 3220, NURS 3225, NURS 3230, and NURS 3240

Semester(s) Traditionally Offered: Fall
Effective Term
Spring

NURS 4215 - Nursing Capstone Practicum
4 credits
Clinical application of the role of the professional nurse with a focus on interdisciplinary collaboration.

Prerequisite/Restriction: NURS 4010, NURS 4015, NURS 4020, and NURS 4025

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

PSY 7395 - Externship in Child/Adolescent Psychology
1 credit
Students in the course are engaged in applied training experiences (generally paid) across a variety of practice settings focused on child and/or adolescent assessment and/or intervention. Student goals and objectives are developed individually with program faculty and on-site supervisors. Students must complete a competency evaluation form with their supervisor and submit their contact hours (direct, indirect, and supervision) to receive a grade in the course.

Prerequisite/Restriction: Successful completion of PSY 7350 and approval of Combined Clinical/Counseling Program faculty. On rare occasion, students may take the course while enrolled in 7350 with Combined Program faculty approval
Repeatable

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring

NURS 4025 - Nursing Management of Care II Practicum
4 credits
Application of nursing care of aging adult with an emphasis on acute and chronic health problems as well as end of life issues. There is an emphasis on the communication, critical thinking, patient safety, and use of evidence in leading holistic, person-centered care for diverse individuals.

Prerequisite/Restriction: NURS 3210, NURS 3220, NURS 3225, NURS 3230, and NURS 3240

Semester(s) Traditionally Offered: Fall
Effective Term
Spring

NURS 4210 - Nursing Capstone
2 credits
Focus on theory and application of principles related to the professional nursing role, with emphasis on the application of holistic nursing principles, evidence and theory in the care of diverse people and populations.

Prerequisite/Restriction: NURS 4010, NURS 4015, NURS 4020, and NURS 4025

Semester(s) Traditionally Offered: Spring
NDFS 1010 - Chocolate: Science, History, and Society (BPS)
BPS Breadth Physical Sciences
3 credits
This course will introduce students to the science behind chocolate manufacturing. The course will focus on physical and scientific concepts behind chocolate making and will tie these concepts to the history and social impacts associated with this high-value product.

NDFS 1020 - Science and Application of Human Nutrition (BLS)
BLS Breadth Life Sciences
3 credits
Role of dietary choices in providing nutrients and their relationship to the social, mental, and physical well-being of people. How to evaluate nutritional status with personal data using computer diet analysis program.

NDFS 1030 - Introduction to Dietetics
1 credit
Overview of Registered Dietitian Nutritionist education pathways and requirements including: educational requirements and options for completion; requirements for acceptance to the Dietetics Programs at USU; requirement for Registration by the Commission on Dietetic Registration (CDR).

NDFS 1050 - Food Safety Manager Certification
0.5 credit
Covers food safety information required by the Utah Food Safety Manager Certification Act. Includes role of food handlers in controlling food-borne disease, time-temperature, employee hygiene, sanitation methods, preventing contamination from time of purchase to time of serving, food service facilities/equipment, and HACCP.

NDFS 1250 - Sanitation and Safety
3 credits
Principles of sanitation and safety applied to food operations. Emphasizes personal hygiene habits and food handling practices that protect the health and safety of employees and consumers.

NDFS 1260 - Food Literacy
3 credits
Challenges students to take reasoned and justified action in the home, community, and world related to food from the ground up.

NDFS 2020 - Nutrition Throughout the Life Cycle
3 credits
Application of nutrition principles to the human life cycle: nutrient functions, needs, sources, and alterations during pregnancy, lactation, growth, development, maturation, and aging.

NDFS 3020 - Nutrition and Physical Performance
2 credits
Includes information on macro/micronutrient metabolism during exercise, specific problems experienced by athletes or highly active persons, myths, ergogenic aids, and current interests.
Semester(s) Traditionally Offered: Fall
NDFS 3070 - Science of Food Preparation
4 credits
Science principles underlying modern food theory and practice. Relation of physical and chemical properties of food components and their systems to food preparation.
Prerequisite/Restriction: CHEM 1120 or CHEM 2300 or CHEM 2310

Semester(s) Traditionally Offered: Spring
Course Fee: $24.00
NDFS 3110 - Food, Technology, and Health (DSC)
DSC Depth Life and Physical Sciences
3 credits
Impact of food technology on food spoilage, food preservation, food quality, and foodborne diseases. Basic processing operations and regulations ensuring a safe food supply.
Prerequisite/Restriction: University Studies Breadth Life Sciences (BLS) course

Semester(s) Traditionally Offered: Fall
Course Fee: $5.00
NDFS 3600 - Medical Terminology for Health Care Professionals
2 credits
Internet-based course teaches medical terminology by focusing on medical word-building rules, prefixes, suffixes, and whole-body terminology related to human body systems. Also includes coverage of anatomy, pathological conditions, and diagnostic treatments and procedures.

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016
NDFS 4020 - Advanced Nutrition
3 credits
Structures, properties, and metabolism of protein, lipids, carbohydrates, vitamins, and minerals. Includes digestion, absorption, hormonal control, cellular biochemistry, metabolic interrelationships, excretion, etc.
Prerequisite/Restriction: NDFS 1020, CHEM 3700, BIOL 2420

Semester(s) Traditionally Offered: Fall
NDFS 4040 - Dairy Foods
3 credits
Explores manufacture of various dairy foods, including pasteurized milk, UHT milk, cream, cheddar cheese, cottage cheese, process cheese, yogurt, butter, and milk and whey powders. Three lectures and one lab.
Prerequisite/Restriction: Enrollment in Animal, Dairy and Veterinary Sciences major

Semester(s) Traditionally Offered: Fall
Course Fee: $20.00
NDFS 4050 - Education and Counseling Methods in Dietetics I (CI)
CI Communications Intensive
2 credits
Principles of education, counseling, and communication as applied to the field of nutrition education and clinical dietetics practice. Prerequisite: Junior level in Coordinated or Didactic Program in Dietetics.
Corequisite: NDFS 4550.

Semester(s) Traditionally Offered: Fall
Course Fee: $120.00
NDFS 4060 - Education and Counseling Methods in Dietetics II (CI)
CI Communications Intensive
2 credits
Continuation of NDFS 4050.
Prerequisite/Restriction: NDFS 4050
Corequisite: NDFS 4560.

Semester(s) Traditionally Offered: Spring
Course Fee: $200.00
NDFS 4250 - Culinary Skills and Management Rotation
3-9 credits
Internship experience in various food service settings. Specific locations and durations to be arranged by instructor.

Prerequisite/Restriction: Junior standing

Repeatable for credit

NDFS 4420 - Nutrition Research Methodology (QI)
QI Quantitative Intensive
2 credits

Development of experimental design, data collection, statistical analysis, interpretation, and presentation of results. Clinical, community, and management data analysis. Interpretation and presentation, including benchmarking, cost/benefit analysis, and continuous quality improvement projects. Enrollment limited to seniors within the Coordinated Program in Dietetics (CPD) or Didactic Program in Dietetics (DPD).

Prerequisite/Restriction: STAT 1040 or higher, MATH 1050

Semester(s) Traditionally Offered: Spring

NDFS 4440 - Fundamentals of Food Engineering (QI)
QI Quantitative Intensive
4 credits

Engineering concepts taught in a fundamental sense and applied to food processing. Concepts include: general problem solving techniques, material and energy balances, fluid dynamics, heat transfer, refrigeration, and kinetics of common biological processes used in food preparation.

Prerequisite/Restriction: PHYS 2110

Semester(s) Traditionally Offered: Fall

Course Fee: $10.00

NDFS 4450 - Clinical Nutrition I Lab
1 credit

Supplement to NDFS 4550. Explores application of nutrition care process to medical case studies.

Semester(s) Traditionally Offered: Fall

Course Fee: $20.00

NDFS 4460 - Clinical Nutrition II Lab
1 credit

Supplement to NDFS 4560. Explores application of nutrition care process to medical case studies.

Semester(s) Traditionally Offered: Spring

NDFS 4480 - Community Nutrition
3 credits

Introduction to public health nutrition, food programs, and national nutrition monitoring.

Prerequisite/Restriction: NDFS 1020

Semester(s) Traditionally Offered: Fall

Course Fee: $20.00

NDFS 4490 - Community Nutrition Experience I
2 credits

Practical experience in community nutrition. Integration and application of material learned in NDFS 4480.

Corequisite: NDFS 4480

Semester(s) Traditionally Offered: Fall

Course Fee: $500.00

NDFS 4500 - Community Nutrition Experience II
2 credits

Practical experience in community nutrition. Integration and application of material learned in NDFS 4480.

Prerequisite/Restriction: NDFS 4480

Semester(s) Traditionally Offered: Spring

Course Fee: $500.00

NDFS 4550 - Medical Nutrition Therapy I
4 credits

Introduction to the profession of dietetics, assessment of nutrition status, and nutrition care planning. Pathophysiology of disease states and applied medical nutrition therapy.

Prerequisite/Restriction: CHEM 3700 enrollment restricted to Nutrition and Food Sciences majors only

Semester(s) Traditionally Offered: Fall
NDFS 4560 - Medical Nutrition Therapy II (CI)
CI Communications Intensive
4 credits

Continuation of NDFS 4550.
Prerequisite/Restriction: NDFS 4550

NDFS 4570 - Clinical Nutrition Experience I
1 credit

Practical experience in health care facilities. Integration and application of material learned in NDFS 4550.
Corequisite: NDFS 4550.
Prerequisite/Restriction: Acceptance into Coordinated Program in Dietetics

NDFS 4580 - Clinical Nutrition Experience II
2 credits

Continuation of NDFS 4570.NDFS 4560
Prerequisite/Restriction: NDFS 4570

NDFS 4660 - Medical Dietetics (CI)
CI Communications Intensive
12 credits

In-depth study of nutrition relationships in disease development and treatment with clinical experience in medical facilities in Salt Lake City.
Prerequisite/Restriction: NDFS 4550, NDFS 4560, NDFS 4570, NDFS 4580

NDFS 4710 - Food Service Systems
2 credits

Principles of food preparation applied to large quantity production, menu planning, food selection, storage, and equipment.
Prerequisite/Restriction: NDFS 1260, NDFS 1250, and NDFS 3070

NDFS 4720 - Food Service Organization and Management (QI)
QI Quantitative Intensive
2 credits

Principles of organization, management theory, financial controls, human and labor relations, employee training, layout, and sanitation.
Prerequisite/Restriction: NDFS 4710

NDFS 4730 - Food Service Systems Lab
2 credits

Prerequisite/Restriction: NDFS 1260 and acceptance into Coordinated Program in Dietetics

NDFS 4740 - Food Service Organization and Management Lab
2 credits

Practical experience in food service management. Integration and application of NDFS 4720.
Prerequisite/Restriction: NDFS 4730
Corequisite: NDFS 4720.
NDFS 4750 - Transition to Professional Practice
2 credits

Application of dietetics in research and professional development.

Prerequisite/Restriction: Must be enrolled in final year in Coordinated Program in Dietetics (CPD) or Didactic Program in Dietetics (DPD)

Semester(s) Traditionally Offered: Spring
Course Fee: $100.00

NDFS 4760 - Transition to Professional Practice Lab
1-2 credits

Application of dietetics in research and professional development.

Prerequisite/Restriction: Must be enrolled in final year in Coordinated Program in Dietetics (CPD) or Didactic Program in Dietetics (DPD)

Semester(s) Traditionally Offered: Spring
Course Fee: $300.00

Effective Term
Summer 2016

NDFS 4780 - Maternal and Child Nutrition (CI)
CI Communications Intensive
2 credits

Clinical nutrition requirements in pregnancy, lactation, and pediatrics. Includes interventions for high risk populations.

Prerequisite/Restriction: NDFS 4550

Semester(s) Traditionally Offered: Spring
Course Fee: $40.00

NDFS 4790 - Maternal and Child Nutrition Lab
1 credit

Supervised practice of clinical nutrition requirements in pregnancy, lactation, and pediatrics. Includes interventions for high risk populations.

Prerequisite/Restriction: Concurrent enrollment in NDFS 4780

Semester(s) Traditionally Offered: Spring
Course Fee: $100.00

NDFS 4900 - Special Problems
1-4 credits

Individual problems and research problems in Nutrition and Food Sciences.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 5020 - Meat Technology and Processing
3 credits

Emphasizes understanding the conversion of muscle to meat, fabrication of carcasses into primal and retail cuts, and principles underlying manufacture of processed meats.

Cross-listed as: NDFS 6020.

Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

Effective Term
Summer 2016

NDFS 5025 - Meat Technology and Processing Laboratory
1 credits

Students will obtain hands on instruction and practical experience with harvest, evaluation, fabrication, and processing of meats.

Cross-listed as: NDFS 6025

Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2016

NDFS 5030 - Dairy Technology and Processing
3 credits

Covers biochemistry, microbiology, and technology of milk processing. Includes heat processing, fat separation, homogenization, concentration, drying, fermentation, freezing, and manufacture of dairy foods such as pasteurized milk, UHT milks, ice cream, cheeses, and yogurt.

Prerequisite/Restriction: NDFS 5110/NDFS 6110, NDFS 5560/NDFS 6560
Cross-listed as: NDFS 6030

Semester(s) Traditionally Offered: Fall
Course Fee: $20.00

NDFS 5040 - Dairy Foods Processing Laboratory
1 credit

Students obtain hands-on experience in the manufacture of various dairy foods and learn about processes such as cream separation, homogenization, pasteurization, sterilization, ultrafiltration and fermentation of milk.

Cross-listed as: NDFS 6040

Semester(s) Traditionally Offered: Fall
Course Fee: $200.00

NDFS 5100 - Sensory Evaluation of Food (QI)
QI Quantitative Intensive
3 credits

Design and implementation of sensory testing of foods. Emphasizes physiology of senses, testing methods, statistical analysis, and taste panel experience.

Prerequisite/Restriction: STAT 3000

Cross-listed as: NDFS 6100.

Semester(s) Traditionally Offered: Spring
Course Fee: $95.00

NDFS 5110 - Food Microbiology (CI)
CI Communications Intensive
3 credits

Microorganisms in food spoilage, poisoning, preservation, and sanitation.

Prerequisite/Restriction: BIOL 2060 or BIOL 3300

Cross-listed as: NDFS 6110

Semester(s) Traditionally Offered: Spring
Course Fee: $60.00

NDFS 5170 - Food Safety & Quality
1-3 credits

Explores modern issues and programs of safety and quality assurance used in the food industry, including Good Manufacturing Practices (GMP), sanitation, Hazard Analysis and Critical Control Points (HACCP), and Safe Quality Food (SQF).

Prerequisite/Restriction: NDFS 5110

Cross-listed as: NDFS 6170.

Repeatable for credit

Semester(s) Traditionally Offered: Summer

NDFS 5200 - Nutritional Epidemiology
3 credits
Introduction to epidemiologic methods and their application to the study of nutrition, human health, and disease. Useful for students with career interests in nutrition, food sciences, dietetics, human health sciences, veterinary sciences, biology, public health, anthropology, social work, and public policy.

Prerequisite/Restriction: STAT 1040 or STAT 1045 or higher STAT class, NDFS 1020

Cross-listed as: NDFS 6200.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

NDFS 5210 - Advanced Public Health Nutrition (CI)
CI Communications Intensive
3 credits

Effects of diet on development and prevention of disease. Conditions of public health significance, including birth defects, coronary heart disease, hypertension, stroke, Alzheimer’s disease and other causes of dementia, cancer, osteoporosis, diabetes, and international health problems. Discussion of health concerns of minority populations, cross-cultural studies, government policy, and establishment of dietary recommendations.

Prerequisite/Restriction: STAT 1040 or STAT 1045 or higher STAT class, CHEM 1120 or higher

Cross-listed as: NDFS 6210

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

NDFS 5220 - Endocrine Aspects of Nutrition
3 credits

Provides physiological background into hormones involved in nutrient regulation, as well as mechanisms of hormone action at the cellular and molecular levels. Includes action of steroids in the nucleus and membrane-based signal transduction pathways. Course includes lectures and literature reviews/presentations.

Prerequisite/Restriction: CHEM 3700 or instructor permission

Cross-listed as: ADVS 5220 and BIOL 5220/ADVS 6220 and BIOL 5220/Biol 6220.

Semester(s) Traditionally Offered: Fall

NDFS 5230 - Communication of Current Topics in Nutrition (CI)
CI Communications Intensive
3 credits

Students will learn best practices for effective scientific communication using a variety of methods. Students will demonstrate communication skills by completing several assignments based on a current nutrition topic of their choice. An iterative write/review/revise approach will be used for assignments.

Cross-listed as: NDFS 6230

Semester(s) Traditionally Offered: Spring

NDFS 5250 - Occupational Experiences in Nutrition and Food Sciences
1-3 credits

On-the-job training.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 5260 - Methods in Biotechnology: Molecular Cloning
3 credits

Laboratory-oriented course designed to teach molecular biology techniques such as DNA cloning, genetic probes, polymerase chain reaction, and DNA sequencing.

Prerequisite/Restriction: CHEM 3700 or CHEM 5710; or BIOL 3060; or instructor permission

Cross-listed as: ADVS 5260 and BIOL 5260, and PSC 5260.

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

NDFS 5300 - Advanced Micronutrient Nutrition
3 credits

Explores the function, interaction, and practical significance of micronutrients in human metabolism and
the ability of the diet to meet these needs. Relates nutrient biochemical functions to specific deficiency symptoms.

Prerequisite/Restriction: NDFS 4020

Cross-listed as: NDFS 6300.

Semester(s) Traditionally Offered: Spring

NDFS 5310 - Fundamentals of Nutrition Research
3 credits

This course will instruct students on the theoretical, practical, and ethical aspects associated with the design, execution, and dissemination of pre-clinical and clinical nutrition research studies.

Prerequisite/Restriction: NDFS 4020

Cross-listed as: NDFS 6310

Semester(s) Traditionally Offered: Fall, Spring

NDFS 5320 - Advanced Sports Nutrition
3 credits

A detailed exploration of the evidence-based theoretical and applied aspects of sports nutrition delivered in an interactive online format. Students will read and discuss current peer-reviewed articles and apply information learned to nutrition prescriptions for athletes.

Prerequisite/Restriction: NDFS 3020 and NDFS 4020

Cross-listed as: NDFS 6320

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

NDFS 5370 - Nutrition and Immunology
2 credits

This course will explore the relationship of nutrition to either strengthen or weaken the immune system, including the effects of obesity, diabetes, allergies and autoimmune disease.

Prerequisite/Restriction: BIOL 2420 and CHEM 3700

Cross-listed as: NDFS 6370

Semester(s) Traditionally Offered: Fall

NDFS 5400 - Nutritional Neuroscience
3 credits

This course provides an integrated approach to examine the relationship between nutrition and brain function, and its role in human behavior, physiology and metabolism.

Prerequisite/Restriction: NDFS 1020, BIOL 2420, and CHEM 3700 As this is not intended to be an introductory course, students are expected to have a sound knowledge of basic nutrition, physiology, and biochemistry

Cross-listed as: NDFS 6400

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

NDFS 5410 - Nutrient Gene Interactions (CI)
CI Communications Intensive
3 credits

Focuses on molecular interactions between nutrients and mechanisms of gene expression, including transcriptional regulation, post-transcriptional regulation, and epigenetics. Emphasizes nutrient/gene interactions involved in the etiology or prevention of chronic disease, such as cancer, cardiovascular disease, and metabolic syndrome.

Prerequisite/Restriction: CHEM 3700

Cross-listed as: NDFS 6410

Semester(s) Traditionally Offered: Spring

NDFS 5420 - Molecular Nutrition Laboratory
2 credits

Explores modern molecular nutrition techniques for determining the influence of nutrients on gene regulation. Focuses on modern techniques commonly used in the field of molecular nutrition, including cell culture, mRNA isolation and quantification, western blotting, promoter cloning/mutation, and nutrient/trans factor interactions.

Prerequisite/Restriction: CHEM 3700
Cross-listed as: NDFS 6420.

Semester(s) Traditionally Offered: Spring
NDFS 5500 - Food Analysis (QI)
QI Quantitative Intensive
4 credits

Application and theory of physical, chemical, and instrumental techniques for determination of composition and quality of food.

Prerequisite/Restriction: NDFS 5560/NDFS 6560

Cross-listed as: NDFS 6500.

Semester(s) Traditionally Offered: Spring
Course Fee: $143.00
NDFS 5510 - Food Laws and Regulations
2 credits

Provides background of federal/state laws and regulations and case law history affecting food production, processing, packaging, marketing, and distribution of food products.

Cross-listed as: NDFS 6510.

Semester(s) Traditionally Offered: Spring
NDFS 5560 - Food Chemistry
4 credits

Chemical structure, properties, reactions, and interactions of the important chemical constituents of food.

Prerequisite/Restriction: CHEM 3700 and CHEM 3710, or NDFS 3070

Cross-listed as: NDFS 6560.

Semester(s) Traditionally Offered: Fall
Course Fee: $40.00
NDFS 5600 - Current Topics in Obesity
3 credits

Current and emerging topics in obesity research. Students will learn how to evaluate scientific papers, ask critical questions, and find research-based answers while becoming familiar with current research and seminal papers in the area of obesity.

Corequisite: NDFS 4020

Cross-listed as: NDFS 6600

Semester(s) Traditionally Offered: Fall
NDFS 5610 - Food and Bioprocess Engineering
3 credits

Standardization and compounding of biomaterials and food products; preservation processing using heat, refrigeration, concentration, and dehydration. Basic unit operations in the bioprocessing industry.

Prerequisite/Restriction: BENG 3200

Cross-listed as: NDFS 6610 and BENG 5610/BENG 6610.

Semester(s) Traditionally Offered: Spring
NDFS 5750 - Advanced Dietetics Practicum
1-6 credits

Advanced dietetics practicum in clinical nutrition, community nutrition, food service management, or research.

Prerequisite/Restriction: Must be enrolled in final year in Coordinated Program in Dietetics (CPD) or Didactic Program in Dietetics (DPD)

Cross-listed as: NDFS 6750.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $125.00 per credit
NDFS 5830 - International Nutrition: Macronutrients
3 credits

Explores principles and roles of macronutrients in causing malnutrition influencing health, survival, and developmental capacity of populations, especially in developing societies. Discussion of approaches implemented at household, community, national, and international levels to improve nutritional status.

Cross-listed as: NDFS 6830.

Semester(s) Traditionally Offered: Fall
NDFS 5920 - Food Product Development (CI)  
CI Communications Intensive  
3 credits

Capstone course that incorporates and unifies the principles of food chemistry, microbiology, engineering, processing, nutrition, sensory analysis, and statistics.

Prerequisite/Restriction: Senior standing NDFS 5100 or NDFS 6100, NDFS 5110 and NDFS 5560

Semester(s) Traditionally Offered: Fall  
Course Fee: $25.00

NDFS 6020 - Meat Technology and Processing  
3 credits

Emphasizes understanding the conversion of muscle to meat, fabrication of carcasses into primal and retail cuts, and principles underlying manufacture of processed meats.

Cross-listed as: NDFS 5020.

Semester(s) Traditionally Offered: Fall  
Course Fee: $50.00

NDFS 6025 - Meat Technology and Processing Laboratory  
1 credits

Students will obtain hands-on instruction and practical experience with harvest, evaluation, fabrication, and processing of meats.

Cross-listed as: NDFS 5025

Semester(s) Traditionally Offered: Fall  
Effective Term: Spring 2016

NDFS 6030 - Dairy Technology and Processing  
3 credits

Covers biochemistry, microbiology, and technology of milk processing. Includes heat processing, fat separation, homogenization, concentration, drying, fermentation, freezing, and manufacture of dairy foods such as pasteurized milk, UHT milks, ice cream, cheeses, and yogurt.

Prerequisite/Restriction: NDFS 6110/NDFS 5110, NDFS 6560/NDFS 5560

Semester(s) Traditionally Offered: Spring  
Course Fee: $95.00

NDFS 6040 - Dairy Foods Processing Laboratory  
1 credit

Students obtain hands-on experience in the manufacture of various dairy foods and learn about processes such as cream separation, homogenization, pasteurization, sterilization, ultrafiltration and fermentation of milk.

Cross-listed as: NDFS 5040

Semester(s) Traditionally Offered: Fall  
Course Fee: $200.00

NDFS 6050 - Community Nutrition Internship  
2-6 credits

Community nutrition supervised practice experience in both public health and school nutrition education. Rotations take place at government and other non-profit nutrition-related agencies and in elementary and secondary public schools.

Prerequisite/Restriction: Acceptance into USU Distance Dietetic Internship Program  
Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 6100 - Sensory Evaluation of Foods  
0 or 3 credits

Design and implementation of sensory testing of foods. Emphasizes physiology of senses, testing methods, statistical analysis, and taste panel experience.

Prerequisite/Restriction: STAT 3000

Cross-listed as: NDFS 5100.

Semester(s) Traditionally Offered: Spring  
Course Fee: $95.00

NDFS 6110 - Food Microbiology  
3 credits
Microorganisms in food spoilage, poisoning, preservation, and sanitation.

Prerequisite/Restriction: BIOL 2060 or BIOL 3300

Cross-listed as: NDFS 5110

Semester(s) Traditionally Offered: Spring

NDFS 6111 - Food Microbiology Laboratory
1 credit

Laboratory experiences working with microorganisms in food spoilage, poisoning, preservation, and sanitation.

Cross-listed as: NDFS 5111

Semester(s) Traditionally Offered: Spring

Course Fee: $30.00

NDFS 6150 - Principles of Food Sanitation
3 credits

This independent course will address sanitation and hygiene principles and their impact on food safety. It includes information on soils, cleaning compounds, sanitizers, cleaning equipment and regulations.

Prerequisite/Restriction: Completion or current enrollment in NDFS 5110 or NDFS 6110 and enrollment in the Masters Food Safety and Quality Program

Semester(s) Traditionally Offered: Fall

NDFS 6160 - Principles of Food Toxicology
3 credits

This independent study course will address the toxins and allergens in foods and their impact on food safety. It includes information on allergens, non-nutrient chemicals, genetically engineered foods, microbial toxins, plant toxins, pesticide residues, and food additives.

Prerequisite/Restriction: NDFS 5110 or NDFS 6110 and enrollment in the Masters Food Safety and Quality Program

Semester(s) Traditionally Offered: Spring

NDFS 6170 - Food Safety & Quality
1-3 credits

Explores modern issues and programs of safety and quality assurance used in the food industry, including Good Manufacturing Practices (GMP), sanitation, Hazard Analysis and Critical Control Points (HACCP), and Safe Quality Food (SQF).

Prerequisite/Restriction: NDFS 5110

Cross-listed as: NDFS 5170.

Repeatable for credit

Semester(s) Traditionally Offered: Summer

NDFS 6180 - Food Safety Inspection and Auditing
1-2 credits

This is an experiential course. Students will arrange to shadow regulatory and industry food safety inspectors (travel off-campus is required). The main objective is to understand and experience the contents and goals of different types of food safety inspections (local, state, industry audits.)

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 6200 - Nutritional Epidemiology
3 credits

Introduction to epidemiologic methods and their application to the study of nutrition, human health, and disease. Useful for students with career interests in nutrition, food sciences, dietetics, human health sciences, veterinary sciences, biology, public health, anthropology, social work, and public policy.

Prerequisite/Restriction: STAT 1040 or STAT 1045 or higher STAT class, NDFS 1020

Cross-listed as: NDFS 5200.

Semester(s) Traditionally Offered: Fall

Effective Term
Fall 2016

NDFS 6210 - Advanced Public Health Nutrition
3 credits

Effects of diet on development and prevention of disease. Conditions of public health significance, including birth defects, coronary heart disease, hypertension, stroke, Alzheimer’s disease and other causes of dementia, cancer, osteoporosis, diabetes, and international health
problems. Discussion of health concerns of minority populations, cross-cultural studies, government policy, and establishment of dietary recommendations.

Prerequisite/Restriction: STAT 1040, STAT 1045, or higher STAT class, and CHEM 1120 or higher

Cross-listed as: NDFS 5210

Semester(s) Traditionally Offered: Spring

NDFS 6220 - Endocrine Aspects of Nutrition
3 credits

Provides physiological background into hormones involved in nutrient regulation, as well as mechanisms of hormone action at the cellular and molecular levels. Includes action of steroids in the nucleus and membrane-based signal transduction pathways. Course includes lectures and literature reviews/presentations.

Prerequisite/Restriction: CHEM 3700 or instructor permission

Cross-listed as: NDFS 5220 and ADVS 6220/ADVS 5220 and BIOL 6220/BIOL 5220.

Semester(s) Traditionally Offered: Fall

NDFS 6230 - Communication of Current Topics in Nutrition
3 credits

Students will learn best practices for effective scientific communication using a variety of methods. Students will demonstrate communication skills by completing several assignments based on a current nutrition topic of their choice. An iterative write/review/revise approach will be used for assignments.

Cross-listed as: NDFS 5230

Semester(s) Traditionally Offered: Spring

NDFS 6250 - Clinical Nutrition Internship
2-10 credits

Clinical nutrition supervised practice experience in multiple healthcare areas including: medical, surgical, intensive care, cardiac, diabetes, renal disease, long-term care, rehab, and outpatient nutrition.

Prerequisite/Restriction: Acceptance into USU Distance Dietetic Internship Program

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 6300 - Advanced Micronutrient Nutrition
3 credits

Explores the function, interaction, and practical significance of micronutrients in human metabolism and the ability of the diet to meet these needs. Relates nutrient biochemical functions to specific deficiency symptoms.

Prerequisite/Restriction: NDFS 4020

Cross-listed as: NDFS 5300

Semester(s) Traditionally Offered: Spring

NDFS 6310 - Fundamentals of Nutrition Research
3 credits

This course will instruct students on the theoretical, practical, and ethical aspects associated with the design, execution and dissemination of pre-clinical and clinical nutrition research studies.

Prerequisite/Restriction: NDFS 4020

Cross-listed as: NDFS 5310

Semester(s) Traditionally Offered: Fall, Spring

NDFS 6320 - Advanced Sports Nutrition
3 credits

A detailed exploration of the evidence-based theoretical and applied aspects of sports nutrition delivered in an interactive online format. Students will read and discuss current peer-reviewed articles and apply information learned to nutrition prescriptions for athletes.

Prerequisite/Restriction: NDFS 3020 and NDFS 4020

Cross-listed as: NDFS 5320

Semester(s) Traditionally Offered: Fall

Effective Term

Fall 2017
NDFS 6350 - Food Service Management Internship  
2-12 credits

School food service management supervised practice experience in school districts that participate in the USDA school lunch program. Includes practice in purchasing, inventory control, food service, food production, marketing, and human resources.

Prerequisite/Restriction: Acceptance into USU Distance Dietetic Internship Program

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 6370 - Nutrition and Immunology  
2 credits

This course will explore the relationship of nutrition to either strengthen or weaken the immune system, including the effects of obesity, diabetes, allergies and autoimmune disease.

Prerequisite/Restriction: BIOL 2420 and CHEM 3700

Cross-listed as: NDFS 5370

Semester(s) Traditionally Offered: Fall

NDFS 6410 - Nutrient Gene Interactions  
3 credits

Focuses on molecular interactions between nutrients and mechanisms of gene expression, including transcriptional regulation, post-transcriptional regulation, and epigenetics. Emphasizes nutrient/gene interactions involved in the etiology or prevention of chronic disease, such as cancer, cardiovascular disease, and metabolic syndrome.

Prerequisite/Restriction: CHEM 3700

Cross-listed as: NDFS 5410

Semester(s) Traditionally Offered: Spring

NDFS 6420 - Molecular Nutrition Laboratory  
2 credits

Explores modern molecular nutrition techniques for determining the influence of nutrients on gene regulation. Focuses on modern techniques commonly used in the field of molecular nutrition, including cell culture, mRNA isolation and quantification, western blotting, promoter cloning/mutation, and nutrient/trans factor interactions.

Cross-listed as: NDFS 5420.

Semester(s) Traditionally Offered: Spring

NDFS 6500 - Food Analysis  
0 or 4 credits

Application and theory of physical, chemical, and instrumental techniques for determination of composition and quality of food.

Prerequisite/Restriction: NDFS 6560/NDFS 5560

Cross-listed as: NDFS 5500.

Semester(s) Traditionally Offered: Spring

Course Fee: $143.00

NDFS 6510 - Food Laws and Regulations  
2 credits

Provides background of federal/state laws and regulations and case law history affecting food production, processing, packaging, marketing, and distribution of food products.

Cross-listed as: NDFS 5510.

Semester(s) Traditionally Offered: Spring

NDFS 6560 - Food Chemistry  
4 credits

Chemical structure, properties, reactions, and interactions of the important chemical constituents of food.

Prerequisite/Restriction: CHEM 3700 and CHEM 3710, or NDFS 3070

Cross-listed as: NDFS 5560.

Semester(s) Traditionally Offered: Spring

Course Fee: $40.00
Nutrition, Dietetics, and Food Sciences

NDFS 6600 - Current Topics in Obesity
3 credits

Current and emerging topics in obesity research. Students will learn how to evaluate scientific papers, ask critical questions, and find research-based answers while becoming familiar with current research and seminal papers in the area of obesity.

Corequisite: NDFS 4020

Cross-listed as: NDFS 5600

Semester(s) Traditionally Offered: Fall

NDFS 6610 - Food and Bioprocess Engineering
3 credits

Standardization and compounding of biomaterials and food products; preservation processing using heat, refrigeration, concentration, and dehydration. Basic unit operations in the bioprocessing industry.

Prerequisite/Restriction: BENG 3200

Cross-listed as: NDFS 5610 and BENG 6610/BENG 5610.

Semester(s) Traditionally Offered: Spring

NDFS 6620 - Microbiology of Fermented Dairy Foods
1 credit

Explores the microbiology and physiology of dairy starter and nonstarter bacteria. Particular emphasis placed on important metabolic functions and biochemical pathways used by these microorganisms in food fermentations and their influence on product attributes.

Semester(s) Traditionally Offered: Spring

NDFS 6640 - Food Proteins
1 credit

Covers topics in protein structure, folding, functional properties, allergens, and purification.

Semester(s) Traditionally Offered: Fall

NDFS 6650 - Meat Science
2 credits

Structure of muscle tissue, chemistry of contraction and relaxation, factors affecting meat tenderness, and postmortem changes and their effect on meat quality.

Prerequisite/Restriction: CHEM 3700

Semester(s) Traditionally Offered: Summer

NDFS 6660 - Cheese Science
2 credits

Studies application of chemistry and microbiology to the manufacture of cheese.

Semester(s) Traditionally Offered: Summer

Course Fee: $200.00

NDFS 6670 - Food Biosecurity and Crisis Management
1 credit

Food biosecurity addresses the intentional contamination of a food product. Crisis management focuses on how a food company deals with a crisis situation; including product recalls, dealing with the media, and damage control.

Semester(s) Traditionally Offered: Fall

NDFS 6680 - Food Enzymes
2 credits

Covers topics in food enzymes, including enzyme classification and nomenclature, reaction kinetics, food applications, and immobilization technology.

Semester(s) Traditionally Offered: Fall

Course Fee: $20.00

NDFS 6690 - Genetics of Lactic Acid Bacteria
1 credit

Describes structural and functional characteristics of four major genetic elements described in lactic acid bacteria: plasmid DNA, transposable elements, bacteriophages, and the chromosome.

Prerequisite/Restriction: BIOL 3300 and CHEM 5700

Semester(s) Traditionally Offered: Spring
NDFS 6700 - Dairy Chemistry
2 credits

Students gain an understanding of the chemical structure, properties, biosynthesis, and reactions of the main constituents in milk. Students apply this knowledge to the development and processing of dairy foods.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

NDFS 6720 - Lipid Analysis and Metabolism
1 credit

Focuses on lipid analysis and metabolism. Discusses biological roles of lipid classes, as well as appropriate methods for their analysis. Additionally, covers biological role lipids play in health and disease.

Semester(s) Traditionally Offered: Fall

NDFS 6730 - Understanding Crystallization in Food Systems
2 credits

Introduces basic concepts of crystallization mechanisms, including theories governing the crystallization process and their applications in food systems. Emphasizes the importance of controlling crystallization and its influence on final product quality and stability.

Semester(s) Traditionally Offered: Spring
Course Fee: $60.00

NDFS 6740 - Waste and Energy Management
1 credit

Explores energy and waste management, including waste treatment methods and ways to reduce energy, or substitute with less-costly energy, in the food processing industry. Students learn through lectures, cooperative learning, site visits, and example problems.

Semester(s) Traditionally Offered: Fall

NDFS 6750 - Advanced Dietetics Practicum
1-6 credits

Advanced dietetics practicum in clinical nutrition, community nutrition, food service management, or research. Prerequisite: Must be enrolled in final year in Coordinated Program in Dietetics (CPD) or Didactic Program in Dietetics (DPD).

Cross-listed as: NDFS 5750.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 6760 - Special Topics in Nutrition and Food Science
1-3 credits

Selected topics in nutrition and food science, based on individual faculty interests.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 6770 - Advanced Management in Dietetics I
3 credits

First of a two part series meant to refine principles of management in the three practice areas of dietetics (clinical, food service management, and community nutrition programs) with an emphasis on School Nutrition Program Management.

Prerequisite/Restriction: Must be an MS candidate in dietetics or be eligible to take the national SFNS (School Food and Nutrition Service) exam

Semester(s) Traditionally Offered: Fall

NDFS 6780 - Advanced Management in Dietetics II
3 credits

Second of a two part series meant to refine principles of management in the three practice areas of dietetics (clinical, food service management, and community nutrition programs) with an emphasis on School Nutrition Program Management. To enroll students must be an MS candidate in dietetics or be eligible to take the national SFNS (School Food and Nutrition Service) exam.

Semester(s) Traditionally Offered: Spring

NDFS 6790 - Current Issues in Dietetics
3 credits

This course explores topics that are new or emerging in areas of dietetics practice and management. Focus includes current topics in ethics, research and policy development and applying these to dietetics management and practice.
Prerequisite/Restriction: Student in the MDA degree program

Effective Term
Spring 2017

NDFS 6830 - International Nutrition: Macronutrients
3 credits

Explores principles and roles of macronutrients in causing malnutrition influencing health, survival, and developmental capacity of populations, especially in developing societies. Discussion of approaches implemented at household, community, national, and international levels to improve nutritional status.

Cross-listed as: NDFS 5830.

Semester(s) Traditionally Offered: Fall

NDFS 6900 - Special Problems
1-4 credits

Individual problems and research problems for upper-division students in Nutrition and Food Sciences.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 6910 - Teaching Experiences in Nutrition and Food Sciences
1-2 credits

Students work with faculty in the Nutrition, Dietetics, and Food Sciences Department to gain experience in teaching.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 6970 - Thesis Research
1-12 credits

For students working on MS research.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

NDFS 6990 - Continuing Graduate Advisement
1-12 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 7800 - Seminar
1 credit

Reports and discussion on research and current literature.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

NDFS 7810 - Public Health Graduate Seminar
1

Public Health includes five core disciplines including (1) Biostatistics, (2) Epidemiology, (3) Environmental Health, (4) Social and Behavioral Public Health, and (5) Health Policy and Health Services Administration. This interdisciplinary seminar will engage graduate students and faculty across departments and colleges with common interests in the Public Health professions. Seminar material will include each of the five core areas of Public Health. Completed credits in this seminar will be required for students enrolled in the USU Master of Public Health graduate degree program. The seminar is also available for credit for other interested graduate students.

Prerequisite/Restriction: Current graduate student enrollment

Repeatable

Effective Term
Fall 2016

NDFS 7970 - Dissertation Research
1-12 credits

For students working on PhD research.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

NDFS 7990 - Continuing Graduate Advisement
1-12 credits

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Office Systems Support

OSS 1050 - Bookkeeping Essentials
3 credits

Overview of accounting concepts, with special emphasis on practical applications. Taught only as a special extension course as requested.

Semester(s) Traditionally Offered: Taught as requested
Effective Term
Fall 2015

OSS 1060 - Introduction to Personal Financial Planning
1-3 credits

Introduction to concepts of financial planning for individuals. Taught only as a special extension course as requested.

Semester(s) Traditionally Offered: Taught when requested
Effective Term
Fall 2015

OSS 1110 - Keyboarding
2

For students with no previous keyboarding experience. Designed so student can touch type and learn basic concepts related to word processing and document formatting.

Semester(s) Traditionally Offered: Taught as requested
Effective Term
Fall 2015

OSS 1400 - Microcomputer Applications
3

Introduction to operating systems, word processing, Internet, graphics, database, and spreadsheet applications.

Semester(s) Traditionally Offered: Taught as requested
Effective Term
Fall 2015

OSS 1410 - Special Topics
1-3

Selected topics related to using computers.

OSS 1420 - Word Processing Applications
3

Word processing software instruction designed for office applications. Emphasizes creating business documents and improving keyboarding skills. Assumes ability to keyboard by touch at a minimum of 50 wpm.

Semester(s) Traditionally Offered: Taught as requested
Effective Term
Fall 2015

OSS 1450 - Financial Software for Small Business Applications
3

Instruction in the use of small business accounting software.

Prerequisite/Restriction: OSS 1050 or equivalent

Semester(s) Traditionally Offered: Taught by request
Effective Term
Fall 2015

OSS 1550 - Business Correspondence
3

Development and application of effective business writing skills, emphasizing business correspondence. Includes thorough review of grammar, spelling, and punctuation related to business correspondence.

Semester(s) Traditionally Offered: Taught as needed
Effective Term
Fall 2015

OSS 2300 - Data Communications and Networking
3

Emphasizes data communications in a LAN and WAN networking environment. Includes network protocols, cable technology, telecommunications standards, security issues, and general telecommunications management issues.

Prerequisite/Restriction: OSS 1400
OSS 2400 - Web Design Applications
3
Design, development, and evaluation of documents for electronic media utilizing the worldwide web.
Prerequisite/Restriction: OSS 1400

OSS 2450 - Spreadsheets and Databases
3
Use of spreadsheets and databases to accomplish application development.
Prerequisite/Restriction: OSS 1400

OSS 2500 - Visual Basic Applications
3
Designed to teach nontechnical students to develop application solutions using Visual Basic. Features of Microsoft Access requiring knowledge of Visual Basic are introduced.
Prerequisite/Restriction: OSS 2450

OSS 2520 - Integrating Office Technology
3
Advanced applications of office technology for production of business documents, emphasizing efficient use of word processing, graphics, and desktop publishing.
Prerequisite/Restriction: OSS 1400

OSS 2600 - Office Procedures
3
Finishing course which integrates office knowledge and skills. Applies administrative activities which are part of the office process.
Prerequisite/Restriction: OSS 1550; OSS 2520; or MIS 3200

OSS 2800 - Principles of Selling
2
Focuses on the sales process, including prospecting, qualifying customers, planning and delivering the sales presentation, overcoming objections, closing the sale, and satisfying the customer's needs.

Outdoor Product Design and Development

OPDD 1700 - Outdoor Product Design & Development Professional Seminar
1 credit
Orientation to outdoor industry. Exploration of careers, professional opportunities in industry will be identified and discussed. Participation of industry leaders will be integrated into seminar to expose students to current issues, topics in industry. Repeatable for up to eight credits.
Repeatable for credit

OPDD 1750 - History of the Outdoor Product Industry
3 credits
An examination of the progression of the outdoor product industry, including apparel, tools, and other equipment. Investigations will include the context of the
industry's past to present while considering the environment, ethics, consumer behavior and the change in product design.

Semester(s) Traditionally Offered: Fall
OPDD 3030 - Design Thinking, Methods, and Materials
3 credits
An in depth exploration of properties, language, function of materials used for outdoor product design. Application of design thinking methodologies will guide the exploration of how materials function when different design methods are used to outdoor product development.

Prerequisite/Restriction: TEE 1030

Semester(s) Traditionally Offered: Spring
OPDD 3400 - Color Theory & Design
3 credits
Exploration of color, its anomalies, emotional responses to, symbolism, trends applied to product design. Analysis of social, cultural, and psychological implications of color in everyday life. Color interactions and science are applied through a series of industry-driven design projects.

Semester(s) Traditionally Offered: Fall
OPDD 3760 - Outdoor Product Design and Development Studio I
3 credits
Studio projects applying concepts related to materials and fasteners used in the outdoor product industry. Students will experiment with various combinations of materials and methodologies for design of soft goods for leisure and sports gear.

Prerequisite/Restriction: OPDD 3030

Semester(s) Traditionally Offered: Fall
OPDD 3770 - Outdoor Product Design and Development Studio II
3 credits
Studio projects applying concepts related to contexts, materials, and components of outdoor product with emphasis on designing for diverse contexts and applications. Students will experiment with new solutions, uses for products considering contextual factors that impact design.

Prerequisite/Restriction: OPDD 3760

Semester(s) Traditionally Offered: Spring
OPDD 4250 - Outdoor Product Design and Development Industry Experience
3 credits
Outdoor product industry experience applying knowledge and skills in business and industry settings.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
OPDD 4420 - Digital Design Technologies for Outdoor Products I
3 credits
Using industry-standard software, students will apply creative and innovative problem-solving skills to outdoor product design. Students will create and develop design ideas using 3-D modeling software and the Adobe Creative Suite (specifically Adobe Illustrator).

Prerequisite/Restriction: TEE 1200

Semester(s) Traditionally Offered: Fall
OPDD 4430 - Digital Design Technologies for Outdoor Products II
3 credits
Advanced application of skills learned in Digital Design Technologies I to the development of seamless print and logo design, tech-pack development and other applications that require Adobe Illustrator and 3-D modeling software.

Prerequisite/Restriction: OPDD 4420

Semester(s) Traditionally Offered: Spring
OPDD 4440 - Aesthetics, Human Factors, and Brand Image
3 credits
Exploration of application of the relationship between user needs, aesthetics, and brand image. Consideration of human factors that influence design. Students will develop detailed user and brand profiles.

Prerequisite/Restriction: OPDD 3030

Semester(s) Traditionally Offered: Fall

OPDD 4750 - Senior Design Studio I
3 credits:
Outdoor product design and development projects focusing on research, ideation, prototype development, and professional presentation using technology to communicate ideas. Consideration of economic viability and environmental impact of design is required.

Prerequisite/Restriction: OPDD 4430

Semester(s) Traditionally Offered: Fall

OPDD 4760 - Senior Design Studio II
3 credits
Emphasis on complete design and development of a collection of outdoor products. Specifications and products are developed according to industry requirements. A cohesive collection will be manufactured and presented.

Prerequisite/Restriction: Senior ranking and OPDD 4750

Semester(s) Traditionally Offered: Spring

OPDD 4770 - Senior Exhibit
1 credit
Professional display and presentation of student work in preparation for formal exhibit. Student work will be reviewed and critiqued by industry leaders and experts before exhibit opens.

Semester(s) Traditionally Offered: Spring

Parks and Recreation Professional

PRP 1000 - Introduction to Recreation Services
3 credits
Introduces the conceptual foundations of play, recreation, and leisure, as well as the history and current trends of the profession. Provides insight into the careers offered within the recreation services industry.

Semester(s) Traditionally Offered: Fall, Spring

PRP 1100 - Traditional Western Life Recreation
2 credits
Elective course designed to introduce the student to business opportunities in the growing industry of farm and ranch recreation to supplement agricultural income. May be an elective credit for all majors. Ranch recreation is any recreational activity enjoyed by guests for a few hours or a few weeks, while on a farm or ranch. Coursework will include choosing, developing appropriate activities, resources, marketing, risk management and insurance. Course teaching methods include lecture, video, and labs.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

PRP 1320 - Outdoor Ethics
3 credits
One of five foundation courses required for the Outdoor Recreation program. Covers four basic outdoor ethical areas: Ecological issues for activities in the wilderness, Federal and State rules and regulations for activities on their land, Archeological and Paleontological ethics and the consequences of human decisions on the environment. Students will learn the nine basic principles of “no trace left behind” which mitigates the hikers/campers impact on the natural environment. Students will learn how to conduct themselves in a wilderness environment with a minimal impact on geology, flora and fauna. Students will become familiar with the general rules Federal land. Primary “do’s and don’ts will be covered for BLM, Forest Service and State or Federal Park lands. Covers policies related to archeological and paleontological artifacts and what the law requires from participants who encounter these artifacts. Course involves lecture, lab, and field trips and an activity fee is required. Adherence to safety protocols is mandatory for field trips.

Campus: USU Eastern only

PRP 1330 - Outdoor Safety
2 credits
Elective course designed for students interested in developing an awareness of safety and survival techniques necessary for a variety of activities such as backpacking, mountaineering, skiing, and prospecting. May be an elective for all majors. Provides for basic skill building so that should an unexpected outdoor emergency occur the student is prepared to survive. Students will gain general understanding of trip planning, attitude, safety, and survival techniques and principles. Class includes field work, labs, guest lecturers, video tapes and handouts. Completers will have knowledge of basic survival and of career opportunities in the recreation field.

Campus: USU Eastern only  
Semester(s) Traditionally Offered: Spring  

PRP 1340 - Introduction to Tour Guiding  
1 credit

Helps students learn about the occupation of tour guiding and gain an appreciation for these unique areas and the people who have lived there over the past 2,000 years.

Campus: USU Eastern only

PRP 1600 - Outdoor Foods and Clothing  
1 credit

Designed to introduce the novice student to the art of outdoor survival, with emphasis on food, clothing and self reliance. Covers the philosophies and history of the outdoor experience. Some student equipment will be required. Course includes lecture, guest speakers, lab and hands on experience.

Campus: USU Eastern only

PRP 1800 - Service Learning  
1-3 credits

Designed to provide students with experience in the process and development of their altruistic tendencies. Students must select approved service areas. Learning will be experiential. Students will become aware of the needs in the community and adopt techniques and practices that will be beneficial to the recipient of the service. Students will profit from the opportunity to serve.

Repeatable for credit  
Campus: USU Eastern only

PRP 2100 - Western Culture and Heritage Tourism  
2 credits

Designed to help students understand the importance of western culture and heritage. Tourism in a rapidly growing recreation industry. May be a transfer credit depending on major. Students will investigate how to transform underdeveloped western culture and historic sites into value added enterprises. Business and marketing skills will be blended with recreation site development skills resulting in a comprehensive recreation enterprise. Class includes lecture, lab and field trip.

Prerequisite/Restriction: PRP 1100  
Campus: USU-Eastern only

PRP 2380 - Facility Management  
2 credits

Teaches the student how to properly maintain an athletic field. Students will learn to care for the playing surface and also the grounds around the playing surface. This is a "hands-on" course. Students will meet for a short description on what is to be accomplished each day, and the reminder of class time will be spent working on actual projects.

Repeatable for credit  
Campus: USU Eastern only

PRP 2500 - Outdoor Recreation Management  
3 credits

Explores philosophy, meaning, and value of outdoor recreation in society. Gives management agency overview. Emphasizes organizing and leading outdoor recreation pursuits.

Semester(s) Traditionally Offered: Fall  
Course Fee: $100.00

PRP 2977 - Cooperative Education  
1-3 credits

Provides supervised on-the-job training in recreation. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements.
Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

PRP 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

PRP 3000 - Designing Recreation Experiences
3 credits

Produces aspects of designing theory-based recreation experiences, utilizing methods, models, marketing, budgets, and evaluation. Semester(s) Traditionally offered: Fall and Spring.

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall

PRP 3025 - Techniques of Experiential Recreation
3 credits

Explores the foundations behind and techniques utilized in leading recreation experiences. Emphasizes practical experience with planning recreation activities.

Prerequisite/Restriction: Enrollment limited to PRP Majors only, PRP 1000 and PRP 3000

Semester(s) Traditionally Offered: Fall
Course Fee: $15.00

PRP 3050 - Evaluation of Recreation Services (QI)
QI Quantitative Intensive
3 credits

Examines methods and practical applications of evaluation utilized in recreation services.

Prerequisite/Restriction: Enrollment limited to PRP majors only; PRP 1000, PRP 3000, PRP 3025; and completion of the Quantitative Literacy (QL) requirement

Semester(s) Traditionally Offered: Spring

PRP 3075 - Applications of Experiential Recreation
3 credits

Applies the management aspects of recreation services. Culminating course emphasizing design, implementation, and evaluation of recreation experiences.

Prerequisite/Restriction: PRP 1000, PRP 3000, PRP 3025, PRP 3050, PRP 4500, PRP 4550

Semester(s) Traditionally Offered: Spring

PRP 3900 - Diverse Populations
3 credits

Examines participation and management aspects of recreation experiences for diverse clientele. Explores settings, cultures, and contexts within the recreation services industry.

Prerequisite/Restriction: PRP 1000 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall

PRP 4000 - Recreation and Park Facility Planning and Management
3 credits

This course is designed to give PRP majors an understanding of the skills necessary for planning, designing, maintaining and managing recreation parks and facilities.

Prerequisite/Restriction: PRP 1000, PRP 3000 and PRP 4100

Semester(s) Traditionally Offered: Fall

PRP 4100 - History of Leisure (CI)
CI Communications Intensive
3 credits

Explores historical, behavioral, scientific, and philosophical foundations of leisure and recreation.

Prerequisite/Restriction: PRP 1000 and fulfillment of Communications Literacy CL2 requirement

Semester(s) Traditionally Offered: Spring
PRP 4250 - Cooperative Work Experience
1-12 credits

Provides practical and educational work and/or voluntary opportunities to gain professional experience prior to PRP 4750.

Prerequisite/Restriction: Instructor permission, PRP 1000 and PRP 3000 (both of which may be taken concurrently)

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PRP 4400 - Recreation and Park Facility Planning and Management
3 credits

This course is designed to give PRP majors an understanding of the skills necessary for planning, designing, maintaining and managing recreation parks and facilities.

Prerequisite/Restriction: PRP 1000, PRP 3000 and PRP 4100

PRP 4500 - Management of Recreation Services
3 credits

Provides entry-level knowledge of current management practice, specializing in human resources, finance, budget, and marketing.

Prerequisite/Restriction: PRP 1000, PRP 3000

Semester(s) Traditionally Offered: Fall

PRP 4550 - Legal Issues and Risk Management of Recreation
3 credits

This course is designed to focus on the legal issues and the risk management process. Students will concentrate on the liability management concerns of recreation programs, facilities and areas.

Prerequisite/Restriction: PRP 1000 and PRP 3000

Semester(s) Traditionally Offered: Spring

PRP 4700 - Pre-Internship Seminar
1 credit

This course will describe all of the requirements for the internship and focus on career planning and preparation.

Prerequisite/Restriction: PRP 1000, PRP 3000, PRP 3025, PRP 3050, PRP 3075, PRP 3900, PRP 4100 and PRP 4550

Corequisite: PRP 3050 and PRP 4550

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

PRP 4725 - Senior Seminar (CI)
CI Communications Intensive
3 credits

Focuses on current issues and trends in recreation services through analysis, papers, presentation, and discussion with professionals.

Prerequisite/Restriction: PRP 1000, PRP 3000, PRP 3025, PRP 3050, PRP 3075, PRP 3900, PRP 4100, PRP 4500, PRP 4550 and fulfillment of CL2 requirement (ENGL 2010) PRP 3075 and PRP 4100 may be taken concurrently

Corequisite: PRP 3075 and PRP 4100

Semester(s) Traditionally Offered: Spring

PRP 4750 - Internship in Recreation Services
6 credits

Fulfills professional practice requirement of a minimum of 400 hours with a cooperating recreation service agency.

Prerequisite/Restriction: PRP 1000, PRP 3000, PRP 3025, PRP 3900, PRP 4250, PRP 4550, and PRP 4700

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $100.00

PRP 4970 - Honors Senior Thesis
1-6 credits

Culminating experience within the department for honors students. Student works closely with faculty mentor in an extensive project in the student's area of
Personal Financial Planning

PFP 3460 - Fundamentals of Personal Investing
3 credits

Examination of investment vehicles available to personal investor. Principal emphasis on corporate and government securities. Credit cannot be used toward requirements for finance major.

Semester(s) Traditionally Offered: Spring

PFP 5060 - Personal Financial Planning and Advising
3 credits

Fundamental concepts and principles of personal financial planning for individuals.

Cross-listed as: PFP 6060.

Semester(s) Traditionally Offered: Fall

PFP 5070 - Retirement Planning
3 credits

Concepts and principles of retirement planning, including retirement and benefit plans, deferred compensation, and investments.

Cross-listed as: PFP 5070.

Semester(s) Traditionally Offered: Spring

PFP 5080 - Estate Planning
3 credits

Concepts and principles of estate planning for individuals, including goal identification, data gathering, forms of property ownership, documents, probate, and transfer taxes.

Cross-listed as: PFP 6080.

Semester(s) Traditionally Offered: Spring
PFP 6080 - Estate Planning
3 credits

Concepts and principles of estate planning for individuals, including goal identification, data gathering, forms of property ownership, documents, probate, and transfer taxes.

Cross-listed as: PFP 5080.

Semester(s) Traditionally Offered: Spring

PFP 6090 - Personal Financial Plans
3 credits

Capstone course in personal financial planning. Knowledge from other financial planning courses used to prepare comprehensive personal financial plans.

Prerequisite/Restriction: ACCT 3410; PFP 3460 or FIN 4460; PFP 6060/PFP 5060, PFP 6070/PFP 5070, PFP 6080/PFP 5080 (all prerequisites may be taken concurrently)

Cross-listed as: PFP 5090.

Philosophy

PHIL 1000 - Introduction to Philosophy (BHU)
BHU Breadth Humanities
3 credits

Introduction to philosophical questions regarding truth, knowledge, reality, mind, God, morality, and meaning. Examination of various philosophical responses to these questions.

Semester(s) Traditionally Offered: Fall, Spring

PHIL 1120 - Social Ethics (BHU)
BHU Breadth Humanities
3 credits

Examination of principles and arguments underlying current debate in American law and politics. Topics may include abortion, euthanasia, capital punishment, discrimination and affirmative action, sexual harassment, freedom of expression, welfare, and duties to help the poor in other nations.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PHIL 1250 - Practical Logic (BHU)
BHU Breadth Humanities
3 credits

Recognition of arguments and diagramming their logical structure. Study of valid argument forms, as well as formal and informal fallacies. Evaluating categorical syllogisms using rules and Venn diagrams. Basic propositional logic.

PHIL 1320 - The Good Life (BHU)
BHU Breadth Humanities
3 credits

Study of great books and great ideas with a focus on perennial human questions. Topics include the good life, the meaning of civilization in the soul and society, the good, the beautiful, suffering, meaning and the transcendent.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Fall 2016

PHIL 2200 - Deductive Logic (QI)
QI Quantitative Intensive
3 credits

Study of deductive arguments and techniques for evaluating their validity, including construction of proofs. Recognizing formal fallacies in reasoning. Symbolizing English sentences and arguments to make their meanings precise. Propositional logic. Study of quantifiers and relations.

Prerequisite/Restriction: MATH 1050 or higher mathematics class or AP Calculus AB score of 3 or higher or STAT 1040 or STAT 1045 or higher statistics class

Semester(s) Traditionally Offered: Fall

PHIL 2400 - Ethics (BHU)
BHU Breadth Humanities
3 credits

Study of judgments concerning what is good or bad, right or wrong. How judgments are justified and related to action. Relativism, subjectivism, absolutism, freedom, and responsibility.

PHIL 2600 - Introduction to Philosophy of Religions (BHU)
BHU Breadth Humanities  
3 credits  
Explores the importance of spirituality for human life. First half of this course looks at the role of myth, symbolism and ritual as found in ancient religion. Second half of this class looks at the transition from polytheism to monotheism and the effect it has had on human nature. Some time will be dedicated to the understanding of Native American, Eastern and alternative religions.  
Campus: USU Eastern only  

Page: 1 <- Back 10 ... 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 ... Forward 10 -> 64  

Philosophy  
PHIL 2988 - Special Problems  
1-3 credits  
Individual work approved by instructor. Time and credit to be arranged.  
Repeatable for credit  
Campus: USU Eastern only  

PHIL 3100 - Ancient Philosophy (CI)  
CI Communications Intensive  
3 credits  
Development of philosophical thought in the Ancient Greek world. Readings from the pre-Socratics, Plato, Aristotle, the Stoics, and Epicureans.  

PHIL 3110 - Medieval Philosophy  
3 credits  
Neo-Platonism with stress on Plotinus, St. Augustine, and early Christian philosophy; early medieval thought; St. Thomas Aquinas and the rise of scholasticism; and philosophical thought in the Renaissance.  
Prerequisite/Restriction: PHIL 1000 or PHIL 3100 or instructor permission  

PHIL 3120 - Early Modern Philosophy (CI)  
CI Communications Intensive  
3 credits  
Philosophers and philosophical disputes in Western Europe from 1400-1750. Figures and topics may include: Bacon, Hobbes, Descartes, Locke, Hume, nominalism, empiricism, rationalism, religion, politics, and morals.  

PHIL 3150 - Kant and the Nineteenth Century (CI)  
CI Communications Intensive  
3 credits  
Study of Kant and nineteenth-century European philosophers, which may include, Hegel, Kierkegaard, Mill, Marx, Schopenhauer, and Nietzsche.  
Prerequisite/Restriction: PHIL 1000 or PHIL 3120/RELS 3120 or instructor permission  

PHIL 3180 - Contemporary European Philosophy (CI)  
CI Communications Intensive  
3 credits  
Study of twentieth-century philosophical movements originating and developing on the European continent. Movements to be considered may include: existentialism, phenomenology, hermeneutics, and post-metaphysical philosophy.  
Prerequisite/Restriction: PHIL 1000 or PHIL 3100 or PHIL 3110 or PHIL 3120 or PHIL 3150 or PHIL 3600 or PHIL 4400 or PHIL 4410 or instructor permission  

PHIL 3500 - Medical Ethics  
3 credits  
Key issues in medicine, including: consent, competency, confidentiality, euthanasia, abortion, and the justification of health care.  

PHIL 3520 - Business Ethics (DHA)  
DHA Depth Humanities and Creative Arts  
3 credits  
Key issues in business, including: foreign bribery, corporate responsibility, corporate culture, ethical theories, justice, and preferential treatment.  

PHIL 3530 - Environmental Ethics (DHA)  
DHA Depth Humanities and Creative Arts  
3 credits  
Key issues in the treatment of nature, such as: the value of wilderness, animal rights, comparative views of nature, and moral issues in economic approaches to the wilderness.
PHIL 3580 - Ethics and Economic Life (DHA)
DHA Depth Humanities and Creative Arts
3 credits

An examination of how social and economic concerns relate to moral issues generally. Topics will include the ethics of production, consumption, exchange, and accountability, as well as workplace issues and questions about the economic dimensions of human nature and the well-lived life.

Semester(s) Traditionally Offered: Spring

PHIL 3600 - Philosophy of Religion (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Problems in defining "religion" and the existence of God; the problem of evil; the immortality of the soul; religious experience; faith; alternatives to theism; religious language.

PHIL 3700 - Political Philosophy (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Explores the nature of a just society, political obligation, and justification and proper limits of political power.

Semester(s) Traditionally Offered: Fall, Odd Years

PHIL 3710 - Philosophies of East Asia
3 credits

Study of Confucianism, Buddhism, Zen Buddhism, and Taoism. Focus on appreciating the merits of each system of thought. Emphasis on class discussion. Includes much assigned reading every week.

PHIL 3720 - Philosophical Theology
3 credits

Explores various topics in Christian philosophical theology, which can include the existence and nature of God, the relation between God and creatures, and the nature of Christ.

Prerequisite/Restriction: PHIL 1000 or PHIL 3100 or PHIL 3120 or PHIL 3600

PHIL 3800 - Philosophy in Literature (DHA)
Depth Humanities and Creative Arts

3 credits

Study of philosophical concepts, problems, and issues as they have been presented and dramatized in works of literature and cinema. Discussion of issues concerning ethics, epistemology, ontology, and logic. Students read or view works from a variety of media, including novels, short stories, and films.

Effective Term
Fall 2016

PHIL 3810 - Aesthetics (DHA)
DHA Depth Humanities
3 credits

Analysis of traditional theories of aesthetics and art criticism. Theories are applied to illustrative examples, including music, painting, photography, sculpture, dance, literature and cinema.

Semester(s) Traditionally Offered: Spring

PHIL 3820 - Theories of Sex and Gender (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Analysis of foundational theories for the study of gender and sexuality. Of central interest are the ethical issues raised in theorizing gender, sexuality, and sex: what would a claim to sexual justice look like and what could ground such a claim.

Semester(s) Traditionally Offered: Spring

PHIL 4250 - Tolkien and Lewis on Myth and Truth
3 credits

Philosophical study of myth and fairy tales. Topics include the relation of myth to truth, symbolic language and the limits of natural reason, and the role of imagination in belief.

Effective Term
Fall 2016

PHIL 4300 - Epistemology (DHA)
DHA
3 credits
Study of foundations of knowledge and belief systems, and related topics in epistemology, including perception, certainty, and skepticism.

Prerequisite/Restriction: PHIL 1000 or PHIL 3100 or PHIL 3110 or PHIL 3120 or PHIL 3150 or PHIL 3600 or PHIL 4310 or PHIL 4400 or PHIL 4410 or instructor permission

PHIL 4310 - Philosophy of Science (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Study of different views of the nature of science: the classical traditions of Hempel and Popper, Kuhn's subjectivism, and Feyerabend's anarchism. Topics include confirmation, induction, scientific realism, reductionism, and the growth of scientific knowledge.

PHIL 4400 - Metaphysics
3 credits

Study of fundamental problems of existence. Topics include: mind and its relation to the body, determinism and human freedom, fatalism, idealism and realism, truth, and our knowledge of the world.

PHIL 4410 - Philosophy of Mind
3 credits

Beginning with the context of Cartesian mind/body dualism, a thorough examination of Cartesian privacy, privileged access, and the problem of other minds is conducted. Ancillary topics may include the mind/machine controversy and animal intelligence.

PHIL 4500 - Contemporary Ethical Theory
3 credits

Careful examination of one or more topics playing a central role in current moral philosophy. Focus on work produced in philosophical literature within last twenty years.

Prerequisite/Restriction: PHIL 1000 or PHIL 1120 or PHIL 2400 or PHIL 3500 or PHIL 3530 or PHIL 3520 or instructor permission

PHIL 4530 - Ethics and Biotechnology (DSC)
DSC Depth Life and Physical Sciences
3 credits

Interdisciplinary examination of key issues such as: cloning, human genetic screening and therapy, and transgenic animals and food.

Cross-listed as: PHIL 6530.

PHIL 4600 - Philosophy of Law
3 credits

Examines the nature of law, relations between law and morality, the obligation to obey law, ways to interpret law, the justification of legal punishment, and appropriate conditions for civil and criminal liability.

PHIL 4900 - Special Topics
3 credits

Detailed consideration of a particular philosopher or philosophical problem. Course may be repeated when a different topic is discussed.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

PHIL 4910 - Readings and Research
1-4 credits

Independent study of a particular philosopher or philosophical topic. Course may be repeated when a different topic is discussed.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

PHIL 4920 - Senior Honors Seminar
1 credit

Credit for completing and presenting a senior honors thesis project. Requirement may be fulfilled by publishing the thesis in an academic journal, defending the thesis before a faculty committee, presenting the thesis at an academic conference, or presenting the thesis in the philosophy session during Scholar's Day.

Semester(s) Traditionally Offered: Spring

PHIL 4930 - Senior Honors Thesis
1-4 credits
Independent study research credits for preparation of a senior honors thesis to fulfill requirements for a degree in philosophy with departmental honors.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PHIL 4990 - Philosophy Seminar
3 credits

Advanced study of recent work in philosophy. Topic will vary by instructor. Especially appropriate for students planning to go on to graduate or professional school.
Repeatable for credit.

PHIL 6530 - Ethics and Biotechnology
3 credits

Interdisciplinary examination of key issues such as: cloning, human genetic screening and therapy, and transgenic animals and food. To receive graduate credit, extra readings and a 25-30 page paper will be required.
Cross-listed as: PHIL 4530.

PHIL 6890 - Philosophy of Science
3 credits

PHIL 6900 - Independent Study
1-4 credits
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Physical Education Activity

PE 1010 - Aerobics
1 credit

Fitness program, primarily designed to improve cardiovascular fitness, muscular endurance, and flexibility.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $10.00

PE 1014 - Turbo Dance Aerobics
1 credit

Course will leave students feeling energized, with a warm up, a little cardio time to burn calories, along with toning for their arms, waist, hips, thighs, and your abs, plus cool down. Students should bring a smile, towel, and water, and wear comfortable workout shoes and clothing.
Repeatable for credit
Campus: USU Eastern only

PE 1016 - Spinning
1 credit

Intense cardiovascular conditioning class performed on stationary bikes.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

PE 1030 - Aerobic Kickboxing
1 credit

Designed as a fitness program to improve cardiovascular fitness, muscular endurance, and flexibility through a combination of aerobic exercise and kickboxing. Emphasis placed on safety, fitness, and enjoyment.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

PE 1046 - Jog/Walk
1 credit

Provides students with opportunity to achieve and maintain personal fitness through jogging and/or walking.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10.00

PE 1055 - Pilates
1 credit

Provides a mind-body exercise program designed to
strengthen core stability, increase flexibility, and increase muscle tone.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $40.00

PE 1057 - Yoga
1 credit


Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $35.00

PE 1058 - Yoga II
1 credit

Provides an opportunity for students to learn and practice basic and intermediate Hatha Yoga skills. May be elective credit depending on major. These courses will focus on warmups, posture, and floor exercise. Skills learned in this course will assist in the development of strength, muscle tone and weight regulation. Students will also increase endurance, flexibility, and peace of mind, while providing for a means of eliminating stress. Class includes lectured lab.

Repeatable for credit.
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

PE 1063 - Conditioning
1 credit

Designed to improve overall flexibility, strength, and endurance capacity of the body.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00

PE 1080 - HYPER FIT
1

HYPER FIT workouts incorporate elements from high-intensity interval training, Olympic lifting, plyometrics, powerlifting, gymnastics, kettlebell lifting, calisthenics, and other exercises.

Repeatable
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring

PE 1085 - Weight Training
1 credit

Demonstration of proper weight training techniques. Helps students understand basic concepts related to weight training, in order to gain strength, improve muscle tone, and start or continue a healthy lifestyle.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $15.00

PE 1090 - Resistance and Stabilization Training
1 credit

Provides students with combination of strength and stabilization training, including agility, balance, and coordination work. Some plyometrics may also be incorporated.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

PE 1097 - Fitness for Life
2 credits

Designed to help students learn and apply overall wellness principles, including physical, psychological, and social areas, to help improve and maintain what would be considered a healthy lifestyle. Successful completers should learn to assess, prescribe, and implement exercise, nutrition, weight control, and stress management programs through class discussions, individual fitness evaluations, and class assignments. There is not a prerequisite, although it would benefit students entering the fitness or sports professions.

Campus: USU Eastern only
PE 1100 - Tennis I Beginning
1 credit

Designed for students desiring a basic understanding of tennis. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $55.00

PE 1101 - Tennis II Intermediate
1 credit

Designed for students with a basic knowledge of tennis who desire to learn intermediate skills. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $55.00

PE 1103 - Table Tennis
1 credit

Designed for students desiring a basic understanding of table tennis. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $45.00

PE 1105 - Badminton
1 credit

Through active participation, students learn basic skills, rules, and strategies of singles and doubles badminton.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $15.00

PE 1110 - Racquetball I Beginning
1 credit

Designed to help students understand the general rules and strategies of racquetball, improve competitive skills, and play safely and effectively.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $15.00

PE 1111 - Racquetball II Intermediate
1 credit

Designed for students with a basic knowledge of racquetball who desire to learn intermediate skills. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $15.00

PE 1112 - Racquetball III Advanced
1 credit

Designed for students with proficient skills and knowledge of racquetball who desire to learn advanced skills. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $15.00

PE 1115 - Pickleball
1 credits

Designed for students desiring a basic understanding of pickleball. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer Effective Term
Fall 2015

PE 1120 - Handball
1 credit

Provides skills and knowledge in the fundamentals of handball.
PE 1130 - Golf Beginning
1 credit

Designed for the beginning and novice golfer. Basics of individual grip, set-up, posture, and swing. Includes putting, chipping, weight transfer, and balance.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $30.00

PE 1131 - Golf Intermediate
1 credit

Designed for students with basic golf skills who desire to learn more about golf and improve their golf skills. Improvement of strategies and skills through active participation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $55.00

PE 1135 - Archery I
1 credit

Elective course to introduce students to the fundamentals of archery. Also covers the history and development of bow shooting. Includes lecture, lab and range shooting. Some student equipment may be required.

Campus: USU Eastern only

PE 1136 - Archery II
1 credit

Elective course to introduce students to the fundamentals of archery. Also covers the history and development of bow shooting. Includes lecture, lab and range shooting. Some student equipment may be required.

Campus: USU Eastern only

PE 1140 - Marksmanship I
1 credit

Provides the opportunity for students to become familiar with small bore target shooting. Course starts with small bore firearms, usually using the 22 Long Rifle caliber firearm. Students will become familiar with and understand the basic concepts of precision shooting, breathing control, sighting techniques and proper trigger squeeze. Basic shooting positions will be discussed and practiced. Ballistics and firearm response will be taught. A large portion of the course will center around general firearm etiquette and safety procedures and students will have extensive opportunities to practice on a firing range. Safety protocols will be learned and adherence to those policies is mandatory. Course involves lecture, lab and field trips. A lab fee is required.

Campus: USU Eastern only

PE 1141 - Marksmanship II
1 credit

Course is a continuing opportunity for students to become familiar with large bore target shooting. Course utilizes large bore center fire rifles. Students will further explore and understand the basic concepts of precision shooting, breathing control, sighting techniques and proper trigger squeeze. Basic shooting positions will be discussed and practiced. Ballistics and firearm response will be taught. A large portion of the course will center around general firearm etiquette and safety procedures and students will have extensive opportunities to practice on a firing range. Safety protocols will be learned and adherence to those policies is mandatory. Course involves lecture, lab and field trips. A lab fee is required.

Campus: USU Eastern only

PE 1145 - Bowling
1 credit

Provides students with the knowledge, skills, and strategies for successful participation and enjoyment.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

PE 1146 - Bowling Intermediate
1 credit
Designed for students with basic bowling skills who desire to learn intermediate skills. Improvement of strategies and skills through active participation and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

PE 1150 - Billiards Beginning
1 credit

Designed to develop basic knowledge and concepts for playing a variety of games. Focuses on stroke mechanics, shot selection, and strategy.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

PE 1151 - Billiards Intermediate
1 credit

Designed for students with basic billiards skills who desire to learn intermediate skills. Improvement of strategies and skills through active participation and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

PE 1152 - Billiards Advanced
1 credit

Designed for students with proficient skills and knowledge of billiards who desire to learn and improve their skills. Improvement of strategies and skills through active participation and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

PE 1155 - Fencing
1 credit

Introduction to basic techniques of fencing.

Repeatable for credit.
Pass/Fail only.

PE 1160 - Trap and Skeet Shooting
2 credits

Introduces students to clay target sports. Students will learn the history as well as the difference between trap, skeet and sporting clays. Students will learn how clay target sports evolved and how to play several different games. Main emphasis will be on trap shooting. Proper stance, target acquisition, trigger squeeze and follow through will also be taught. Course involves lecture, lab and field trips. A lab fee is required.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

PE 1170 - Gymnastics
1 credit

Designed to enhance current abilities and teach skills according to the individual student’s abilities. Skills taught through drill work and lecture.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

PE 1171 - Gymnastics II
1 credit

Elective course will provide an opportunity for students to learn basic and intermediate gymnastic skills. May be elective credit depending on major. Coaching on all four events: vaults, bars, beam and floor exercise. Class includes lectured labs.

Campus: USU Eastern only

PE 1200 - Basketball
1 credit

Designed to help the recreational player become more familiar with the basic skills involved in the game of basketball. During the course, games and/or a “mini” tournament will be played.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $15.00

PE 1210 - Volleyball Beginning
1 credit

Designed to help students understand the general rules and strategies and enjoyment of the game through active participation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00

PE 1211 - Volleyball Intermediate
1 credit

Designed for students with basic knowledge of volleyball who desire to learn intermediate skills. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00

PE 1212 - Volleyball Advanced
1 credit

Designed for students with proficient skills and knowledge of volleyball who desire to learn new skills and improve their skills. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00

PE 1225 - Softball
1 credit

Designed to help students develop and understand the skills and strategies of recreational softball through active participation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $15.00

PE 1230 - Soccer
1 credit

Designed to help students develop and understand the skills and strategies of soccer through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00

PE 1235 - Flag Football
1 credit

Designed to help students develop and understand the skills and strategies of recreational flag football through active participation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall
Course Fee: $15.00

PE 1245 - Ultimate Frisbee
1 credit

Designed to enhance each student's skills and abilities in ultimate frisbee. Emphasizes cardiovascular and muscular fitness. Course is progressive, with increase in intensity as the individual improves abilities.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00

PE 1246 - Ultimate Frisbee Intermediate
1 credit

Designed to enhance the skills and abilities of students desiring to learn intermediate skills in ultimate frisbee. Emphasizes cardiovascular and muscular fitness. Improvement of skills and strategies through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Fee</th>
<th>Repeatable</th>
<th>Grade Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 1260</td>
<td>Ice Hockey Beginning</td>
<td>$15.00</td>
<td></td>
<td>Pass/Fail</td>
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<tr>
<td></td>
<td>Designed for students desiring a basic understanding of ice hockey. Conditioning and skill development achieved through active participation in drills and games.</td>
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<tr>
<td>PE 1261</td>
<td>Ice Hockey Intermediate</td>
<td>$85.00</td>
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<td>Pass/Fail</td>
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<tr>
<td></td>
<td>Designed for students with a basic understanding of ice hockey who would like to learn intermediate skills and techniques. Conditioning and skill development achieved through active participation in drills and games.</td>
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<tr>
<td>PE 1265</td>
<td>Officiating Ice Hockey</td>
<td>$85.00</td>
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<td>Pass/Fail</td>
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<tr>
<td></td>
<td>Development of skating skills, positioning, and rules knowledge. Students officiate at scrimmages and games, and are evaluated on their performance. Course leads to USA Hockey levels 1, 2, and 3 certification.</td>
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<tr>
<td>PE 1300</td>
<td>Swimming Beginning</td>
<td>$33.00</td>
<td></td>
<td>Pass/Fail</td>
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<td></td>
<td>Designed for swimmers and nonswimmers desiring to improve swimming skills and enhance cardiovascular and muscular fitness. Emphasizes swimming safety and enjoyment in a variety of water activities. Beginning and intermediate swim sections offered.</td>
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<tr>
<td>PE 1301</td>
<td>Lap Swimming</td>
<td>$50.00</td>
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<td>Pass/Fail</td>
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<tr>
<td></td>
<td>Designed for swimmers desiring to improve swimming skills and enhance cardiovascular and muscular fitness.</td>
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<tr>
<td>PE 1315</td>
<td>Water Aerobics</td>
<td>$33.00</td>
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<td>Pass/Fail</td>
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<tr>
<td></td>
<td>Provides students with opportunity to maintain personal fitness, with an emphasis on non-weight-bearing cardiovascular activity in water.</td>
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<tr>
<td>PE 1340</td>
<td>Life Guard</td>
<td>$50.00</td>
<td></td>
<td>Pass/Fail</td>
</tr>
<tr>
<td></td>
<td>Prerequisite/Restriction: Must be able to tread water for two minutes, to swim the Side Stroke, Breast Stroke and Back Crawl Stroke, 500 yards each A qualifications test will be given before the first day of class</td>
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<tr>
<td>PE 1345</td>
<td>Water Safety Instructor</td>
<td>$50.00</td>
<td></td>
<td>Pass/Fail</td>
</tr>
<tr>
<td></td>
<td>Prerequisite/Restriction: Must be able to tread water for two minutes, to swim the Side Stroke, Breast Stroke and Back Crawl Stroke, 500 yards each A qualifications test will be given before the first day of class</td>
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</tr>
</tbody>
</table>
choose to take the test to be “Open Water Diver” certified. Students must be in good condition and be able to swim. Safety protocols will be learned and adherence to those policies is mandatory. Course involves lecture, lab and field trips and a lab fee is required.

Campus: USU Eastern only

PE 1400 - Self-Defense
1 credit

Covers skill development in terms of defensive capability, environment assessment, situation management, and the legal ramifications of the use of force.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer Course Fee: $50.00

PE 1407 - Rape Aggression Defense
1 credit

Designed to develop and enhance the options of self-defense, so they may become viable considerations to the woman who is attacked. Students learn how to use personal weapons against abduction.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $50.00

PE 1410 - Tai Chi Chuan
1 credit

Designed to give participants entry-level experience in the art of Tai Chi Chuan. Participants explore the physical, meditational, yogic, metaphysical, and martial foundations of the art.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $50.00

PE 1430 - Karate
1 credit

Designed to develop and enhance the options of self-defense for students with little or no background in martial arts (Eastern or Western) with the rudimentary skills of self-defense.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $50.00

PE 1440 - Aikido
1 credit

Students learn Aikido self-defense techniques through blending with the energy of an attacker, physical exercises for mind-body coordination, and forms of breathing to improve concentration and relaxation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $50.00

PE 1444 - Martial Arts Tang Soo Do
2 credits

Introduction to a Korean form of martial arts called Tang Soo Do. Course will take students through physical training specific to the discipline in preparation of learning the style basics for stances and blocking in defensive moves and techniques of punching and kicking in offensive moves. History and philosophy of the discipline will also be taught. Respect and etiquette of this style of art are factors that will lead a student to understand and demonstrate self control and self awareness. Course requires physical exertion and physical contact.

Repeatable for credit
Campus: USU Eastern only

PE 1445 - Tae Kwon Do
1 credit

Students learn Tae Kwon Do self-defense techniques through blending with the energy of an attacker, physical exercises for mind-body coordination, and forms of breathing to improve concentration and relaxation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring Course Fee: $50.00
PE 1446 - Shorinji Kempo
1 credit

Elective course that allows students to progress through various levels of the Japanese martial art of self defense known as Shorinji Kempo. Instruction includes both “soft” techniques (escapes, arm locks, throws, and pins) and “hard” techniques (blocks, punches, and kicks). Through mastery of skills, students may progress from the white belt of the beginner through the colored belts of more advanced ranks. Qualifying exams by a Branchmaster will determine advancement. Repeatable credit is available so that this class can be taken multiple semesters to allow accomplishment of individual goals.

Repeatable for credit
Campus: USU Eastern only

PE 1480 - Mountaineering I
2 credits

Designed to introduce and acquaint students with mountaineering skills and knowledge such as: rock climbing, mountain travel, and camping at elevation, as well as route finding and safety procedures. May be an elective credit depending on major. In order to enjoy the class outings, students should be in good health and physical condition. Some student outdoor equipment and clothing may be required. Course includes lecture, lab and field experience.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

PE 1490 - Mountaineering II
2 credits

Designed to introduce and acquaint students with mountaineering skills and knowledge such as: rock climbing, mountain travel, and camping at elevation, as well as route finding and safety procedures. May be an elective credit depending on major. In order to enjoy the class outings, students should be in good health and physical condition. Some student outdoor equipment and clothing may be required. Course includes lecture, lab and field experience.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

PE 1500 - Canoeing I
1 credit

Introduces students to the sport of canoeing. Provides students with the opportunity to gain the knowledge and skills necessary to enjoy floating class I and II rivers safely. Students will participate in day trips. Safety, environmental, and ethical issues will be considered. Students need to be in good physical condition and must be able to swim. Safety protocols will be learned and adherence to those policies is mandatory. Course involves lecture, lab and field trips and a lab fee is required.

Campus: USU Eastern only

PE 1505 - Kayaking I
1 credit

Provides basic skills and knowledge in kayaking.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $125.00

Page: 1 Back 10 ... 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 ... Forward 10 -> 64

Physical Education Activity

PE 1506 - Kayaking II
1 credit

Continuation of Kayaking I, where students will put their skills to use learning how to navigate and handle kayaks in the river environment. Students will become familiar with techniques necessary to properly handle a kayak on a variety of river conditions utilizing the skills they were previously taught. These techniques will be practiced and taught under the supervision of a qualified instructor on field trips that will provide the student the ability to test their skills under conditions. Proper gear and equipment will be emphasized. Kayaking history, river ethics and environmental considerations will be taught. Safety protocols will be learned and adherence is mandatory. Students must be good swimmers. Field trips will be taken and lab fees assessed to rent equipment and pay river permits.

Prerequisite/Restriction: PE 1505
Campus: USU Eastern only

PE 1508 - River Guide Preparation
3 credits

Introduces students to responsibilities of river guiding and to learn the skills necessary to become an apprentice river guide. Safety and environmental considerations will be emphasized. Students need to be in good physical condition. History, river ethics and environmental considerations will also be taught. Safety protocols will be learned and adherence is mandatory. Students must be good swimmers. Field trips will be taken and lab fees assessed to rent equipment and travel.

Campus: USU Eastern only

PE 1509 - River Running I
1 credit

Introduces students to the sport of river running. Provides students with the opportunity to gain the knowledge and skills necessary to enjoy river running safely. Students will participate in rafting rivers up to class 3. Skills involved with paddle boats will be emphasized. Safety, environmental, and ethical issues will be considered. Students need to be in good physical condition. Safety protocols will be learned and adherence is mandatory. Students must be good swimmers. Field trips will be taken and lab fees assessed to rent equipment and pay for river trips.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

PE 1510 - Fly Fishing
1 credit

Provides students with the opportunity to develop the skills, knowledge, and strategies for successful participation and enjoyment. Classes are offered in beginning and intermediate fly tying, rod building, and casting.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $55.00

PE 1511 - Fly Tying Beginning
1 credit

Provides students with an introduction to fly tying, including knots, flies, casting, fishing, and understanding trout streams.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $55.00

PE 1512 - Fly Tying Intermediate
1 credit

Designed for students with basic fly tying skills who are interested in learning intermediate skills.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $55.00

PE 1513 - Fly Casting
1 credit

Designed for students desiring a basic understanding of fly casting techniques and strategies.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $55.00

PE 1514 - Fly Rod Building
1 credit

Designed for students desiring a basic understanding of fly rod building. Students will build a fly rod for their own personal use.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $55.00

PE 1515 - Sailing
1 credit

Provides skills and knowledge in the fundamentals of sailing and water safety.

Repeatable for credit.
PE 1520 - Hiking
1 credit
Provides skills and knowledge in hiking, with an emphasis on leave no trace techniques and safe operations in an outdoor environment.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $40.00

PE 1523 - Orienteering
1 credit
Provides skills and knowledge in the fundamentals of orienteering with an emphasis on wilderness travel techniques and safety in the outdoors.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $40.00

PE 1527 - Rock Climbing: Basic
1 credit
Provides skills and knowledge in basic rock climbing, teaching safe judgment and proper techniques in a climbing gym.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $140.00

PE 1529 - Introduction to Wall Climbing
0.5 credit
Introduces students to the sport of Bouldering and to learn the skills necessary to make Bouldering safe and fun. Safety and environmental considerations will be emphasized. Students need to be in good physical condition. Students who are incapable of doing the basics on the climbing wall will not be allowed to continue in the class. This is for their own safety.
Campus: USU Eastern only

PE 1530 - Bouldering
1 credit
Introduces students to the sport of Bouldering and to learn the skills necessary to make Bouldering safe and fun. Safety and environmental considerations will be emphasized. Students need to be in good physical condition - this can’t be emphasized enough. Students who are incapable of doing the basics on the climbing wall will not be allowed to continue in the class. This is for the student’s own safety.
Campus: USU Eastern only

PE 1532 - Outdoor Survival
1 credit
Provides skills and knowledge in the fundamentals of outdoor survival and developing a wilderness ethic to allow for safe participation in wilderness activities.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $40.00

PE 1535 - Backpacking
1 credit
Elective course designed to introduce students to the fundamental skills and lifetime recreational opportunities of backpacking. May be an elective credit for all majors. As more and more people head into the backcountry for a wilderness experience, it becomes critical that they have the knowledge and skills required to safely and fully enjoy that wilderness and at the same time preserve it for others. Course also covers the philosophies, history, personal outdoor ethics of backpacking and career opportunities which are available. Teaching methods include lecture, videos, labs, and field work. Some student equipment will be required.
Campus: USU Eastern only

PE 1536 - Desert Backpacking
1 credit
Covers minimum-impact camping skills, outdoor cooking, basic first-aid, map and compass use, route finding, knot tying and rope handling. Students will backpack through the challenging sandstone and slick rock terrain and stop
along the way to explore ruins and interesting geology. Covers the history of ancient inhabitants and the geological formations. As the course progresses and student skills and experience increase, instructors turn more and more responsibility over to student patrols. This gives students the opportunity to make the course challenging, to create a pace that is “doable” for everyone, to become friends and confidantes with other class members, and to have some fun. Students need to be in good physical condition. Safety protocols will be learned and adherence to those policies is mandatory. Course involves lecture, lab and field trips and a lab fee is required.

Campus: USU Eastern only

PE 1538 - Yurt Camping
1 credit

Provides skills and knowledge for safe winter camping using a yurt for shelter. Assists in the development of high outdoor ethics.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $40.00

PE 1543 - Wilderness First Aid
1 credit

Provides outdoor leaders with an introduction to wilderness first aid. Upon completion of course, students may receive a two-year wilderness first aid certification.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $40.00

PE 1550 - Mountain and Road Biking
1 credit

Introduction to road safety principles, various riding techniques, and cycle maintenance. Sections of road and mountain biking offered. Beginning and intermediate classes offered for both road and mountain biking.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $50.00

PE 1570 - National Outdoor Leadership School Course
3-18 credits

Provides students with the opportunity to earn USU credit for attending National Outdoor Leadership (NOLS) courses.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PE 1580 - Canyoneering I
1 credit

Canyoneering is a term used to describe an adventure sport that combines hiking, wading, swimming, boulder hopping, rock climbing, and rappelling. Introduces students to the sport of canyoneering. Students will learn the skills necessary to make canyoneering safe and enjoyable. Safety and environmental considerations will be emphasized. Outings will include training at the Spring Canyon Climbing Area and outings to the world famous canyons of the San Rafael Swell. Students need to be in good physical condition. Safety protocols will be learned and adherence to those policies is mandatory. Course involves lecture, lab and field trips. A lab fee is required.

Campus: USU Eastern only

PE 1600 - Winter Exploration
1 credit

Provides skills and knowledge for safe winter camping using backpacking equipment. Assists in the development of high outdoor ethics.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $40.00

PE 1605 - Skiing
1 credit

Alpine ski instruction for all students. Offered for beginning, intermediate, and advanced levels. Focuses on knowledge, techniques, equipment, and safety necessary for participating in and enjoying alpine skiing, snowboarding, and telemark skiing.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $186.50

PE 1615 - Snowboarding
1 credit

Provides opportunity for students of all skill levels and experience to develop their riding techniques. Emphasizes versatility and efficiency in varied snow and terrain conditions.

Repeatable for credit. Pass/Fail only.

PE 1625 - Cross Country Skiing I
1 credit

Focuses on knowledge, techniques, equipment, and safety necessary to participate in and enjoy winter recreational activities, including cross country skiing and snowshoeing.

Repeatable for credit. Pass/Fail only.

PE 1630 - Cross Country Skiing II
1 credit

Designed for students interested in developing a healthy lifestyle and an appreciation of the outdoors during the winter season. May be an elective for all majors. Provides for skill building in areas such as basic techniques, clothing, safety, equipment, awareness and group management. Students will gain general understanding of the mountain and desert winter environment. Students will also develop leadership skills. Class includes field work, labs, video tapes, and handouts. Completers will have knowledge of basic cross country touring and of career opportunities in the recreation field.

Prerequisite/Restriction: PE 1625
Campus: USU Eastern only

PE 1635 - Telemark Skiing
1 credit

Provides opportunity for students of all skill levels and experience to develop their telemark skiing skills. Emphasizes versatility and efficiency in varied snow and terrain conditions.

Repeatable for credit. Pass/Fail only.

PE 1655 - Snowshoeing
1 credit

Provides skills and knowledge of snowshoeing, with an emphasis on leave no trace techniques and development of safe winter activity skills.

Repeatable for credit. Pass/Fail only.

PE 1670 - Figure Skating Beginning
1 credit

Designed for students desiring to learn basic figure skating skills. Conditioning and skill development achieved through active participation.

Repeatable for credit. Pass/Fail only.

PE 1671 - Figure Skating Intermediate
1 credit

Designed for students with basic figure skating skills who are interested in becoming more proficient skaters and learning new techniques and skills. Conditioning and skill development achieved through active participation.

Repeatable for credit. Pass/Fail only.

PE 1680 - Curling
1 credit

Designed for students desiring to learn the rules, skills,
strategies, and etiquette of curling.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $85.00

PE 1700 - Dance
1 credit

Designed to help students enhance their basic skills and enjoyment of dance through the following forms: jazz, modern, ballet, ballroom, social, Latin, western swing, etc.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $35.00

PE 1701 - Introduction to Modern Dance
1 credit

Designed for individuals to gain basic dance experience through a wide variety of modern and post-modern dance techniques and choreographic exercises.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $35.00

PE 1702 - Modern Dance Intermediate
1 credit

Designed for individuals to expand their dance experience through a wide range of modern and post-modern dance techniques and choreographic exercises.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $35.00

PE 1705 - Ballet
1 credit:

This course is a ballet technique class for adults. Correct technique and alignment will be stressed. Basic ballet positions of the body will be learned or reviewed. Barre work will be followed by center work.

Pass/Fail Only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PE 1710 - Western Swing
1 credit

Designed to help students enhance their basic skills and enjoyment of country western swing dance (e.g., western swing, two-step, waltz, cowboy cha-cha, line dancing, etc.).

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $35.00

PE 1711 - Western Swing Intermediate
1 credit

Designed for students who have basic western swing dancing skills and would like to develop and improve their techniques.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $35.00

PE 1720 - Social and Ballroom Dance
1 credit

Designed to provide knowledge and experience in ballroom and social dance.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $35.00

PE 1745 - Big Band Swing Level I
1 credit

Designed to provide students with basic knowledge and experience in Big Band Swing dance (e.g., lindy hop, boogie woogie, etc.).

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $35.00
PE 1746 - Big Band Swing Level II
1 credit

Designed for students with basic knowledge and experience in Big Band Swing dance (e.g., lindy hop, boogie woogie, etc.) to learn new techniques and enhance their skills.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $35.00

PE 1760 - Jazz Technique
1 credit

Designed for students who want to learn basic jazz technique. Includes center floor work, as well as across floor progressions. Improves strength and endurance levels through dancing.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $40.00

PE 1765 - Hip Hop Beginning/Intermediate
1 credit

Advanced, up-beat, energetic class designed to increase coordination, improve rhythm, and increase stamina.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $40.00

PE 1770 - Reiki Energy and Stress Relief
1 credit

Students will be introduced to the possibilities of Reiki Energy. Rei (produced Ray) represents “Universal” and Ki (pronounced Key) meaning “Life Force Energy,” thus Reiki represents “Universal Life Force Energy” which flows around and through all matter. Students will experience Reiki sessions, learn to give self treatments, be attuned to the Reiki energy, and learn how to share Reiki with others for the purpose of relaxation and health promotion. Students will be encouraged to participate in volunteer Reiki Share opportunities.

Repeatable for credit.
Campus: USU Eastern only

PE 1900 - Club Sports
1 credit

Designed for students desiring to participate in extramural competition against other colleges and universities in the following sports: ballroom dance, baseball, bowling, cycling, disc golf, hockey, men’s lacrosse, racquetball, rodeo, rugby, men’s soccer, ultimate frisbee, men’s volleyball, waterpolo, and wrestling.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

PE 1905 - Aggiettes
1 credit

Designed for students who audition for and are accepted into the Aggiette dance program to represent Utah State University at sporting events.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

PE 1906 - Eagle Dancers
1 credit

Designed for students who audition and are selected as members of the Dance Team. Emphasizes learning and rehearsing a variety of dance styles for performance at athletic events. Includes physical fitness, weight management, nutrition, choreography, sportsmanship, and intermediate to advanced level dance technique. Team members are required to take a weight management course each semester and Basic Ballet I or higher.

Prerequisite/Restriction: Audition
Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

PE 1910 - African Dance
1 credit

Introduces students to African dance using live
Each class incorporates a series of warm-up exercises, followed by specific dances inspired by traditional African ceremonies and events, all accompanied by a traditional African drum ensemble.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $90.00

PE 1915 - Cheer Squad
1 credit

Designed for students who audition for and are accepted into the Cheer Squad program to represent Utah State University at sporting events.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

PE 2000 - Personal Instruction and Conditioning
1 credit

Designed for students and prospective members of varsity teams, as well as for the student/athlete requiring a personalized program.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PE 2010 - Varsity Cross Country
1 credit

Designed to meet the needs of varsity student/athletes in cross country.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall

PE 2020 - Varsity Football
1 credit

Designed to meet the needs of varsity student/athletes in football.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall

PE 2030 - Varsity Soccer
1 credit

Designed to meet the needs of varsity student/athletes in soccer.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall

PE 2040 - Varsity Volleyball
1 credit

Designed to meet the needs of varsity student/athletes in volleyball.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall

PE 2050 - Varsity Indoor Track and Field
1 credit

Designed to meet the needs of varsity student/athletes in indoor track and field.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring

PE 2060 - Varsity Basketball
1 credit

Designed to meet the needs of varsity student/athletes in basketball.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring

PE 2070 - Varsity Gymnastics
1 credit

Designed to meet the needs of varsity student/athletes in gymnastics.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring

PE 2080 - Varsity Track and Field
1 credit
Designed to meet the needs of varsity student/athletes in track and field.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring

PE 2090 - Varsity Softball
1 credit

Designed to meet the needs of varsity student/athletes in softball.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring

PE 2100 - Varsity Golf
1 credit

Designed to meet the needs of varsity student/athletes in golf.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

PE 2110 - Varsity Tennis
1 credit

Designed to meet the needs of varsity student/athletes in tennis.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

PE 2120 - Varsity Weight Training
1 credit

Designed for varsity athletes. Emphasizes strength development.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PE 2130 - Varsity Baseball
1 credit

Open to all students. Emphasis will be on team play with students learning all the basic skills associated with the game of baseball. Includes demonstrations and application in pitching, hitting, base running and defensive skills.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

PE 2988 - Special Problems
1-3 credits

Individual work approved by the instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

PE 2999 - Workshop
1-3 credits

Designed to meet the changing needs of the student in Physical Education.

Repeatable for credit
Campus: USU Eastern only

PE 3000 - Dynamic Fitness
3 credits

Designed to develop positive health practices in the areas of physical activity, diet, rest, and relaxation of living through classroom, laboratory, and activity experiences.

Cross-listed as: PEP 3000.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $15.00

PE 3010 - Yoga Technique 1
3 credits

This course is designed to introduce students to the techniques, training and practice of yoga at a beginner level.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $414.00
Effective Term
Spring
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Semester(s) Traditionally Offered</th>
<th>Course Fee</th>
<th>Effective Term</th>
<th>Repeatable</th>
<th>Pass/Fail only</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE 3011</td>
<td>Introduction to Yoga Teacher Training</td>
<td>1</td>
<td>Designed to introduce students to the techniques, training, and practice of asana, pranayama, kriya, chanting, mantra, meditation and other traditional yoga techniques. The course also introduces teaching methodology and yoga philosophy.</td>
<td>Fall, Spring</td>
<td>$138.00</td>
<td>Spring 2016</td>
<td></td>
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<tr>
<td>PE 3020</td>
<td>Yoga Teaching Methodology I</td>
<td>3</td>
<td>This course is designed to introduce students to the art and science of teaching yoga, more specifically; ethics for yoga teachers, class organization, leading a class, effective communication, verbal and physical adjustments, observation and demonstration.</td>
<td>Fall, Spring</td>
<td>$414.00</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PE 3021</td>
<td>Yoga Teaching Methodology II</td>
<td>3</td>
<td>This course is designed to extend students exposure to the art and science of teaching yoga, more specifically; ethics for yoga teachers, class organization, leading a class, effective communication, verbal and physical adjustments, observation and demonstration.</td>
<td>Fall, Spring</td>
<td>$414.00</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PE 3070</td>
<td>Yoga Anatomy</td>
<td>2</td>
<td>This course introduces students to the fundamentals of human anatomy and kinesiology as it relates to the yoga practice, and introduces them specifically to the marma system used in Yoga anatomy.</td>
<td>Fall, Spring</td>
<td>$276.00</td>
<td>Fall 2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE 4000</td>
<td>Lifeguard Training</td>
<td>2</td>
<td>Designed to prepare students as pool or nonsurf open water lifeguards. Presents knowledge and skills necessary for lifeguard functions. American Red Cross certification available.</td>
<td>Fall, Spring</td>
<td>$90.00</td>
<td>Fall 2016</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PE 4010</td>
<td>Yoga Theory</td>
<td>2</td>
<td>This course introduces the students to the study of yoga philosophy through major Hindu texts such as the Bhagavad Gita, the Yoga Sutras of Patanjali and The Upanishads.</td>
<td>Fall, Spring</td>
<td>$414.00</td>
<td>Fall 2016</td>
<td></td>
<td></td>
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<tr>
<td>PE 4050</td>
<td>Water Safety Instructor</td>
<td>2</td>
<td>Attention given to methods of teaching swimming and lifesaving. Presents knowledge and skills necessary for lifeguard functions. American Red Cross certification available.</td>
<td>Fall, Spring</td>
<td>$60.00</td>
<td>Fall 2016</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PE 4200</td>
<td>Transitions</td>
<td>2</td>
<td>Enhance the transition from the university to life after college by exploring topic such as career exploration, personal branding, resume preparation, understanding expectations, and networking. Become familiar with career prep support offered through campus services.</td>
<td>Fall, Spring</td>
<td></td>
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</tr>
</tbody>
</table>
Effective Term  
Summer 2016

Physical Education Professional

PEP 1900 - Mental Strategies  
2 credits

Survey of the mental strategies and techniques used by pro athletes, star entertainers, and top executives to attain and maintain high performance levels in their fields and how those strategies and techniques can be applied in sports, business, etc.

Campus: USU Eastern only

PEP 2000 - Introduction and History of Physical Education  
2 credits

Acquaints P.E. students with four areas of physical education, including: the department, with respect to the University and the College of Education and Human Services; the history of physical education; the effects of sociology on physical education; and future employment opportunities in the fields of physical education.

Semester(s) Traditionally Offered: Fall, Spring

PEP 2020 - Introduction to Physical Therapy  
2 credits

Introduces prephysical therapy students to the discipline of physical therapy and familiarizes them with its associated spectrum of opportunities and responsibilities.

Semester(s) Traditionally Offered: Fall

PEP 2030 - Introduction to Fundamentals of Coaching  
2 credits

Designed for youth as well as secondary coaches. Class overviews, methods, teaching techniques, coaching philosophies and practical experiences in both team and individual sports. Includes lecture demonstration, media presentations, game scouting, field project and class journals. Course stresses motivation, selection, discipline, management and the technical aspects of coaching.

Campus: USU Eastern only

PEP 2050 - Sport Rules and Regulations of the Utah High School Athletic Association  
1 credit

Knowledge of the rules and mechanics of officiating all Utah high school sports.

PEP 2100 - Skills 1 (Swimming, Volleyball, Football)  
1 credit

Provides physical education majors and minors with the knowledge, skills, practice, and understanding of swimming, volleyball, and football needed for successful participation. Exposes students to a variety of teaching methods for these three sports.

Semester(s) Traditionally Offered: Fall, Spring  
Course Fee: $10.00

PEP 2200 - Skills 2 (Lifetime Activities)  
1 credit

Provides physical education majors and minors with the knowledge, skills, practice, and understanding of lifetime activities needed for successful participation. Exposes students to a variety of teaching methods for these activities.

Semester(s) Traditionally Offered: Fall, Spring  
Course Fee: $50.00

PEP 2300 - Skills 3 (Softball, Basketball, Soccer)  
1 credit

Provides physical education majors and minors with the knowledge, skills, practice, and understanding of softball, basketball, and soccer needed for successful participation. Exposes students to a variety of teaching methods for these three sports.

Semester(s) Traditionally Offered: Fall, Spring

PEP 2400 - Skills 4 (Tennis, Badminton, Track and Field)  
1 credit

Provides physical education majors and minors with the knowledge, skills, practice, and understanding of tennis, badminton, and track and field needed for successful participation. Exposes students to a variety of teaching methods for these three sports.
PEP 2500 - Skills 5 (Dance Activities)
1 credit

Focuses on fundamental motor skills, mixers, aerobic, line, folk, ballroom, and square dance. Provides opportunities to practice rhythms and movement, as well as opportunities to practice teaching. Designed for physical education majors and minors.

PEP 2550 - PE for Young Children
2 credits

For students in early childhood education and elementary education. Combines the philosophy of physical education with the practical planning and implementing of physical education experiences for children in the primary and elementary settings.

Cross-listed as: FCHD 2030

Campus: USU Eastern only

PEP 2650 - Kinesiology
3 credits

Study of the anatomical, physiological, and mechanical principles applied to human movement.

Campus: USU Eastern only

PEP 2710 - Introduction to Athletic Training
3 credits

Introductory course in the field of athletic training for students interested in physical therapy, coaching, or training and physical education fields. Course includes lecture, demonstrations, and laboratory experience in basic first aid and CPR principles, injury prevention, evaluation and treatment of injuries with emphasis on protective taping.

Prerequisite/Restriction: First Aid training is recommended

Campus: USU Eastern only

PEP 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in physical education. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Campus: USU Eastern only

PEP 3000 - Dynamic Fitness
3 credits

Designed to develop positive health practices in the areas of physical activity, diet, rest, and relaxation of living through classroom, laboratory, and activity experiences.

Cross-listed as: PE 3000.

PEP 3050 - Physical Education in the Elementary School
3 credits

Prepares students to teach elementary physical education. Focuses on developmentally appropriate activities, locomotor and manipulative skills, fitness, games, rhythms, motor learning, and lesson planning. Students will teach physical education lessons in the elementary school.

Prerequisite/Restriction: Completion of 45 credits prior to registration

PEP 3100 - Athletic Injuries
3 credits

Care and prevention of common athletic injuries and standard taping techniques. Emphasizes recognition, first aid, and referral for these injuries. Taping techniques taught in a lab setting.
PEP 3200 - Motor Learning and Technology in Skill Analysis (CI)
3 credits
Exploration of materials, methods, mechanisms of learning, practicing, and performing motor skills. A variety of sport skills taught where students give and receive feedback. Students teach and analyze sport skills with a presentation using computer technology with video and slides.

Prerequisite/Restriction: Major in Human Movement Science or Elementary Education or Pre-Elementary Education

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10.00

PEP 3250 - Anatomical Kinesiology
3 credits
Study of the anatomical bases of human movement. Laboratory provides application of principles.

Prerequisite/Restriction: BIOL 2320

Semester(s) Traditionally Offered: Fall, Spring

PEP 3300 - Clinical Experience I
1 credit
Public school clinical experience in physical education.

Prerequisite/Restriction: Admission into Teacher Education program
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $50.00

PEP 3550 - Strategies for Teaching Physical Education
3 credits
Designed to provide future physical education teachers with sound strategies and methods for teaching lifetime activities including fitness, as well as team, individual, and dual sports.

Prerequisite/Restriction: Enrollment limited to students who have been admitted to Teaching Emphasis of Human Movement Science Major or to Physical Education Coaching Minor

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

PEP 3600 - Elementary Physical Education Practicum
3 credits
Prepares teachers to teach elementary physical education as a support minor.

Prerequisite/Restriction: PEP 3050

Semester(s) Traditionally Offered: Arranged

PEP 3650 - Movement Exploration for Elementary Teachers
2 credits
Covers creative movement and international folk dance. Experiences range from classroom management and curriculum development to large open-space activities and performance. Includes art and sound activities.

Semester(s) Traditionally Offered: Fall

PEP 4000 - Mental Aspects of Sports Performance
3 credits
Provides current knowledge of sport psychology. Applies this knowledge to teaching sports and coaching in public schools.

Cross-listed as: PSY 4000.

Semester(s) Traditionally Offered: Fall, Spring

PEP 4100 - Exercise Physiology
4 credits
Designed to expose students to theory and application of exercise physiology and principles of training and conditioning. Laboratory experience provides hands-on practicum for concepts taught in the classroom.

Prerequisite/Restriction: BIOL 2320, BIOL 2420; PEP 2000 or PEP 2020; and MATH 1050 or STAT 1040 or STAT 1045 or ACT Math score of 25 or higher or equivalent SAT Math score or AP Calculus AB score of 3 or higher
PEP 4150 - Advanced Care and Prevention of Athletic Injuries  
3 credits  
Final preparation and competency demonstration of knowledge and skills prior to taking the national certification exam for the Athletic Training credential.  

Prerequisite/Restriction: PEP 3100, instructor permission, and NATABOC certification eligibility

PEP 4200 - Biomechanics (QI)  
QI Quantitative Intensive  
4 credits  
Understanding and application of human anatomical kinesiology and biomechanical principles fundamental to efficient human movement. In required concurrent one-hour lab, students obtain hands-on application of principles of anatomical kinesiology and biomechanics.  

Prerequisite/Restriction: BIOL 2320, BIOL 2420, PEP 2000 or PEP 2020; and MATH 1050 or STAT 1040 or STAT 1045 or ACT Math score of 25 or higher or equivalent SAT Math score or AP Calculus AB score of 3 or higher

PEP 4250 - Advanced Cooperative Work Experience  
1-10 credits  
Cooperative education work experience offers student opportunity to work in related field work of the major.  

Prerequisite/Restriction: Instructor permission  
Repeatable for credit.  
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer  
Course Fee: $10.00

PEP 4300 - Clinical Experience II  
1 credit  
Public school clinical experience in physical education.  

Prerequisite/Restriction: Admission into Teacher Education program  
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring  
Course Fee: $50.00

PEP 4350 - Administration and Classroom Management of Physical Education  
2 credits  
Designed for students to develop a philosophy toward the development and implementation of quality physical education programming. Effective classroom management techniques presented and discussed. Reviews budget, personnel, facilities management, programs, and activities.

Semester(s) Traditionally Offered: Fall

PEP 4400 - Evaluation in Physical Education (QI)  
QI Quantitative Intensive  
3 credits  
Focuses on the nature and use of a variety of tests in physical education. Practical application, interpretation, and use of test results are stressed.  

Prerequisite/Restriction: PEP 2000 or PEP 2020 and enrollment in major within Health, Physical Education and Recreation Department

Semester(s) Traditionally Offered: Fall, Spring

PEP 4500 - Motivational Strategies for Physical Education and Coaching  
3 credits  
Addresses issues related to development of coaching philosophy, administration, and reviewing motivational strategies to develop and encourage positive behavior toward sport. Intrinsic motivation, goal setting, team building, and discipline discussed. Provides opportunity to work with local youth sports.  

Semester(s) Traditionally Offered: Spring
PEP 4570 - Injury Evaluation  
3 credits  
Overview of procedures to evaluate musculoskeletal injuries related to physical activity. Review of functional anatomy, evaluation and diagnostic procedures for clinical decisions. Development of practical skills will be emphasized in a clinical laboratory setting.  
Prerequisite/Restriction: BIOL 2320, BIOL 2420, PEP 3100, PEP 3250  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

PEP 4580 - Therapeutic Modalities  
2 credits  
Overview of common physical rehabilitation modalities utilized subsequent to musculoskeletal injuries and surgical procedures. Clinical exposure to therapeutic pathways and modalities applications will be emphasized.  
Prerequisite/Restriction: BIOL 2320, BIOL 2420, PEP 3100, PEP 3250  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

PEP 4600 - Methods of Coaching Football and Soccer  
1 credit  
Outlines the methods, strategies, and techniques for coaching scholastic football and soccer. Emphasizes young player skill development and high school coaches’ administration of these sports.  
Prerequisite/Restriction: PEP 4500 (may be taken concurrently)  
Semester(s) Traditionally Offered: Arranged  

PEP 4700 - Methods of Coaching Volleyball, Track and Field  
1 credit  
Outlines the methods, strategies, and techniques for coaching scholastic volleyball, as well as track and field. Emphasizes young player skill development and high school coaches’ administration of these sports.  
Prerequisite/Restriction: PEP 4500 (may be taken concurrently)  

PEP 4800 - Methods of Coaching Basketball, Baseball, and Softball  
1 credit  
Outlines methods, strategies, and techniques of coaching scholastic basketball, baseball, and softball. Emphasizes young player skill development and high school coaches’ administration of these sports.  
Prerequisite/Restriction: PEP 4500 (may be taken concurrently)  
Semester(s) Traditionally Offered: Arranged  

PEP 4850 - Methods of Teaching and Coaching Women’s Gymnastics  
3 credits  
Instructs students in required coaching methods for women’s gymnastics from the beginning to advanced levels. Also includes section on judging.  
Semester(s) Traditionally Offered: Arranged  
Course Fee: $20.00  

PEP 4900 - Methods of Physical Education (CI)  
CI Communications Intensive  
3 credits  
Designed to prepare physical education majors and minors to teach physical education in the schools. Emphasizes planning, teaching, strategies, and methods. Admission to the Teacher Education program is required.  
Prerequisite/Restriction: PEP 2000  
Corequisite: PEP 3300 or PEP 4300  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

PEP 4950 - Honors Senior Thesis  
1-6 credits  
Culminating experience within the department for honors students. Student works closely with faculty mentor in an extensive project in the student’s area of interest.  
Semester(s) Traditionally Offered: Fall, Spring
PEP 5050 - Psychological Aspects of Sports Performance  
3 credits
Psychological theory and principles applied to sports. Includes motivational techniques, psychological evaluation, stress and anxiety in sports, and personality and sports performance.
Cross-listed as: PEP 6050 and PSY 5050/PSY 6050.
Semester(s) Traditionally Offered: Arranged

PEP 5070 - Sport Sociology  
3 credits
Develops understanding of the social significance of sport. Applies the sociological perspective to a variety of contemporary issues, enabling students to better understand how sport affects and reflects American culture.
Semester(s) Traditionally Offered: Spring

PEP 5100 - Fitness Assessment and Exercise Programs  
4 credits
Application of physiologic principles, assessment techniques, and exercise prescription for developing quality fitness programs that impact health. Students gain experience in a personal fitness program and in the use and interpretation of fitness tests.
Prerequisite/Restriction: PEP 4100
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $24.00

PEP 5200 - Human Motivation in Physical Activity Contexts  
3 credits
This course will introduce students to the concepts and science of human motivation and its role in promoting physical activity in non-competitive settings. A focus on the intrinsic and extrinsic factors that shape behavior, the impact of the motivational climates created by adults and significant others, and the positive and negative outcomes of various forms of motivation.
Semester(s) Traditionally Offered: Spring

PEP 5430 - The History and Philosophy of Physical Education (CI)  
CI Communications Intensive  
3 credits
Designed to familiarize physical education majors (or nonmajors) with history of physical education and sport, as well as philosophical influences which have contributed to development of contemporary physical education and sport. Considers historical development of yesterday's pastimes into today's complex, institutionalized forms of sport and physical education.
Semester(s) Traditionally Offered: Fall

PEP 5500 - Student Teaching Seminar  
2 credits
Capstone seminar focused upon student teaching issues, professional development, and principles of effective instruction.
Prerequisite/Restriction: PEP 4900, completion of Level I and II field experiences
Semester(s) Traditionally Offered: Fall, Spring

PEP 5560 - Practicum in Improving School System Programs  
1-4 credits
In-service seminar for experienced teachers, emphasizing improvement in instruction.
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 5630 - Student Teaching in Secondary Schools  
10 credits
A 13-week culminating experience in which students assume full-time teaching responsibilities under the direction of cooperating teachers in physical education.
Prerequisite/Restriction: PEP 4900, completion of Level I and Level II field experiences
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $300.00
PEP 5700 - Special Topics in Physical Education  
1-6 credits  

In-depth review and discussion of special topics in physical education.  

Cross-listed as: PEP 6700.  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

PEP 5900 - Independent Study  
1-3 credits  

Provides opportunity for undergraduate or graduate students to participate in independent inquiry under guidance of a professor.  
Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

PEP 5910 - Independent Research  
1-3 credits  

Allows undergraduate students to pursue personal research interest by formalizing an independent project under the guidance of a professor.  
Repeatable for credit  
Semester(s) Traditionally Offered: Fall, Spring, Summer  

PEP 6000 - Administration of Athletics  
3 credits  

Prepares students to organize and administer interscholastic and intercollegiate sports at the public school or university level. Consideration is given to both the challenges and standards associated with such programs.  
Semester(s) Traditionally Offered: Arranged  

PEP 6010 - Leadership in Health, Physical Education, and Recreation  
3 credits  

Group approach to improvement and innovation in leadership and supervisory skills.  
Semester(s) Traditionally Offered: Arranged  

PEP 6020 - Curriculum in Physical Education  
3 credits  

Curriculum development studied in terms of student needs in relation to present-day society. Includes current practices and trends in the area of curriculum.  
Semester(s) Traditionally Offered: Spring, Taught Alternate, Odd Years  

PEP 6050 - Psychological Aspects of Sports Performance  
3 credits  

Psychological theory and principles applied to sports. Includes motivational techniques, psychological evaluation, stress and anxiety in sports, and personality and sports performance.  
Cross-listed as: PEP 5050 and PSY 6050/PSY 5050.  
Semester(s) Traditionally Offered: Arranged  

PEP 6070 - Sport in Society  
3 credits  

Introduces students to complex role and social significance of sport in contemporary society. Familiarizes students with aims, scope, and potential contributions of sport in society.  
Semester(s) Traditionally Offered: Spring  

PEP 6200 - Biophysical Aspects of Physical Activity  
3 credits  

This course reviews the fundamental connections between physical activity, functional anatomy, biomechanics, and exercise physiology. Through these perspectives, the relationships between physical activity and health, anatomical structure and human movement, and the physiological adaptations to enhance exercise performance will be explored.  
Semester(s) Traditionally Offered: Spring  

PEP 6250 - Graduate Cooperative Work Experience  
1-10 credits  

Professional level of educational work experience in a cooperative education position for graduate students.
Repeatable for credit.

PEP 6290 - Corporate Wellness Marketing  
3 credits

Reviews history of corporate fitness in America, as well as common organizational and management practices. Emphasizes marketing practices promoting individual and business involvement.

Semester(s) Traditionally Offered: Spring

PEP 6300 - Seminar in Human Movement Sciences  
1 credit

Seminar for students with exercise science, sports medicine, and corporate wellness specializations. Introduction of faculty, expectations, and tools for exercise science graduate studies.

Semester(s) Traditionally Offered: Fall

PEP 6400 - Advanced Exercise Physiology  
4 credits

Detailed examination of exercise physiology, such as advanced study of metabolism, cardiorespiratory responses, and body composition. Scientific process emphasized with data collections and writing.

Semester(s) Traditionally Offered: Fall  
Course Fee: $15.00

PEP 6410 - Bioenergetics and Exercise Metabolism  
2 credits


Semester(s) Traditionally Offered: Fall

PEP 6425 - Exercise in Extreme Environments  
2 credits

This course provides an advanced study of the human physiological responses and adaptations that occur with exposure to exercise in heat, cold, hyperbaric (underwater), hypobaric (high altitude), and polluted environments.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring

PEP 6430 - History and Philosophy of Physical Education and Sport  
3 credits

History of physical education; philosophical influences which have contributed to contemporary physical education; and methods of educational instruction using the primary philosophical positions.

Semester(s) Traditionally Offered: Fall

PEP 6440 - Body Composition  
2 credits

Advanced study of human body composition. Theoretical and applied aspects of body composition assessment in research, clinical, and health/fitness settings. Limitations and usefulness of various assessment techniques reviewed. Laboratory allows for independent investigation and skill development of assessment techniques.

Semester(s) Traditionally Offered: Spring

PEP 6450 - ECG Interpretation and Advanced Exercise Prescription  
3 credits

Electrocardiogram (ECG) interpretation relevant to cardiac rehabilitation and stress testing. Exercise prescription for specific populations.

Prerequisite/Restriction: PEP 5100 and PEP 6400

Semester(s) Traditionally Offered: Spring  
Course Fee: $15.00

PEP 6460 - Exercise Electrocardiogram Interpretation  
2 credits

Provides an understanding of the theory and practice of ECG interpretation in response to exercise. Review standard 12-lead diagnostic ECG and identification of
atrial and ventricular enlargement, dysrhythms, ischaemia and myocardial infarction at rest and during exercise.

Semester(s) Traditionally Offered: Spring

PEP 6470 - Clinical Exercise Prescription
2 credits

Provides an understanding of how chronic conditions such as obesity, hypertension, metabolic syndrome, diabetes, hyperlipidemia, coronary artery and pulmonary diseases impact prescribing exercise for individuals possessing these conditions. Review of exercise prescription modifications to accommodate existing conditions.

Semester(s) Traditionally Offered: Spring

PEP 6480 - Advanced Neuromuscular Exercise Physiology
2 credits

Provides an understanding of the structural basis for muscular contraction, central and peripheral factors involved in neuromuscular fatigue, and adaptations of the neuromuscular system resulting from aerobic and strength training.

Semester(s) Traditionally Offered: Spring

PEP 6490 - Advanced Cardiovascular Exercise Physiology
2 credits

Provides an understanding of the structural and electrophysiological basis of cardiac function and the peripheral circulatory system during exercise. Influence of dynamic and static exercise on the circulatory response including the chronic adaptations of the circulatory system to aerobic and resistance training.

Semester(s) Traditionally Offered: Spring

PEP 6500 - Practicum in Corporate Wellness
1-10 credits

Experiences designed for the practical implementation of coursework in a corporate wellness, fitness industry, cardiac rehabilitation, or other related setting.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 6540 - Neuromuscular Adaptations
3 credits

Interaction of neuromuscular systems with mechanical properties of the human body and environment. Emphasizes mechanisms influencing human flexibility, strength, and adaptive responses to overload.

Semester(s) Traditionally Offered: Fall
Course Fee: $10.00

PEP 6550 - Athletic Training Clinical Orthopedics I
3 credits

Provides graduate student athletic trainers with opportunity to learn sports medicine from a sports medicine physician’s perspective. Concepts provide real-life examples.

Semester(s) Traditionally Offered: Fall

PEP 6560 - Athletic Training Clinical Orthopedics II
3 credits

Provides graduate student athletic trainers with opportunity to learn sports medicine from a sports medicine physician’s perspective. Concepts provide real-life examples.

Semester(s) Traditionally Offered: Spring

PEP 6570 - Athletic Training Clinical Orthopedics III
3 credits

Provides students in athletic training services with an opportunity to understand the role of the athletic trainer, in conjunction with the team physician, in providing care, evaluation, and treatment for sport-related injuries.

Semester(s) Traditionally Offered: Fall

PEP 6580 - Athletic Training Clinical Orthopedics IV
3 credits

Provides students in athletic training services with an opportunity to understand the role of the athletic trainer, in conjunction with the team physician, in providing care, evaluation, and treatment for sport-related injuries.

Semester(s) Traditionally Offered: Spring
PEP 6610 - Topics in Biomechanics
2 credits

The course will review kinematic and kinetic principles and discuss their application to sport and rehabilitation. Current research published in the biomechanics discipline will form the outline for lectures and drive discussions.

Semester(s) Traditionally Offered: Spring

PEP 6620 - Methods in Biomechanics
1 credit

This course is designed to allow students to develop skills in using instrumentation in biomechanics for the purpose of collecting, analyzing, interpreting and presenting biomechanical data. Course content is intended to reinforce understanding of forces and motions involved in human movement.

Cross-listed as: PEP 7620

Semester(s) Traditionally Offered: Spring

PEP 6690 - Analysis of Teaching Physical Education
3 credits

Designed to provide graduate students with practicum experiences in the analysis of physical education, via micro teaching and observation of physical education classes.

Semester(s) Traditionally Offered: Arranged

PEP 6700 - Special Topics in Physical Education
1-6 credits

In-depth review and discussion of special topics in physical education.

Cross-listed as: PEP 5700.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 6730 - Worksite Guidance and Counseling
3 credits

Provides cardiac rehabilitation/corporate wellness graduate students with basic understanding of exercise and health psychology.

Semester(s) Traditionally Offered: Arranged

PEP 6800 - Advanced Biomechanics
3 credits

Instrumentation, theory, and methods for biomechanical measurement of kinematic and kinetic characteristics of human motion.

Prerequisite/Restriction: PEP 4200

Semester(s) Traditionally Offered: Spring

Course Fee: $15.00

PEP 6810 - Research Methods in Health Sciences
3 credits

Explores basic to advanced concepts contained in research and statistical design, as applicable to health sciences.

Semester(s) Traditionally Offered: Fall

PEP 6820 - Wellness Certification and Technology
2 credits

Provides instruction and experience in wellness technology and wellness certification. Students learn use of current technology in the fitness industry and obtain certain wellness certifications.

Semester(s) Traditionally Offered: Arranged

PEP 6830 - Motor Learning
3 credits

Comprehensive review and analysis of research in the area of motor skills which bears upon the teaching of physical education activities.

Semester(s) Traditionally Offered: Arranged

PEP 6840 - Fundamentals of Motor Behavior
2 credits

This course offers advanced understanding of principles underlying motor control and learning. Topics such as movement variability and expertise will be explored. Discussion of research articles and class topics will focus on the practical applications of understanding motor control.
Semester(s) Traditionally Offered: Fall
PEP 6850 - Neural Aspects of Rehabilitation
2 credits

A review of the human nervous system’s control of movement, including the role of the basal ganglia, motor cortex and spinal chord. The impact of pathology on gait, posture and voluntary hand movements and how various rehabilitation approaches addresses these pathologies.

Semester(s) Traditionally Offered: Spring
PEP 6860 - Motor Development
2 credits

A study of the progressive change in movement behavior from infancy through older adulthood. Emphasis upon developing the ability to identify the stages in a variety of motor skills, physical growth patterns and biological maturity and the relationship of each to motor performance.

Semester(s) Traditionally Offered: Spring, Taught Alternate Years
PEP 6900 - Independent Study
1-3 credits

Student conducts independent projects under direction of one or more professors. Provides student with opportunity for individualized study.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 6910 - Independent Research
1-3 credits

Allows graduate students to pursue personal research interests by formalizing an independent project under the guidance of a graduate professor.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 6960 - Master’s Project
3 credits

Allows students opportunity to develop creative and applicable educational project.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 6970 - Thesis
1-9 credits

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 6990 - Continuing Graduate Advisement
1-9 credits

Provides graduate students with continued support and advisement. Usually taken following completion of all coursework required for the degree.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 7040 - Review of Literature
1 credit

Guided experience in conducting a comprehensive and systematic review of literature on a topic related to Pathokinesiology.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 7060 - Research Internship
1 credit

Guided experience in conducting research on topics in Pathokinesiology.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 7070 - Grant Writing for Pathokinesiology
1 credit

Guided experience in preparation of grant proposals.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 7080 - Publication
1 credit

Individualized experience in writing scholarly manuscripts for submission to peer-reviewed academic journals.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 7090 - Conference Presentation
1 credit

Individualized experience in presenting scholarly work at academic conferences.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 7330 - Supervision Internship
1 credit

Guided experience in supervising undergraduate and/or master's students during practica or research experiences.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 7340 - College Teaching Internship
1 credit

Guided experience and supervision in teaching university-level discipline courses.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 7550 - Practicum in the Evaluation of Instruction
1-6 credits

Field-based experience involving supervision of student teachers in Department of Health, Physical Education and Recreation.

Semester(s) Traditionally Offered: Arranged

PEP 7620 - Methods in Biomechanics
1 credit

This course is designed to allow students to develop skills in using instrumentation in biomechanics for the purpose of collecting, analyzing, interpreting and presenting biomechanical data. Course content is intended to reinforce understanding of forces and motions involved in human movement.

Cross-listed as: PEP 6620

Semester(s) Traditionally Offered: Spring

PEP 7820 - Seminar: Special Topics
1-3 credits

In-depth study of special topics in Pathokinesiology and rehabilitation. Examination of relevant research and current discipline paradigms.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Alternate Years

PEP 7870 - Advanced Motor Behavior Seminar
2 credits

This course provides students with advanced study and understanding of principles underlying general motor control. Emphasis will be placed on the theoretical bases of motor control, and motor change occurring via learning and adaptation as it related to movement variability, motivation and ergonomics.

Prerequisite/Restriction: PEP 6840 and PEP 6860

Semester(s) Traditionally Offered: Fall, Taught Alternate Years

PEP 7900 - Independent Study
1-3 credits

Individual discussion and intensive study of a particular topic in Pathokinesiology.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Pass/Fail Only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 7910 - Independent Research
1-3 credits

Conducting research.

Prerequisite/Restriction: Instructor permission
Repeatable for credit
Pass/Fail Only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 7940 - Journal Reading Group
1-2 credits

Seminar discussion of recent empirical and theoretical journal articles in pathokinesiology aspects of biomechanics, motor rehabilitation and sensory motor behavior.
Repeatable for credit.
Pass/Fail
Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 7970 - Dissertation
1-18 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Pass/Fail Only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PEP 7990 - Continuing Graduate Advisement
1-12 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Pass/Fail Only
Semester(s) Traditionally Offered: Fall, Spring, Summer

Physics

PHYS 1010 - Elementary Physics (BPS)
BPS Breadth Physical Sciences
3 credits

Introduces the basic principles of classical physics, such as the scientific method, conservation laws, properties of matter and how these ideas have shaped the world in which we live. Aimed at non-science majors to expose them to the physics all around them. With the lab course PHYS 1015, the course can be taken as a Physical Science General Education course for those students that need a lab science course. Additionally, this course is recommended for students planning on taking PHYS 2010 or PHYS 2210. Course will be taught using lecture, video, in class experiments and class discussion.

Prerequisite/Restriction: ACT Math score of 23 or higher or equivalent SAT Math score, AP Calculus AB score of 3 or higher, or grade of C or better in MATH 0995

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

PHYS 1015 - Elementary Physics Laboratory
1 credit

PHYS 1010 must be taken concurrently with PHYS 1015, but PHYS 1015 is optional.

Corequisite: PHYS 1010

Campus: USU Eastern only

PHYS 1020 - Energy (BPS)
BPS Breadth Physical Sciences
3 credits

Study of energy resources, utilization, conversion, and conservation, including energy balance and flow in biological and geological systems. Social impacts of energy resource development, including public policy and planning.

Prerequisite/Restriction: At least one university-level mathematics or statistics course

Course Fee: $10.00

PHYS 1040 - Introductory Astronomy (BPS)
BPS Breadth Physical Sciences
3 credits

Exploration of solar system and universe. Laws of motion, fundamental interactions, structure of matter, electromagnetic radiation, and conceptual models of celestial motions. Conceptual and quantitative homework problems and exams, along with writing assignments and observation reports, are required. Facility with high school mathematics is expected.

Course Fee: $10.00

PHYS 1050 - Technical Physics
3 credits

Study of laws of Physics as might be encountered in trade and technical fields. Subjects studied will include basic technical mathematics, measurements, forces, vectors, equilibrium, friction, torque, rotational equilibrium, uniformly accelerated motion, acceleration, energy, momentum, rotational motion, simple machines, properties of solids and properties of fluids. Designed for the students in technical areas such as welding, mining, automotive, electronics, machine technology, etc.

Campus: USU Eastern only

PHYS 1080 - Intelligent Life in the Universe (BPS)
BPS Breadth Physical Sciences
Study of the likelihood of extraterrestrial intelligence and its probable locations. Nature and evolution of life on Earth, as well as stellar evolution and planetary environments. Discussion of psychology of UFO phenomena.

Prerequisite/Restriction: At least one university-level mathematics or statistics course

Course Fee: $10.00

PHYS 1100 - Great Ideas in Physics (BPS)
BPS Breadth Physical Sciences
3 credits

Descriptive introduction to the principles underlying contemporary physics. Great ideas will include relativity and quantum mechanics and such consequences and applications as the twin paradox, black holes, nuclear energy, magnetic imaging, lasers, superconductivity, and the paradox of Schrodinger's cat. Facility with high school algebra is expected.

PHYS 1200 - Introduction to Physics by Hands-on Exploration (BPS)
BPS Breadth Physical Sciences
4 credits

Overview of physics concepts important in today's society. Explores structure of matter, electricity and magnetism, light and sound, forces, energy, momentum, thermodynamics, and modern physics. Required laboratory emphasizes hands-on, inquiry-based activities.

Course Fee: $14.00

PHYS 1800 - Physics of Technology (BPS)
BPS Breadth Physical Sciences
4 credits

Overview of the classical physics on which industrial technology is based. Elements of kinematics, forces, energy, momentum, thermodynamics, electric and magnetic fields, waves, and optics. Required laboratory.

Prerequisite/Restriction: ACT Math score of at least 27 or equivalent SAT Math score, AP Calculus AB Score of at least 3, or MATH 1050 and MATH 1060

Course Fee: $10.00

PHYS 2010 - General Physics I
4 credits

An algebra based physics course on the study of motion and heat including 1-D and 2-D kinematics, Newton's three laws of motion, rotations, laws of gravitation, periodic motion, and mechanical waves including sound. Heat topics will include calorimetry, the three laws of Thermodynamics, the meaning of temperature, and heat as a process or transfer of energy. Class will be taught using lectures, demonstration, videos, and group problem solving. Students will be required to explain their homework solutions on the board to the entire class. Can be used by science majors to complete the Physical Science General Education requirement. Intended for students seeking to enter dental, pharmacy, veterinarian programs and life science areas.

Prerequisite/Restriction: MATH 1060 or MATH 1210 or AP Calculus AB score of 3 or higher

Corequisite: PHYS 2015

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

PHYS 2015 - General Physics Lab I
1 credit

Intended to supplement the material covered in PHYS 2010 and help students visualize and experience the material being covered in lecture. Taught using a combination of traditional labs and computer based discovery labs.

Corequisite: PHYS 2010

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall

PHYS 2020 - General Physics II
4 credits

An algebra based physics course on the study of electricity, magnetism and light. Covers forces between point charges, the ideas of electric potentials, the relationship between potential, charge and energy. Other E-M material covered will include basic AC and DC circuits, forces on currents in magnetic fields, and the
relationship between electricity and light. Light topics covered will include geometric optics, lenses and mirrors and the wave nature of light, diffraction and interference. Taught using lectures, demonstrations, videos, and group problem solving. Students will be required to explain their homework solutions on the board to the entire class. Can be used by science majors to complete the Physical Science General Education requirement.

Prerequisite/Restriction: PHYS 2010 and PHYS 2015

Corequisite: PHYS 2025

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

PHYS 2025 - General Physics Lab II
1 credit

Intended to supplement the materials covered in PHYS 2020 and help students visualize and experience the material being covered in lecture. Taught using a combination of traditional labs and computer based discovery labs.

Corequisite: PHYS 2020

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

PHYS 2110 - General Physics - Life Sciences I
4 credits

Study of kinematics and dynamics of particles and systems of particles. Introduction to Newton’s Laws of motion, momentum and energy conservation, rotations, and thermodynamics, with applications in biology and biotechnology. Required recitation and lab.

Prerequisite/Restriction: MATH 1100 or MATH 1210

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00

PHYS 2120 - General Physics - Life Sciences II (BPS)
BPS Breadth Physical Sciences
4 credits

Introduction to electromagnetism, optics, and quantum phenomena—including the microscopic structure of matter, with applications in biology and biotechnology. Required recitation and lab.

Prerequisite/Restriction: PHYS 2110 or PHYS 2310 (may be taken concurrently)

Course Fee: $20.00

PHYS 2210 - Physics for Scientists and Engineers I (BPS/QI)
BPS/QI Quantitative Intensive
4 credits

The study of motion and thermal physics including vectors, kinematics, forces, Newton’s three laws of motion, circular motion and rotations, harmonic motion, momentum, energy and work, gravity, fluids, and thermodynamics. Lecture and required recitation.

Prerequisite/Restriction: MATH 1210

Course Fee: $10.00

Page: 1 <- Back 10 .. 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 .. Forward 10 -> 64

Physics

PHYS 2215 - Physics for Scientists and Engineers Lab I
1 credit

Computer-assisted laboratory investigations of mechanics and thermal physics principles taught in PHYS 2210 and PHYS 2310.

Prerequisite/Restriction: PHYS 2210 or PHYS 2310 (may be taken concurrently)

Course Fee: $20.00

PHYS 2220 - Physics for Scientists and Engineers II (BPS/QI)
BPS/QI Breadth Physical Sciences and Quantitative Intensive
4 credits

The study of waves, electricity and magnetism, optics, and quantum phenomena. Topics include electric and magnetic forces and fields, electric potential, Maxwell’s equations, DC and AC circuits, geometrical optics, wave nature of light, special relativity, and atomic, molecular, nuclear phenomena. Lecture and required recitation.
Prerequisite/Restriction: MATH 1210, PHYS 2210 or PHYS 2310

PHYS 2225 - Physics for Scientists and Engineers Lab II
1 credit

Computer-assisted laboratory investigations of wave, electricity and magnetism, optics, and quantum physics principles taught in PHYS 2220 or PHYS 2320.

Prerequisite/Restriction: PHYS 2220 or PHYS 2320 (may be taken concurrently)

PHYS 2310 - Physics for Physics Majors I
4 credits

The study of motion and thermal physics. Topics include kinematics, forces, Newton's laws of motion, momentum, rotations and torque, work and potential energy, conservation laws, harmonic motion, gravity, fluids, and thermodynamics. Includes activities related to the profession of physics.

Prerequisite/Restriction: Prerequisite: MATH 1210
Restrictions: Student must be a declared Physics major or Instructor permission

PHYS 2400 - Introductory Topics in Physics
1-3 credits

Explores issues in contemporary physics at an introductory level.

Prerequisite/Restriction: Instructor permission
Repeatable for credit

PHYS 2500 - Introduction to Computer Methods in Physics
2 credits

Topics include: (1) use of numerical, graphical, and symbolic manipulation software to solve physics problems; and (2) interfacing computers to instrumentation for control and data acquisition.

Prerequisite/Restriction: PHYS 1800, PHYS 2110, PHYS 2210, or PHYS 2310

PHYS 2500 - Introduction to Computer Methods in Physics
2 credits

Topics include: (1) use of numerical, graphical, and symbolic manipulation software to solve physics problems; and (2) interfacing computers to instrumentation for control and data acquisition.

Prerequisite/Restriction: PHYS 1800, PHYS 2110, PHYS 2210, or PHYS 2310

PHYS 2700 - Science Excursion
1 credit

Campus: USU Eastern only

PHYS 2710 - Introductory Modern Physics
3 credits

Overview of the origins, principles, and practical applications of quantum mechanics. Atomic structure and periodic table, molecular bonding, solids, electronic properties of metals and semiconductors, and superconductivity.

Prerequisite/Restriction: MATH 1220 and PHYS 2210 or PHYS 2320

PHYS 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in physics. Students meet with the instructor/Coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit
agreements.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

PHYS 2988 - Special Problems
1-3 credits

Individual work approved by the instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

PHYS 3010 - Space Exploration from Earth to the Solar System (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 credits

Comparative introduction to the Earth and other planets in our solar system, including geological structure and atmosphere. Emphasis on space exploration methods, including spacecraft and detection instrumentation. Examines latest results of Mars missions, Jupiter and Saturn exploration, etc.

Prerequisite/Restriction: Completion of University Studies Quantitative Literacy (QL) and Breadth Physical Sciences (BPS) requirements

PHYS 3020 - Great Scientists (DSC)
DSC Depth Life and Physical Sciences
3 credits

Lives and work of men and women responsible for scientific revolution: Maxwell (loved children), Einstein (despised authority), Curie (suffered discrimination against women), Schrodinger (fled from Hitler), Watson and Crick (the DNA story), Feynman (lock picker), Rubin (as a young girl built her own telescope), and others.

Prerequisite/Restriction: Fulfillment of University Studies Breadth Physical Sciences (BPS) or Breadth Life Sciences (BLS) requirement

PHYS 3030 - The Universe (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 credits

Study of properties and origin of the universe, based on Einstein’s theory of gravity. Topics include curved space-time; black holes, white holes, and worm holes; the big bang; multiple universes; and the births of stars, galaxies, heavy atoms, and planets.

Prerequisite/Restriction: Completion of University Studies Quantitative Literacy (QL) requirement and PHYS 1040

PHYS 3040 - Space Weather–Dangers to the High-Tech World (QI)
QI Quantitative Intensive
3 credits

Space weather can be as destructive to high technology as ordinary weather is to property and crops. Examines increasing vulnerability of society to events in space resulting from changes on the Sun and from human activity. Explores how we learn about space weather with satellites, radars, lidars, and numerical models.

Prerequisite/Restriction: Completion of University Studies Quantitative Literacy (QL) and Breadth Physical Sciences (BPS) requirements

PHYS 3150 - Energy in the Twenty-first Century (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 credits

Provides science-based overview of energy resources. Compares and analyzes energy budgets and energy resources, including solar energy, fossil fuels, nuclear energy, and renewable sources. For the different energy sources, contrasts carbon emissions and potential impacts on climate change.

Prerequisite/Restriction: GEO 1360 and Quantitative Literacy (QL) course or equivalent

Cross-listed as: GEO 3150

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

PHYS 3500 - Topics in Physics
1-3 credits

Introduces and explores issues in contemporary physics
at an intermediate undergraduate level. Focuses on phenomena and experimental methods.

Prerequisite/Restriction: PHYS 2710 and instructor permission

Repeatable for credit.

PHYS 3550 - Intermediate Classical Mechanics 3 credits

Newton’s laws of motion, work and energy, systems of particles, Lagrange’s and Hamilton’s equations, accelerated reference frames, central force problem, harmonic oscillations, and rigid body rotations.

Prerequisite/Restriction: PHYS 2710 (may be taken concurrently); MATH 2210; MATH 2250 (may be taken concurrently)

PHYS 3600 - Electromagnetism I 3 credits

Electrostatics, electric potential, current, magnetostatics, induction, AC circuits, Maxwell’s equations, and electromagnetic waves.

Prerequisite/Restriction: PHYS 2710, MATH 2210; MATH 2250 (may be taken concurrently)

PHYS 3700 - Thermal Physics 3 credits


Prerequisite/Restriction: PHYS 2710

PHYS 3710 - Intermediate Modern Physics 3 credits

Introduction to the principles and applications of special and general relativity. Space-time, relativistic kinematics and dynamics, gravity and geometry, black holes, Big Bang, nuclei, radioactivity, and nuclear reactions. Interconnections between modern cosmology and elementary particle physics.

Prerequisite/Restriction: MATH 1220 and PHYS 2220 or PHYS 2320

PHYS 3750 - Foundations of Wave Phenomena 3 credits

Survey of wave phenomena in physics, with emphasis on application of mathematical techniques to the wave equation, Schrödinger equation, and Maxwell equations.

Prerequisite/Restriction: PHYS 2710, MATH 2210, MATH 2250

PHYS 3870 - Intermediate Physics Laboratory (CI) CI Communications Intensive 3

Modern experimental techniques, data and error analysis, experimental design, and communication skills. Exercises complement upper-level theory courses, and include some experiments of historical importance.

Prerequisite/Restriction: PHYS 2500, PHYS 2710 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall
Course Fee: $40.00
Effective Term
Fall 2016

PHYS 3880 - Advanced Physics Laboratory (CI) CI Communications Intensive 3 credits

Modern experimental physics techniques, with emphasis on student designed and implemented experimental projects.

Prerequisite/Restriction: PHYS 3870

Semester(s) Traditionally Offered: Spring
Course Fee: $40.00
Effective Term
Summer 2016

PHYS 3900 - Projects in Physics 1-3 credits

Individual study pursued under direction of staff member.
Prerequisite/Restriction: Instructor permission

Repeatable for credit.

PHYS 4020 - Science, Art, and Music (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 credits

Explores how science constrains production and appreciation of visual and auditory art. Relevance to art of: physics of sound and light, perspective and observer in relativity and quantum mechanics, symmetry, fractals, chaos, complex adaptive behavior, and self-organization.

Prerequisite/Restriction: Quantitative Literacy (QL), and Physical or Life Sciences breadth (BPS or BLS) requirements

PHYS 4250 - Cooperative Work Experience (CI)
CI Communications Intensive
1-6 credits

Planned work experience in industry or national laboratories. A detailed plan and the purpose of the experience must have prior approval. A written report is required.

Prerequisite/Restriction: PHYS 2710

Repeatable for credit.

PHYS 4600 - Electromagnetism II
3 credits

Potential formulations of electrodynamics, energy and momentum, waves and boundary conditions, waves in dielectrics and conductors, guided waves, dipole radiation, and relativistic electrodynamics.

Prerequisite/Restriction: PHYS 3550, PHYS 3600, PHYS 3750

PHYS 4650 - Optics I
3 credits

Topics include mathematics of wave motion, electromagnetic theory of light, light propagation, geometrical optics, and superposition of waves. For graduate (6000-level) credit, additional reading, recitation, use of optical-design software, and/or writing will be required.

Prerequisite/Restriction: PHYS 2710, MATH 2210, MATH 2250; or ECE 3870

Cross-listed as: PHYS 6650

Semester(s) Traditionally Offered: Fall

PHYS 4680 - Optics II
3 credits

Topics include polarization, interference, diffraction, Fourier optics, coherence theory, and the quantum nature of light. For graduate (6000-level) credit, additional reading, recitation, use of optical-design software, and/or writing will be required.

Prerequisite/Restriction: PHYS 4650 or PHYS 6650

Cross-listed as: PHYS 6680

Semester(s) Traditionally Offered: Fall

PHYS 4700 - Quantum Mechanics I
3 credits

Principles of quantum mechanics, operators in Hilbert space, matrix mechanics, angular momentum, spin, perturbation theory, and applications.

Prerequisite/Restriction: PHYS 3550, PHYS 3600, PHYS 3750

PHYS 4710 - Quantum Mechanics II
3 credits

Continuation of PHYS 4700.

Prerequisite/Restriction: PHYS 4700

PHYS 4900 - Research in Physics (CI)
CI Communications Intensive
1-3 credits

Research experience pursued with faculty mentor. Prior to registration, student must make arrangements with the Physics Department's undergraduate research advisor.

Prerequisite/Restriction: PHYS 2710
Repeatable for credit

PHYS 5330 - Plasma Physics I
3 credits
Characteristics of the plasma state and plasma generation; velocity distribution functions, collisions and Boltzmann's equation; wave modes in a plasma; transport theory; plasma devices. For graduate (6000-level) credit, additional assignments will be required.

Prerequisite/Restriction: PHYS 4600

Cross-listed as: PHYS 6330

PHYS 5340 - Methods of Theoretical Physics I
3 credits
Physics applications of vector calculus and differential geometry, group theory, infinite series, complex analysis, differential equations, Sturm-Liouville theory, orthogonal functions, integral equations, and the calculus of variations.

PHYS 5350 - Methods of Theoretical Physics II
3 credits
Continuation of PHYS 5340.

Prerequisite/Restriction: PHYS 5340

PHYS 5500 - Intermediate Topics in Physics
1-3 credits
Explores issues in contemporary physics at the advanced undergraduate and beginning graduate level.

Repeatable for credit.

PHYS 5530 - Solid State Physics I
3 credits
Modern theory of the solid state. Bulk properties of solids, including the crystal lattice, cohesion, electronic and vibrational structure. Response to stimuli, such as electric, magnetic, and optical fields. For graduate (6000 level) credit, additional assignments will be required.

Prerequisite/Restriction: PHYS 3700 and PHYS 4600; PHYS 4710 (can be taken concurrently)

Cross-listed as: PHYS 6530

PHYS 5700 - Introduction to Microfabrication
3 credits
Materials, wet chemical cleaning and etch, photolithography, metal deposition, doping, carrier density and conductivity, microfluidics, micro-electronic-mechanical-systems.

Prerequisite/Restriction: PHYS 2210, PHYS 2215, PHYS 2220 and PHYS 2225; instructor permission

Cross-listed as: BENG 5700 and ECE 5700

PHYS 5800 - Physics Colloquium
1 credit
A series of invited lectures on specialized topics in physics and related subjects.

Repeatable for credit.
Pass/Fail only.

PHYS 5910 - Relativity I
3 credits
Foundations of spacetime physics. Survey of the basics of special and general relativity, the description of curved spacetime, and the Einstein equations. Exact solutions, applications, tests, and the mathematical techniques of general relativity. For graduate (6000 level), additional assignments will be required.

Prerequisite/Restriction: PHYS 3710 and PHYS 4600

Cross-listed as: PHYS 6910

PHYS 6010 - Classical Mechanics I
3 credits
Lagrange's equations, Hamilton's principle, Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, central forces, noninertial reference frames, rigid body motion, small oscillations, relativistic mechanics, canonical perturbation theory, continuum mechanics.
PHYS 6020 - Classical Mechanics II
3 credits
Continuation of PHYS 6010.
Prerequisite/Restriction: PHYS 6010

PHYS 6110 - Electrodynamics I
3 credits
Fundamental laws of electrostatics and magnetostatics; dielectric media, Maxwell’s equations, time varying fields, and electromagnetic waves. Waveguides and radiation by moving charges.
Prerequisite/Restriction: PHYS 4600 or equivalent

PHYS 6120 - Electrodynamics II
3 credits
Continuation of PHYS 6110
Prerequisite/Restriction: PHYS 6110

PHYS 6210 - Quantum Mechanics I
3 credits
Advanced quantum mechanics stressing the formalism of states and operators in the study of quantum dynamics, angular momentum, symmetry and group theory, perturbation theory and scattering.
Prerequisite/Restriction: PHYS 4710 or equivalent

PHYS 6220 - Quantum Mechanics II
3 credits
Continuation of PHYS 6210.
Prerequisite/Restriction: PHYS 6210

PHYS 6240 - Space Environment and Engineering
3 credits
Study of space environment and models used for engineering analysis. Topics include considerations for engineering in the space environment such as plasma interactions, debris, chemical reactions, radiation effects, and thermal issues.
Prerequisite/Restriction: MATH 2270, MATH 2280

PHYS 6250 - Cooperative Work Experience
1-6 credits
Allows students to register for credit when working in a physics-related position.
Prerequisite/Restriction: Permission of department head prior to enrollment
Repeatable for credit.

PHYS 6310 - Solar-terrestrial Physics I
3 credits
Study of solar-terrestrial physics, including planetary magnetic fields, the interaction of the sun with planetary properties (magnetic fields and atmospheres), and an overview of ionospheric measurement techniques. Study of the upper atmosphere and the physics occurring in each of the layers and zones, including the equatorial and polar ionosphere.
Prerequisite/Restriction: PHYS 4600 or equivalent

PHYS 6320 - Solar-terrestrial Physics II
3 credits
Continuation of PHYS 6310.
Prerequisite/Restriction: PHYS 6310

PHYS 6330 - Plasma Physics I
3 credits
Characteristics of the plasma state and plasma generation; velocity distribution functions, collisions and Boltzmann’s equation; wave modes in a plasma; transport theory; plasma devices. For graduate (6000-level) credit, additional assignments will be required.
Prerequisite/Restriction: PHYS 4600
Cross-listed as: PHYS 5330

PHYS 6340 - Plasma Physics II
3 credits
Continuation of PHYS 5330 or PHYS 6330
Prerequisite/Restriction: PHYS 5330 or PHYS 6330

PHYS 6410 - Statistical Mechanics I
3 credits


PHYS 6420 - Statistical Mechanics II
3 credits

Continuation of PHYS 6410.

Prerequisite/Restriction: PHYS 6410

PHYS 6530 - Solid State Physics I
3 credits

Modern theory of the solid state. Bulk properties of solids, including the crystal lattice, cohesion, electronic and vibrational structure. Response to stimuli, such as electric, magnetic, and optical fields. For graduate (6000-level) credit, additional assignments will be required.

Prerequisite/Restriction: PHYS 3700 and PHYS 4600; PHYS 4710; (can be taken concurrently)

Cross-listed as: PHYS 5530

PHYS 6540 - Solid State Physics II
3 credits

Continuation of PHYS 5530 or PHYS 6530

Prerequisite/Restriction: PHYS 5530 or PHYS 6530

PHYS 6550 - Physics of Materials I
3 credits

Application of microscopic (quantum) and macroscopic (classical) physics to study materials properties (e.g., bonding, structure, atomic dynamics, electrical, magnetic, thermal, optical), characterization methods, and a survey of materials.

Prerequisite/Restriction: PHYS 3700, PHYS 4710

PHYS 6560 - Physics of Materials II
3 credits

Continuation of PHYS 5550.

Prerequisite/Restriction: PHYS 6550

PHYS 6650 - Optics I
3 credits

Topics include mathematics of wave motion, electromagnetic theory of light, light propagation, geometrical optics, and superposition of waves. For graduate (6000-level) credit, additional reading, recitation, use of optical-design software, and/or writing will be required.

Prerequisite/Restriction: PHYS 2710, MATH 2210, MATH 2250; or ECE 3870

Cross-listed as: PHYS 4650

Semester(s) Traditionally Offered: Fall

PHYS 6680 - Optics II
3 credits

Topics include polarization, interference, diffraction, Fourier optics, coherence theory, and the quantum nature of light. For graduate (6000-level) credit, additional reading, recitation, use of optical-design software, and/or writing will be required.

Prerequisite/Restriction: PHYS 4650 or PHYS 6650

Cross-listed as: PHYS 4680

Semester(s) Traditionally Offered: Fall

PHYS 6910 - Relativity I
3 credits

Foundations of spacetime physics. Survey of the basics of special and general relativity, the description of curved spacetime, and the Einstein equations. Exact solutions, applications, tests, and the mathematical techniques of general relativity. For graduate (6000 level), additional assignments will be required.

Prerequisite/Restriction: PHYS 3710 and PHYS 4600

Cross-listed as: PHYS 5910
PHYS 6920 - Relativity II
3 credits
Continuation of PHYS 5910 or PHYS 6910
Prerequisite/Restriction: PHYS 5910 or PHYS 6910

PHYS 6930 - Quantum Field Theory I
3 credits
Detailed study of the relativistic quantum description of scalar, spinor, and vector fields in spacetime. Topics include gauge theories, canonical and path integral quantization, and interactions.

PHYS 6940 - Quantum Field Theory II
3 credits
Continuation of PHYS 6930.
Prerequisite/Restriction: PHYS 6930

PHYS 6970 - Thesis Research
1-10 credits
Advanced research under guidance of one or more faculty members.
Repeatable for credit.
Pass/Fail only.

PHYS 6990 - Continuing Graduate Advisement
1-9 credits
Repeatable for credit.
Pass/Fail only.

PHYS 7210 - Spacecraft Instrumentation
3 credits
Theory, engineering, and data reduction techniques of spacecraft instrumentation for space science and spacecraft systems.
Prerequisite/Restriction: PHYS 6240/ECE 6240
Corequisite: ECE 7210.

PHYS 7500 - Advanced Topics in Physics (Topic)
3 credits
Explores issues in contemporary physics at the advanced graduate level.

Repeatable for credit.

PHYS 7510 - Seminar
1-3 credits
Repeatable for credit.

PHYS 7970 - Dissertation Research
1-15 credits
Repeatable for credit.
Pass/Fail only.

PHYS 7990 - Continuing Graduate Advisement
1-9 credits
Repeatable for credit.
Pass/Fail only.

Plants, Soils, and Climate

PSC 1050 - Plants, Soils, and Climate Orientation
1-2 credits
Orientation to the teaching, research, and extension programs of the department, and to career opportunities. Optional orientation to a specific major: Horticulture, Crop Science, or Environmental Soil/Water Science.
Semester(s) Traditionally Offered: Fall

PSC 1800 - Introduction to Horticulture (BLS)
BLS Breadth Life Sciences
3 credits
Introduction to production of nursery, greenhouse, fruit, and vegetable crops. Explores residential and commercial landscape construction and management. Students also learn about interior plants, arboriculture, turf science, landscape plant materials, and home gardening.
Semester(s) Traditionally Offered: Fall

PSC 2000 - The Atmosphere and Weather (BPS)
BPS Breadth Physical Sciences
3 credits
Survey of the processes governing the behavior of the atmosphere and the phenomenon of weather. Basic physical principles of radiation, energy, evaporation, and heat transport are introduced and connected to
atmospheric circulation and weather. 

Semester(s) Traditionally Offered: Fall

PSC 2010 - Soils, Waters, and the Environment (BPS)
BPS Breadth Physical Sciences
3 credits

Introduction to principles of physical and biological science. Discussion of current environmental topics, focusing on soil and the waters that contact the soil. Topics include water quality, global climate change, deforestation, soil conservation, and agricultural sustainability.

Semester(s) Traditionally Offered: Spring

PSC 2200 - Pest Management Principles and Practices
3 credits

Overview of pest control considerations, procedures, and principles. Topics include integrated pest management, organic and chemical pest control, environmental considerations, safety, life cycles of pests, and commercial pesticide licensing.

Semester(s) Traditionally Offered: Spring
Course Fee: $25.00

PSC 2250 - Occupational Experience in Agronomy and Horticulture
1-4 credits

Provides credit for on-the-job training in jobs related to plants or soils.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 2600 - Herbaceous Plant Materials
3 credits

Identification, culture, and utilization of herbaceous ornamental plants in the landscape, including annual and perennial flowering plants, herbaceous ground covers, ornamental grasses, and herbs.

Semester(s) Traditionally Offered: Fall

PSC 2620 - Woody Plant Materials: Trees and Shrubs for the Landscape
3 credits

Identification, culture, and utilization of woody ornamental plants in the landscape, including shade trees, flowering trees and shrubs, hedge plants, and vines. Review of native plants commonly used in the landscape.

Semester(s) Traditionally Offered: Fall

PSC 2900 - Special Problems in Plant Science
1-4 credits

Student-selected practical problems in horticulture and/or agronomy.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 3000 - Fundamentals of Soil Science
4 credits

Fundamentals of soil science, emphasizing physical, chemical, mineralogical, and biological properties of soils, and how these properties relate to plant growth and environmental quality.

Prerequisite/Restriction: CHEM 1110 or higher; and MATH 1050 or higher or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00

PSC 3010 - Basic Flower Arranging
2 credits

Principles of basic flower design using fresh, dried, and artificial flowers. Proper care of cut flowers and foliages. Basic plant physiology behind such principles. Lab fee required.

Campus: Offered through Distance Education only.
Semester(s) Traditionally Offered: Fall
Course Fee: $110.00

PSC 3100 - Soils and Civilization (DSC)
DSC Depth Life and Physical Sciences
3 credits

Lectures, readings, and discussions to explore effects of soil physical, chemical, and biological properties on civilization throughout history. Influence of soils on
settlement patterns, land use/management, and civilization decline. Case studies focus on current soil and land use issues in western North America.

Semester(s) Traditionally Offered: Spring
PSC 3200 - Microbes in Environmental Action (DSC)
DSC Depth Life and Physical Sciences
3 credits

Microorganisms play a central role in maintaining the biosphere. In this course, the diversity of microbial lifestyles is introduced. Current examples and case studies used to demonstrate microbial actions in composting, waste water treatment, and bioremediation of pollutants in the environment.

Prerequisite/Restriction: Completion of Breadth Life Sciences (BLS) University Studies requirement

Semester(s) Traditionally Offered: Spring
PSC 3250 - Aviation Weather
3 credits

Discussion, observation, and analysis of weather important for pilots and those associated with air travel.

Prerequisite/Restriction: PSC 2000 (Atmosphere and Weather)

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017
PSC 3300 - Residential Landscapes
3 credits

Functional and aesthetic relationships of plants and structures in the landscape in connection with installation considerations.

Prerequisite/Restriction: PSC 2620 and PSC 2600 recommended

Semester(s) Traditionally Offered: Spring
Course Fee: $25.00
PSC 3400 - Arboriculture
3 credits

Principles and practices of arboriculture including planting site analysis and modification, tree selection, pruning, soil nutrient and irrigation management, introduction to tree pest management, tree appraisals and sustainability.

Prerequisite/Restriction: PSC 2600, PSC 2620

Semester(s) Traditionally Offered: Spring
Course Fee: $20.00
PSC 3430 - Construction Methods for Residential Landscape Installation
2 credits

Introduction to methods and equipment used in landscape installation, such as techniques of layout, pavers, water features, planting, sod installation, sprinkler and drip irrigation installation, and equipment operation.

Semester(s) Traditionally Offered: Fall
Course Fee: $35.00
PSC 3440 - Landscape Business Practices
3 credits

Explores small business approach to managing landscape construction companies and using techniques of bidding and estimating.

Semester(s) Traditionally Offered: Spring
PSC 3500 - Structure and Function of Plants
3 credits

Introduction to principles of plant physiology and fundamentals of plant anatomy, emphasizing implications for management and utilization.

Prerequisite/Restriction: Integrated Science or comparable breadth course, BIOL 1010 or BIOL 1610

Semester(s) Traditionally Offered: Spring
Course Fee: $20.00
PSC 3600 - An Introduction to Plant Breeding and Heredity
2 credits

An introduction to plant breeding and heredity provides the basis for the improvement of plants. The course
includes fundamentals of plant reproduction and basics of heredity and selection.

PSC 3700 - Plant Propagation
4 credits

Propagation of plants by sexual and asexual means. Covers fundamental physiology of propagation, as well as cultural practices and techniques used in crop production.

Prerequisite/Restriction: BIOL 1610 recommended

Semester(s) Traditionally Offered: Fall
Course Fee: $35.00

PSC 3800 - Fundamentals of Organic Agriculture
3 credits

Organic agriculture uses a holistic systems approach for maintaining plant, animal, and soil health. In this course, animal and crop production approaches and disease, as well as insect and weed management strategies, are scientifically assessed, critically compared, and used in decision making and problem solving exercises.

Prerequisite/Restriction: General physical sciences requirement

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

PSC 3810 - Turfgrass Management
3 credits

Fundamentals of turfgrass science: species adaptation, identification, and cultural requirements; turfgrass growth and development; establishment; primary cultural practices (fertilization, irrigation, mowing); secondary cultural practices; pest management; integrated management planning for turfgrass systems.

Prerequisite/Restriction: BIOL 1010 or BIOL 1610

Semester(s) Traditionally Offered: Fall

PSC 4000 - Soil and Water Conservation
4 credits

Applied soil and water conservation in an agronomic setting. Management of soil-water-plant-atmosphere continuum. Soil conservation techniques as they apply to actual situations.

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

PSC 4050 - Greenhouse Management and Crop Production
4 credits

Design and management of greenhouse facilities. Production requirements of primary greenhouse crops.

Semester(s) Traditionally Offered: Spring
Course Fee: $20.00

PSC 4200 - Temperate Zone Fruit Production
3 credits

Explores principles and practices underlying scientific fruit production. Focuses on physiological principles undergirding production practices. Topics include: plant growth and development, fruit anatomy, site selection, fertilizers, harvest, post-harvest physiology, and storage. Includes discussion of the production of important temperate fruit crops.

Prerequisite/Restriction: BIOL 1010 or BIOL 1610

Semester(s) Traditionally Offered: Spring

PSC 4250 - Internship in Plants, Soils, and/or Climate
1-4 credits

Professional internship in crop science, horticulture, environmental soil/water science, and/or climate. Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 4280 - Field Crops
3 credits

Economic importance, use, distribution, origin, history, classification, identification, botanical nature, marketing, processing, storage, certification, grading, diseases, insects, commercial production, and improvement of cereal, root, and oilseed crops. Two lectures, one lab per week.

Semester(s) Traditionally Offered: Fall, Odd Years
Course Fee: $40.00
Plants, Soils, and Climate

PSC 4301 - Computer Aided Residential Landscape Design  
2 credits

Students will learn to use modern CAD software used in residential landscape design. This will include acquiring basic skills to digitally create landscape designs, generate plant and supply lists for bidding, and generate presentation and marketing materials.

Prerequisite/Restriction: PSC 3300

Semester(s) Traditionally Offered: Fall

PSC 4302 - Advanced Residential Landscape Design  
2 credits

Advanced course in residential landscape design. Uses industry-standard and computer-aided design software for small-scale designs.

Prerequisite/Restriction: PSC 3300 and PSC 4301

Semester(s) Traditionally Offered: Spring

PSC 4310 - World Food Crops and Cropping Systems: The Plants That Feed Us  
3 credits

Climatic, geographic, and management requirements of the world's plants that provide food for humans, including botanical relationships. Systems used to produce these crops and processes for turning them into food.

Prerequisite/Restriction: Integrated Science or comparable breadth course

PSC 4320 - Forage Production and Pasture Ecology  
3 credits

Cultivation and management of legumes and grasses used throughout the Intermountain region of the U.S. and the world for grazing, stored feed, soil improvement, and conservation. Forage plant growth and development, nutrient and water utilization, and responses to environmental stress.

Prerequisite/Restriction: Integrated Science or comparable breadth course

Semester(s) Traditionally Offered: Fall, Even Years

Course Fee: $40.00

PSC 4400 - Modern Vegetable Production  
3 credits

Principles and practices underlying scientific vegetable culture. Discussion of production of important vegetables, focusing on the physiological processes influencing their culture. Explores crop performance in research and commercial applications.

Prerequisite/Restriction: BIOL 1010 or BIOL 1610

Semester(s) Traditionally Offered: Fall

PSC 4420 - Landscape Irrigation Design (QI)  
QI Quantitative Intensive  
2 credits

Introduction to design of sprinkler and drip irrigation systems for residential and commercial landscapes.

Prerequisite/Restriction: PSC 2620

Semester(s) Traditionally Offered: Spring

PSC 4500 - Soil Reclamation  
3 credits

Provides in-depth information on causes of soil degradation (both natural and man-made) and rehabilitation procedures.

Prerequisite/Restriction: PSC 3000

Semester(s) Traditionally Offered: Spring

PSC 4550 - Weed Management  
3 credits

This course stresses the fundamentals of modern weed science needed to effectively meet weed challenges in crop land, managed landscapes, forests and rangeland, rights-of-way and industrial sites, riparian and aquatic settings, recreation sites, and wildlife management areas. Weed identification, biology, ecology and modern
management principles are all explored in this course.

Semester(s) Traditionally Offered: Fall
Course Fee: $35.00

PSC 4600 - Cereal Science (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 credits

Introduction to principles involved in cereal chemistry and processing. Covers starch chemistry, dry milling, wet milling, decortication, malting, and extrusion. Processing of all major cereals also covered.

Prerequisite/Restriction: Completion of Quantitative Literacy (QL) requirement

Semester(s) Traditionally Offered: Spring, Even Years

PSC 4700 - Irrigated Soils
3 credits

Soil salinity, soil-moisture-plant relationships, water supply and quality, irrigation water measurements, soil moisture movement, and irrigation methods.

Prerequisite/Restriction: PSC 3000 or equivalent, or instructor permission

Semester(s) Traditionally Offered: Spring

PSC 4810 - Climate and Climate Change (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 credits

Emphasizes physical basis of climate (climate dynamics), as well as the mechanisms and processes for its fluctuations on sub-seasonal to interannual time scales (climate variations) and on regional to hemispheric/global time scales.

Prerequisite/Restriction: PSC 2000

PSC 4820 - Challenges in Climate Change and Energy
3 credits

Capstone experience for students completing the minor. Students integrate socio-economic and sustainability concepts in the analysis of current climate and energy problem(s), and present findings in oral and written reports. An internship experience in pertinent area related to climate change or energy may be chosen with final presentations.

Prerequisite/Restriction: WATS 3820 or GEO 5680

Semester(s) Traditionally Offered: Fall

PSC 4830 - Atmospheric Instrumentation and Operation
3 credits

The course will introduce typical atmospheric instruments based on WMO (World Meteorological Organization) meteorologist operational guide book. The course outline will include: as a meteorological observer; selection of a meteorological station; installation of instruments; principles of operation and performance of various instruments; calibration of instruments; data acquisition. In addition (optional), an interactive practicum will be incorporated into the class to train students with operational skills in meteorological observation, that further foster their interests, teamwork, and collaboration skills. The course includes several measurements and data processing labs and introductory visits to and demonstrations.

Prerequisite/Restriction: MATH 1210 and PSC 2000

Effective Term
Fall 2017

PSC 4840 - Climate Dynamics
3 credits

Basic dynamics of the atmosphere and meteorology. Dynamical Meteorology aims to provide basic governing equations and dynamical understanding of atmospheric motions at various scales. Such as Newton's laws of motion, Eulerian and Lagrangian time derivatives, continuity equation and assumption of incompressibility, thermal wind.

Prerequisite/Restriction: MATH 2210, PHYS 2210, and PSC 2000
Fundamental physics of the meteorological and climate systems. This course provides an introduction to the physics and chemistry of the atmosphere including experience with computer codes, aerosols and theories of their formation, evolution, and removal. Topics covered include, gas and aerosol transport from urban to continental scales, coupled models of radiation, transport, and chemistry, solution of inverse problems to deduce emissions and removal rates, emissions control technology and costs, and applications to air pollution and climate.

Prerequisite/Restriction: MATH 2210, PHYS 2210, and PSC 2000

The thermodynamics of the atmosphere provides the foundation to understand how and why the climate system changes and the weather evolves the way it does. The maintenance of heat and energy balance drives the Earth’s atmospheric circulations.

Prerequisite/Restriction: MATH 2210, PHYS 2210, and MATH 2250

Capstone course for senior Plants, Soils, and Climate majors. Focuses on individual presentations of current scientific papers, and collaborative production of a white paper and professional presentation recommending a science-based solution to a current issue related to plants, soils, or climate. Includes experiences in team building.

Prerequisite/Restriction: MATH 1100 or MATH 1210; and PHYS 2110 or PHYS 2210

Cross-listed as: PSC 6003 and CEE 5003/CEE 6003
Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

PSC 5050 - Principles of Environmental Soil Chemistry
3 credits

Introduction to common chemical processes occurring among solid, liquid, and gas phases in soil systems. Emphasis placed on chemistry of arid land soils.

Prerequisite/Restriction: CHEM 1110 or higher; and MATH 1050 or higher or AP Calculus AB score of 3 or higher

Cross-listed as: PSC 6050.

Semester(s) Traditionally Offered: Spring, Odd Years

PSC 5070 - Advanced Agroecology
3 credits

Summary: A critical evaluation of agroecology and its role in the management of agroecosystems. Concepts in ecology introduced from the perspective of agriculture with research examples discussed. Challenges to adoption and the role of community in sustainable food systems explored.

Prerequisite/Restriction: PSC 3800 Fundamentals of Organic Agriculture, PSC 3000 Fundamentals of Soil Science, PSC 3500 Structure and Function of Plants

Cross-listed as: PSC 6070.

Semester(s) Traditionally Offered: Spring

PSC 5090 - Sustainable Low Water Landscaping
3 credits

This course will focus on environmental analysis of climate, water, and soils of a prospective landscape site to inform the design process on selection of adapted plants and plant layout that will minimize irrigation water use and maintenance.

Cross-listed as: PSC 6090 and LAEP 5090/LAEP 6090.

Semester(s) Traditionally Offered: Spring

PSC 5100 - Professional Turf and Urban Landscape Water Management
3 credits

This course will study intensively used turfgrass areas as well as irrigation management and applied water relations of urban landscapes in the arid west. This course will also involve the complex interactions with people who use and expect much of these environments.

Semester(s) Traditionally Offered: Spring

PSC 5130 - Soil Genesis, Morphology, and Classification
4 credits

Morphology, development, and classification of soils. Lectures and weekly field exercises emphasize soil as a natural body of the landscape: its properties, distribution, behavior, and interpretations for diverse land uses.

Prerequisite/Restriction: Understanding of fundamental soil science; PSC 3000 recommended

Cross-listed as: PSC 6130.

Semester(s) Traditionally Offered: Fall
Course Fee: $80.00

PSC 5160 - Methods in Biotechnology: Cell Culture
3 credits

Techniques and fundamental knowledge for culturing mammalian and insect cells. Students will learn maintenance, growing, genetic engineering of cells, cytotoxicity, hybridoma creation, cloning, etc. Extensive laboratory experience is provided.

Cross-listed as: ADVS 5160 and BIOL 5160 and NDFS 5160.

Semester(s) Traditionally Offered: Spring
Course Fee: $60.00

PSC 5200 - Site-Specific Agriculture and Landscape/Horticultural Management
3 credits

Integration of site-specific management technology, such as computers, GPS, yield monitors, variable rate controllers, mechanized samplers, and postharvest processing controllers with planning, tillage, planting, chemical applications, and harvesting to optimize off-site inputs and environmental/economical sustainability in
crop or landscape management.

Campus: Distance Education during summer semester only.
Semester(s) Traditionally Offered: Spring

PSC 5260 - Methods in Biotechnology: Molecular Cloning
3 credits

Laboratory-oriented course designed to teach molecular biology techniques such as DNA cloning, genetic probes, polymerase chain reaction, and DNA sequencing.

Prerequisite/Restriction: CHEM 3700 or CHEM 5710; or BIOL 3060; or instructor permission
Cross-listed as: ADVS 5260, BIOL 5260, and NDFS 5260.
Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

PSC 5270 - Environmental Plant Physiology
2 credits


Prerequisite/Restriction: BIOL 4400 or PSC 3500 or equivalent
Cross-listed as: PSC 6270
Semester(s) Traditionally Offered: Spring

PSC 5300 - Principles of Cytogenetics
3 credits

Examination and analysis of variation in chromosome structure, behavior, and number. Includes discussions of developmental and evolutionary effects of this variation, and practical applications in plant and animal genetics.

Prerequisite/Restriction: BIOL 3060
Semester(s) Traditionally Offered: Spring, Odd Years

PSC 5310 - Soil Microbiology
3 credits

Ecology and diversity of microorganisms in soils. Emphasis on factors controlling microbial activity and the role of microorganisms in organic matter decomposition and nutrient cycling.

Prerequisite/Restriction: BIOL 1610, BIOL 1620; CHEM 2300 or CHEM 2310; PSC 3000
Cross-listed as: BIOL 5310
Semester(s) Traditionally Offered: Fall, Even Years

PSC 5350 - Wildland Soils
3 credits

Application of basic principles of soil science to wildland ecosystems. Effects of disturbance and land use on wildland soil properties. Role of soils in natural resource management.

Prerequisite/Restriction: CHEM 1110, PSC 3000, and one additional upper-division Soils course, or instructor permission
Cross-listed as: PSC 6350 and WILD 5350/WILD 6350.
Semester(s) Traditionally Offered: Spring

PSC 5400 - General Meteorology
3 credits

Designed for senior and graduate students in different fields who desire some basic introduction to meteorology. Bridges a large gap between courses describing meteorological phenomena in broad and simple terms and other courses treating the atmosphere more theoretically.

Cross-listed as: PSC 6400.
Semester(s) Traditionally Offered: Fall

PSC 5430 - Plant Nutrition
2 credits


Prerequisite/Restriction: PSC 3500 or BIOL 4400 or
PSC 5500 - Environmental Physics of Land Ecosystems and Climate
3 credits

How terrestrial ecosystems and climate affect each other at various scales, from microclimates, to regional and finally global climate. Quantitative exploration of the biophysical processes that connect the land and climate.

Cross-listed as: PSC 6500.

Semester(s) Traditionally Offered: Fall, Even Years

PSC 5530 - Soils and Plant Nutrient Bioavailability (QI)
QI Quantitative Intensive
3 credits

Description of forms, transformations, and movement of plant nutrients in soils. Discussion of factors affecting nutrient supply, both qualitatively and quantitatively, for nutrient elements essential for plant growth.

Prerequisite/Restriction: PSC 3000; CHEM 1110 or CHEM 1210

Cross-listed as: PSC 6530.

Semester(s) Traditionally Offered: Spring

PSC 5550 - Weed Biology and Control
4 credits

Management strategies for undesirable plant species in native and agroecosystems. Interference and allelopathy, undesirable plant invasion and spread, noxious weed eradication principles and practices, integrated plant management strategies, herbicide interactions with weeds and crops, and economics of management emphases.

Cross-listed as: PSC 6550.

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00

PSC 5560 - Analytical Techniques for the Soil Environment
3 credits

Analysis of chemical and biological soil characteristics. Results interpreted for soil fertility, land use, and environmental remediation. Graduate credit requires a paper reviewing analysis of element or compound class.

Prerequisite/Restriction: PSC 5050/PSC 6050 or PSC 5530/PSC 6530 (may be taken concurrently), or instructor’s permission

Cross-listed as: PSC 6560

Semester(s) Traditionally Offered: Spring, Taught Odd Years
Course Fee: $60.00

PSC 5620 - Aquatic Chemistry
3 credits

Provides students with understanding of principles of aquatic chemistry, emphasizing chemical equilibria, acid-base reactions, complex formation, oxidation-reduction reactions, complex formation, and dissolution chemistry.

Prerequisite/Restriction: CHEM 1210 or equivalent

Cross-listed as: CEE 5620.

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00

PSC 5670 - Environmental Soil Physics
4 credits

Characterization of the physical properties of soils and other porous media. Measurement, prediction, and control of processes taking place in and through soils (e.g., water flow and solute transport), including atmospheric and groundwater interactions.

Cross-listed as: PSC 6670

Semester(s) Traditionally Offered: Fall of even years only

PSC 5680 - Paleoclimatology
3 credits

Covers climate through the past four billion years of geologic time. Explores driving forces behind climate
changes. Examines data and methods used in paleoclimate research. Includes discussion of literature and stresses local paleoclimate records. Three lectures per week, along with field trips.

Prerequisite/Restriction: GEO 3600/WATS 3600 or instructor permission

Cross-listed as: PSC 6680 and GEO 5680/GEO 6680 and WATS 5680/WATS 6680.

Course Fee: $75.00

PSC 5700 - Advanced Plant Breeding
2

This course provides detailed selection schemes for agronomic and horticultural crops. Topics include selection schemes for allogamous and autogamous plants, maximizing genetic gain, and marker assisted selection.

Prerequisite/Restriction: PSC 3600 OR BIOL 3060 May not take concurrently

Semester(s) Traditionally Offered: Spring, Odd Years
Effective Term
Spring 2016

PSC 5740 - Environmental Quality: Soil and Water (CI)
CI Communications Intensive
2 credits

Senior capstone course for Environmental Soil/Water Science (ESWS) major. Students analyze current soil and water environmental quality problem(s), formulate remediation or mitigation plans, and present findings in oral and written reports.

Prerequisite/Restriction: PSC 5130 and two 5000-level courses dealing with Soil topics

Semester(s) Traditionally Offered: Spring

PSC 5750 - Crop Biotechnology
2 credits

Genetic and cellular approaches to crop improvement. Emphasizes cell culture, transformation, markers, marker-assisted selection, mapping simple and quantitatively inherited traits, fine mapping, gene cloning, mutagenesis, expression profiling, and bioinformatics.

Prerequisite/Restriction: BIOL 3060

Semester(s) Traditionally Offered: Spring, Odd Years

PSC 6000 - Environmental Instrumentation
2 credits

Discusses physics of signal transduction underlying all sensors. Basic electronics necessary to link sensors with dataloggers. Programming dataloggers to maximize measurement accuracy and to summarize data.

Cross-listed as: PSC 5000.

Semester(s) Traditionally Offered: Fall, Odd Years

PSC 6003 - Remote Sensing of Land Surfaces
4 credits

Basic principles of radiation and remote sensing. Techniques for ground-based measurements of reflected and emitted radiation, as well as ancillary data collection to support airborne and satellite remote sensing studies in agriculture, geography, and hydrology.

Prerequisite/Restriction: MATH 1100 or MATH 1210; and PHYS 2110 or PHYS 2210

Cross-listed as: PSC 5003 and CEE 6003/CEE 5003

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

PSC 6050 - Principles of Environmental Soil Chemistry
3 credits

Introduction to common chemical processes occurring among solid, liquid, and gas phases in soil systems. Emphasis placed on chemistry of arid land soils.

Prerequisite/Restriction: CHEM 1110 or higher; and MATH 1050 or higher or AP Calculus AB score of 3 or higher

Cross-listed as: PSC 5050.

Semester(s) Traditionally Offered: Spring, Odd Years

PSC 6070 - Advanced Agroecology
3
A critical evaluation of agroecology and its role in the management of agroecosystems. Concepts in ecology introduced from the perspective of agriculture with research examples discussed. Challenges to adoption and the role of community in sustainable food systems explored.

Prerequisite/Restriction: PSC 3800 Fundamentals of Organic Agriculture, PSC 3000 Fundamentals of Soil Science, PSC 3500 Structure and Function of Plants

Semester(s) Traditionally Offered: Spring
Spring 2016

PSC 6090 - Sustainable Low Water Landscaping
3 credits

This course will focus on environmental analysis of climate, water, and soils of a prospective landscape site to inform the design process on selection of adapted plants and plant layout that will minimize irrigation water use and maintenance.

Cross-listed as: PSC 5090 and LAEP 6090/LAEP 5090.

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

PSC 6091 - Plants for Low Water Landscapes
1

This course explores the plants of different temperate ecosystems, with an emphasis on arid systems, and their use in creating hydrozones for amenity landscapes. Also covers procurement, propagation, establishment and maintenance of plants for low water landscapes.

Effective Term
Fall 2016

PSC 6092 - Designing Low Water Landscapes
1

Introduce students to the landscape design process as it applies to the development of a low water landscape plan. Objectives include understanding site inventory and analysis, functional diagrams, planting design, low-water plant selection and plant care.

Prerequisite/Restriction: Matriculation into MPSH Program

Effective Term
Fall 2016

PSC 6093 - Water Demand and Management in Low Water Landscapes
1

This course explores water demand and water management issues relating to low-water urban landscapes, including efficient irrigation, water budgets, plant water demand and plant adaptations in managing hydrozones. Students will use Simplified Landscape Irrigation Demand Estimation (SLIDE) rules to address the complicated social and physiological aspects of landscape water management.

Prerequisite/Restriction: Matriculation into MPSH Program

Effective Term
Fall 2016

PSC 6123 - Climate Data Analysis
3 credits

Worldwide climate data does not exist in a single database. Understanding the different data collections, how to access them, and what they contain is critical for any research that involves climate. Substantial knowledge about the earth’s climate/weather system is essential in analyzing and interpreting climate data.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

PSC 6130 - Soil Genesis, Morphology, and Classification
4 credits

Morphology, development, and classification of soils. Lectures and weekly field exercises emphasize soil as a natural body of the landscape: its properties, distribution, behavior, and interpretations for diverse land uses.

Prerequisite/Restriction: Understanding of fundamental soil science; PSC 3000 recommended

Cross-listed as: PSC 5130.
Semester(s) Traditionally Offered: Fall
Course Fee: $80.00

PSC 6140 - Unsaturated Flow and Transport
3 credits

Simulation and measurement of transport processes (e.g., water, solutes, CO2, heat) in partially-saturated soils. Includes influence of chemical reactions, plant root, and microbial respiration on CO2 soil fluxes, and plant root distribution and uptake on transpiration processes. Applies to problems related to agricultural, environmental, ecological, and hydrological applications.

Semester(s) Traditionally Offered: Spring, Odd Years

PSC 6190 - Salt-affected Soils
2 credits

Emphasis on chemistry of salt-affected soils. Topics include carbonate chemistry, cation exchange, and reclamation of sodium and salt-affected soils. Exploration of effects of sodium accumulation on soil hydraulic conductivity and the biochemistry of salt and potentially toxic elements.

PSC 6200 - Biogeochemistry of Terrestrial Ecosystems
3 credits

Inputs, outputs, and cycling patterns of major nutrients. Emphasis on mechanisms for transformations, factors influencing process rates, and the impacts of management and global change on nutrient cycles and air and water quality.

Prerequisite/Restriction: BIOL 1620, PSC 3000, CHEM 2300 or CHEM 2310, or instructor permission

Cross-listed as: BIOL 6200 and WILD 6200.

PSC 6220 - Professional Experience in Water Efficient Landscaping
1-6 credits

Internship component of water efficient landscaping master's program. Summer employment with water purveyors, consulting firms, and businesses involved in landscape irrigation.

Semester(s) Traditionally Offered: Summer

PSC 6230 - Readings in Landscape Water Conservation
2 credits

Background topics in water development and policy in the West. Current topics on various aspects of water conservation in urban landscapes.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

PSC 6240 - Water Efficient Landscaping Seminar
1 credit

Students develop skills in public speaking by presenting their summer internship experience to the Plants, Soils, and Climate faculty. Students also work on a culminating academic endeavor for the program.

Semester(s) Traditionally Offered: Fall

PSC 6270 - Environmental Plant Physiology
2 credits


Prerequisite/Restriction: BIOL 4400 or PSC 3500 or equivalent

Cross-listed as: PSC 5270

Semester(s) Traditionally Offered: Spring

PSC 6350 - Wildland Soils
3 credits

Application of basic principles of soil science to wildland ecosystems. Effects of disturbance and land use on wildland soil properties. Role of soils in natural resource management.

Prerequisite/Restriction: CHEM 1110, PSC 3000, and one additional upper-division Soils course, or instructor permission

Cross-listed as: PSC 5350 and WILD 6350/WILD 5350.
PSC 6400 - General Meteorology
3 credits

Designed for senior and graduate students in different fields who desire some basic introduction to meteorology. Bridges a large gap between courses describing meteorological phenomena in broad and simple terms and other courses treating the atmosphere more theoretically.

Cross-listed as: PSC 5400.

Semester(s) Traditionally Offered: Fall

PSC 6430 - Plant Nutrition
2 credits


Cross-listed as: PSC 5430.

Semester(s) Traditionally Offered: Fall, Even Years

PSC 6500 - Environmental Physics of Land Ecosystems and Climate
3 credits

How terrestrial ecosystems and climate affect each other at various scales, from microclimates, to regional and finally global climate. Quantitative exploration of the biophysical processes that connect the land and climate.

Cross-listed as: PSC 5500.

Semester(s) Traditionally Offered: Spring

PSC 6550 - Weed Biology and Control
4 credits

Management strategies for undesirable plant species in native and agroecosystems. Interference and allelopathy, undesirable plant invasion and spread, noxious weed eradication principles and practices, integrated plant management strategies, herbicide interactions with weeds and crops, and economics of management emphases.

Cross-listed as: PSC 5550.

Semester(s) Traditionally Offered: Spring

Course Fee: $23.00

PSC 6560 - Analytical Techniques for the Soil Environment
3 credits

Analysis of chemical and biological soil characteristics. Results interpreted for soil fertility, land use, and environmental remediation. Graduate credit requires a paper reviewing analysis of element or compound class.

Prerequisite/Restriction: PSC 6050/PSC 5050 or PSC 6530/PSC 5530 (may be taken concurrently), or instructor permission

Cross-listed as: PSC 5560

Semester(s) Traditionally Offered: Spring, Taught Odd Years

Course Fee: $60.00

PSC 6570 - Advanced Weed Science
3 credits

Explores advanced topics and research techniques in weed science. Discussion of weed biology, ecology, invasion, and interference. Includes uptake, movement, metabolism, and physiological activity of herbicides in plants. Considers mechanisms and impacts of herbicide resistance in weeds and crops.

Prerequisite/Restriction: BIOL 4400, PSC 6550/PSC 5550 or instructor permission

Semester(s) Traditionally Offered: Spring, Odd Years

Cross-listed as: PSC 5570.
PSC 6670 - Environmental Soil Physics
4 credits

Characterization of the physical properties of soils and other porous media. Measurement, prediction, and control of processes taking place in and through soils (e.g., water flow and solute transport), including atmospheric and groundwater interactions.

Cross-listed as: PSC 5670.

Semester(s) Traditionally Offered: Fall of even years only

PSC 6680 - Paleoclimatology
3 credits

Covers climate through the past four billion years of geologic time. Explores driving forces behind climate changes. Examines data and methods used in paleoclimate research. Includes discussion of literature and stresses local paleoclimate records. Three lectures per week, along with field trips.

Prerequisite/Restriction: GEO 3600/WATS 3600 or instructor permission

Cross-listed as: PSC 5680 and GEO 6680/GEO 5680 and WATS 6680/WATS 5680.

Course Fee: $75.00

PSC 6700 - Integrative Topics in Plants, Soils, and Climate
1-3 credits

Team-taught special topics course encouraging interdisciplinary analysis of a research or policy area from the current literature, encompassing the three departmental subdisciplines. Emphasis on written and oral student presentations.

Repeatable for credit.

PSC 6710 - Climate and Climate Change
3 credits

Emphasizes physical basis of climate (climate dynamics), as well as the mechanisms and processes for its fluctuations on sub-seasonal to interannual time scales (climate variations) and on regional to hemispheric/global time scales.

Cross-listed as: PSC 4810

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

PSC 6820 - Environmental Biophysics
2 credits

Explores connections between biosphere and atmosphere at many scales. Introduces processes governing exchanges of mass and energy between surface and atmosphere, as well as connections to climate. Examines role of the biota at local to global scales.

Semester(s) Traditionally Offered: Spring

PSC 6870 - Ecology Seminar
1 credit

The Ecology Center schedules regular seminars throughout the school year with ecological scientists from other institutions participating. Ecology majors are required to attend a minimum of 10 such lectures. Students should register for fall semester, but attend through spring semester.

Cross-listed as: BIOL 6870 and ENVS 6870 and WATS 6870 and WILD 6870.

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall

PSC 6890 - Plants, Soils, and Climate Graduate Seminar
1 credit

Review and critique of presentations. Communication practice in extemporaneous, extension, research, poster, and lecture presentations. PSC graduate students must enroll during both fall and spring semesters.

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

PSC 6900 - Special Problems in Plants, Soils, and/or Climate
1-8 credits

Graduate-level special topics and problems in crop science, horticulture, environmental soil/water science,
and/or climate. Subject, time, and credit arranged individually as needed.

Prerequisite/Restriction: Departmental approval required prior to enrollment

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 6910 - Special Problems in Climatology
3 credits

Study of physical causes and effects of various climate regimes found upon the Earth. Study of the basis and mechanisms of all types of physically-based climate models. Assists students in comprehending relative complexities and applicabilities of the whole range of climate models.

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

PSC 6950 - Navigating Science’s Terra Incognita: Communicating to Non-Scientists
2 credits

Graduate students learn to communicate their research to lay audiences by identifying the audience and appropriately tailoring the most relevant points of that research.

Cross-listed as: BIOL 6950

Pass/Fail
Semester(s) Traditionally Offered: Fall

PSC 6960 - Graduate General Ecology
4 credits

General concepts, history, and issues in all major areas of the science of ecology including: environmental biophysics; and physiological, behavioral, evolutionary, community, ecosystem, and applied ecology in both terrestrial and aquatic environments.

Cross-listed as: BIOL 6960 and ENVS 6960 and WATS 6960 and WILD 6960.

Semester(s) Traditionally Offered: Fall

PSC 6970 - Research and Thesis
1-18 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 6990 - Continuing Graduate Advisement
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 7200 - Soil Interfacial Processes and Reactive Transport
3 credits

Course divided into two blocks. Subject matter for first block is soil electrochemistry and surface chemistry. Second block applies material from first block to system in which transport limits reaction time.

Semester(s) Traditionally Offered: Spring, Odd Years

PSC 7210 - Advanced Topics in Pedology
2 credits

Strategies for designing and critiquing pedological research through literature, discussions, and field trips. Topics will change, depending upon student interest, and can include factors and processes involved in pedogenesis, soil mineralogy, soil-biota relationships, and landscape evolution.

Prerequisite/Restriction: PSC 6130/PSC 5130

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

PSC 7890 - Plants, Soils, and Climate Graduate Seminar
1 credit

Review and critique of presentations. Communication practice in extemporaneous, extension, research, poster, and lecture presentations. PSC graduate students must enroll during both fall and spring semesters.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

PSC 7900 - Special Problems in Plants, Soils, and/or Climate
Graduate-level special topics and problems in crop science, horticulture, environmental soil/water science, and/or climate. Subject, time, and credit arranged individually as needed.

Prerequisite/Restriction: Departmental approval required prior to enrollment
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 7970 - Research and Thesis
1-18 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 7990 - Continuing Graduate Advisement
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Political Science

POLS 1010 - Introduction to Political Science (BSS)
BSS Breadth Social Sciences
3 credits

Presents an overview of the five major subdivisions of political science: American institutions, theory, public policy, comparative politics, and international relations. To successfully complete the course, students should demonstrate a basic understanding of the development of democratic theory, how American institutions function, how policy is created and implemented, how other nations function, and the causes of conflict and cooperation in the international arena. Instructional methods will include lecture, slides, videos and class discussion. Course requires short-answer and multiple choice quizzes, a mid-term and a final examination. Intended for political science and pre-law majors.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

POLS 1100 - United States Government and Politics (BAI)
BAI Breadth American Institutions

3 credits

U.S. Constitution, political parties and elections, interest groups, Congress, president, bureaucracy, courts, and civil rights and liberties. This course meets the Americanization requirement.

Semester(s) Traditionally Offered: Fall, Spring

POLS 1200 - Native American Government
3 credits

Examines traditional and contemporary Native American government. Explores the variety of political forms among Native American groups, tribal governments today, and the impacts of interaction with the Federal government.

Campus: USU Eastern only

POLS 2100 - Introduction to International Politics
3 credits

Analysis of the nation-state system as well as interdependence of the global community.

Semester(s) Traditionally Offered: Fall, Spring

POLS 2110 - Contemporary Indian Affairs
3 credits

Designed to acquaint students with a basic historical knowledge of 19th and 20th century diplomacy, a geopolitical basis from which to better understand global politics, and a basic knowledge of the theories and approaches to international relations currently employed at the research level. However, the course is not intended to instruct students in the mechanics of empirical research, nor is it intended to be either a history or geography course. Rather, the goal is to relate specific international actions to the aforementioned theories and approaches, thus, allowing the student to better understand the complexity and interdependent nature of international relations.

Prerequisite/Restriction: POLS 1010 or POLS 1100

Campus: USU Eastern only

POLS 2200 - Comparative Politics (BSS)
BAI Breadth Social Sciences
3 credits
Comparisons of differences in political culture, institutions, and processes, including authoritarian and democratic systems, violence and corruption, political development, and public policy.

Semester(s) Traditionally Offered: Fall, Spring

POLS 2300 - Introduction to Political Theory
3 credits

A survey course covering ancient and modern political theory.

Semester(s) Traditionally Offered: Fall, Spring

POLS 2400 - Introduction of Geopolitics
3 credits

The course introduces students to the concept of geopolitics by exploring key geographic concepts and the ideas of structure and agency. Topics include terrorism, nationalism, borders, and environmental geopolitics. Current events are discussed to exemplify the concepts.

Semester(s) Traditionally Offered: Spring

POLS 2500 - Introduction to International Studies
3 credits

This course is designed to introduce students to different fields that make up international studies, different methods used to gain knowledge about human societies and the policies those societies pursue, as well as career opportunities in those fields.

Semester(s) Traditionally Offered: Fall

POLS 2971 - Campaign Internship
1-12 credits

A semester campaign internship.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

POLS 2972 - Washington Internship
1-12 credits

A semester congressional, administrative, or legal internship in Washington, D.C.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Pass/Fail only.
Campus: USU Eastern only

Page: 1 <- Back 10 .. 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 .. Forward 10 -> 64

Political Science

POLS 2973 - State Government Internship
1-12 credits

A semester legislative, lobbying, or administrative internship in the state government of Utah or those of any other state government.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Pass/Fail only
Campus: USU Eastern only

POLS 2974 - Administrative Internship
1-12 credits

A semester administrative internship at the local or state level.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Pass/Fail only
Campus: USU Eastern only

POLS 2975 - International Internship
1-12 credits

Prerequisite/Restriction: Enrollment in International Studies major

Campus: USU Eastern only

POLS 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.
Repeatable for credit
Campus: USU Eastern only
POLS 2999 - Workshop
1-3 credits

Designed to meet the changing needs of the student in Political Science.

Repeatable for credit
Campus: USU Eastern only
POLS 3000 - Introduction to Political Research (QI)
QI Quantitative Intensive
3 credits

Methodology, methods, and approaches used to study and analyze political events and relationships, including the use of library resources.

Prerequisite/Restriction: Completion of the Quantitative Literacy (QL) requirement, or any MATH or STAT course that requires a QL course as a prerequisite

Semester(s) Traditionally Offered: Fall, Spring, Summer
POLS 3100 - Global Issues
3 credits

The origins and consequences of conflict and cooperation in an interdependent global community are examined in order to analyze how transnational, as well as competing national, interests and institutions affect economic, political, and environmental choices and outcomes.

Semester(s) Traditionally Offered: Fall
POLS 3110 - Parties and Elections (DSS)
DSS Depth Social Sciences
3 credits

Political parties, campaigns, and elections.

POLS 3115 - Electoral Behavior
3 credits

Considers the factors influencing citizens to become involved in politics. Explores how voters decide which candidates or issues to support, how candidates might act on that support, and whether or not reforms are needed to ensure greater participation.

Semester(s) Traditionally Offered: Spring
POLS 3140 - The Presidency (DSS)
DSS Depth Social Sciences
3 credits

Examines the origins, purposes, and scope of the executive power in the American constitutional system.

Semester(s) Traditionally Offered: Fall
POLS 3150 - State and Local Government
3 credits

Includes state and local politics, in addition to metro-urban politics.

POLS 3170 - Law and Economics
3 credits

Explains legal and political rules, the organization of government, and other institutional processes. Uses standard microeconomic tools and concepts, such as scarcity, choice, preferences, incentives, and supply and demand.

Prerequisite/Restriction: POLS 1100
Cross-listed as: ECN 3170.

Semester(s) Traditionally Offered: Spring
POLS 3180 - Introduction to Public Administration
3 credits
Overviews management of United States governmental affairs. Helps students understand how the government is structured to accomplish the execution and implementation of public policy.

Prerequisite/Restriction: POLS 1100

POLS 3210 - Western European Government and Politics (DSS)
DSS Depth Social Sciences
3 credits

Britain, France, Germany, Scandinavia, and the European Union.

POLS 3220 - Russian and East European Government and Politics (DSS)
DSS Depth Social Sciences
3 credits

Examines the strategies that the Russians and Russian leaders have chosen to meet historical and contemporary challenges to their statehood. Analyzes the rationales behind their foreign and domestic policy choices and the tools used to achieve their vital national objectives.

POLS 3230 - Middle Eastern Government and Politics
3 credits

General overview of political cultures and political developments in the Middle East.

Semester(s) Traditionally Offered: Fall

POLS 3240 - African Government and Politics
3.0

Examines the historic, cultural, economic, social, religious, and geographic traits that distinguish the countries of Africa and their political processes; investigates contemporary regional issues such as governance, poverty, modernization, diseases, energy, environment, and Africa’s increasing integration with the world.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

POLS 3250 - Chinese Government and Politics (DSS)
DSS Depth Social Sciences
POLS 3400 - United States Foreign Policy (DSS)
DSS Depth Social Sciences
3 credits
Formulation, execution, and impact of United States foreign policy.
Semester(s) Traditionally Offered: Fall, Spring

POLS 3410 - International Human Rights System
3 credits
The course introduces the concept of human rights in the international system. It examines the evolution of human rights as the international regime. The course reviews human rights through the problems of enforcement and the role of human rights institutions.
Prerequisite/Restriction: POLS 2100 or POLS 2200

POLS 3430 - Political Geography
3 credits
The relationship between earth and state. World political phenomena studied from a geographic point of view, including international boundaries, territorial seas, and landlocked states.
Prerequisite/Restriction: POLS 2100 or POLS 2200 or POLS 2300 or POLS 2400
Cross-listed as: GEOG 3430.

POLS 3700 - Terrorism and Counterterrorism
3 credits
Explores dynamics, causes, characteristics, and consequences of those acts labeled "terrorist." Also explores counter measures to such acts.

POLS 3810 - Introduction to Public Policy (DSS)
DSS Depth Social Sciences
3 credits
Examines different approaches to the study of public policy and different value dimensions in the design of policies.
Semester(s) Traditionally Offered: Fall

POLS 4000 - Political Analysis
3 credits
Political data, quantitative and analytical techniques.
Prerequisite/Restriction: POLS 3000

POLS 4120 - American Constitutional Law
3 credits
Analyzes the separation of powers, checks and balances, federalism, the Bill of Rights, and other constitutional amendments.
Semester(s) Traditionally Offered: Fall

POLS 4130 - Constitutional Theory
3 credits
Introduces students to constitutional theory, with particular emphasis on American constitutional theory.
Prerequisite/Restriction: POLS 1100
Semester(s) Traditionally Offered: Spring

POLS 4140 - Political Organizations
3 credits
Focuses on formal and informal constitutional rules, examining how different sets of rule structures impact the collective decisions of individuals in society and how individuals can influence or shape the rules structuring their lives.
Prerequisite/Restriction: POLS 1100

POLS 4150 - The Supreme Court and the Shaping of America
3 credits
Exposes students to the most important Supreme Court decisions in U.S. history. Outlines how such decisions impact American citizens and policy.
Semester(s) Traditionally Offered: Spring

POLS 4160 - The First Amendment
3 credits
Provides an in-depth examination of the first amendment of the U.S. Constitution, based on case law of the Supreme
Court and interpretations made within government agencies.

POLS 4210 - European Union Politics
3 credits

Explores creation and ongoing development of the European Union. Examines governing institutions, and internal and external politics of the European Union across a number of issues areas.

Semester(s) Traditionally Offered: Fall

POLS 4220 - Ethnic Conflict and Cooperation (CI)
CI Communications Intensive
3 credits

Examines origins of ethnic groups and the causes of ethnic conflicts, as well as different strategies for preventing or resolving such conflict. Explores conditions facilitating interethnic cooperation, the more common form of ethnic group interaction.

POLS 4230 - Issues in Middle East Politics
3 credits

Contemporary Middle Eastern political movements, regional conflicts, and state-level political change.

Semester(s) Traditionally Offered: Spring

POLS 4260 - Southeast Asian Government and Politics
3 credits

Semester(s) Traditionally Offered: Spring

POLS 4280 - Politics and War
3 credits

Examines causes and implications of war. Study of wars from general to limited, including case studies such as the Vietnam War.

Semester(s) Traditionally Offered: Spring

POLS 4310 - History of Political Thought I (CI)
CI Communications Intensive
3 credits

Issues and thinkers in ancient and medieval political thought.

Semester(s) Traditionally Offered: Spring

POLS 4320 - History of Political Thought II (DSS)
DSS Depth Social Sciences
3 credits

Issues and thinkers in modern and contemporary political thought.

Semester(s) Traditionally Offered: Spring

POLS 4330 - Political Theory and Literature
3 credits

Utilizes works from the field of literature, partly in order to discuss issues in politics and political philosophy, and partly as examples of political thought at its best.

Semester(s) Traditionally Offered: Fall, Spring

POLS 4350 - Public Policy and Democratic Theory
3 credits

Examines the nature of the American Republic. Focuses on the tension between our republican form of government and the tendency toward democratization. Considers how this balance has changed over time.

Semester(s) Traditionally Offered: Fall

POLS 4410 - Global Negotiations
3 credits

Creates an awareness of international issues and other cultures. Utilizes a computer simulation program in which negotiating teams of students from around the world are linked in a negotiation simulation.

POLS 4450 - United States and Latin America (CI)
CI Communications Intensive
3 credits

Study and analysis of foreign relations of Latin American nations among themselves and with the rest of the world.

Semester(s) Traditionally Offered: Spring

POLS 4460 - National Security Policy
3 credits

How intelligence systems function, fit within the policymaking systems of free societies, and are managed and controlled.
**POLS 4462 - The US Intelligence Community**

3 credits

This course provides students with the ability to evaluate the impact of intelligence policies on national security policy and international relations.

Prerequisite/Restriction: ENGL 2010

Semester(s) Traditionally Offered: Fall

**POLS 4463 - Grand Strategy and International Politics**

3 credits

This course examines grand strategies of great powers to determine the relationship between grand strategy and stability in international politics.

Prerequisite/Restriction: POLS 1100 or POLS 2100

Semester(s) Traditionally Offered: Spring

**POLS 4464 - International Security**

3 credits

This course introduces undergraduates to the principle theories used in security studies and to the major security issues faced by the United States.

Prerequisite/Restriction: POLS 1100 and POLS 2100 or permission of the instructor

Semester(s) Traditionally Offered: Taught Alternate Years

**POLS 4470 - Foreign Policy in the Pacific**

3 credits

Analysis of contemporary foreign policies of major countries surrounding the North Pacific.

Semester(s) Traditionally Offered: Spring

**POLS 4800 - American Constitutional Development**

3 credits

Using a historical perspective, this course examines the ideas, practices, and institutions that shaped the constitutional development of the United States. Of particular importance is how our constitutional values and practices have changed over time.

Semester(s) Traditionally Offered: Fall

Effective Term

Fall 2016

**POLS 4820 - Natural Resources and Environmental Policy: Political Economy of Environmental Quality (DSS)**

DSS Depth Social Sciences

3 credits

Causes of environmental and natural resources problems and evaluation of political and private responses to them. Study of economics and politics applied to the environment. Production, protection, and allocation of scarce resources by markets and political systems.

Semester(s) Traditionally Offered: Taught Alternate Years

**POLS 4840 - Regulatory Politics**

3 credits

This course considers the political context of regulatory policymaking. It explores theories of regulatory politics as well as the implementation of regulatory policies.

Semester(s) Traditionally Offered: Fall, Alternate Years

**POLS 4890 - Special Topics**

1-5 credits

Credit arranged.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

**POLS 4910 - Readings and Conference**

1-5 credits

Individually directed study in subjects of special interest to students. Credit arranged.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
POLS 4990 - Senior Research Seminar (CI)  
CI Communications Intensive  
3 credits

Introduces students to the research process by having them complete a major research project in the topic area of the particular professor.

Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring

POLS 5100 - Politics and Public Policy  
3 credits

Explains public policies as rational expressions of political self-interest and explores the relationship between self-interest and values such as “equity” and “efficiency” in policy.

Semester(s) Traditionally Offered: Spring

POLS 5110 - Social Policy  
3 credits

Examines health, education, and welfare policies in U.S. contexts and in comparative context.

Semester(s) Traditionally Offered: Spring

POLS 5120 - Economics of Russia and Eastern Europe, 9th Century to 21st Century  
3 credits

Development of the economics of Russia and Eastern Europe from earliest times to the present, emphasizing the interaction between economic forces and policies of the state.

Prerequisite/Restriction: APEC 2010/ECN 2010  
Semester(s) Traditionally Offered: Fall

POLS 5130 - Law and Policy  
3 credits

Analyzes the relationship between law and the formation and implementation of policy.

Semester(s) Traditionally Offered: Spring

POLS 5140 - Law, Politics, and War  
3 credits

Examines relationship between law, politics, and war, with particular emphasis on the American experience since 1787.

Semester(s) Traditionally Offered: Fall

POLS 5200 - Global Environment  
3 credits

Examines different strategies for resolving global resource and environmental problems.

POLS 5210 - Comparative Political Change/Development  
3 credits

Emphasis on approaches and theories in the field of comparative politics, with a focus on political change/development.

POLS 5270 - Latin American Politics and Development  
3 credits

Focuses on special contemporary issues of selected Latin American nations, such as democratization, the role of the military, and elections.

Semester(s) Traditionally Offered: Spring

POLS 5290 - Development in Europe  
3 credits

Emphasizes political and economic development in Europe.

POLS 5300 - Cyber Warfare and International Politics  
3 credits

This course addresses emerging international relations, policy, doctrine, strategy, and operational issues associated with Computer Network Attack (CNA) and Computer Network Exploitation (CNE), collectively referred to as cyber warfare. It provides students with a comprehensive perspective and enhances their knowledge of cyber warfare conducted by both state and non-state actors.

Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 5350 - Evolution, Conflict, and Cooperation (DSS)  
DSS Depth Social Sciences  
3 credits

Intensively examines human cooperation as a
fundamental problem of development and human conflict as the major obstacle to development.

POLS 5400 - National Security Strategy and Strategic Uncertainty
3 credits

This course examines a range of approaches and methods with a particular emphasis on scenario planning methods such as wargaming and policy analysis.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

POLS 5420 - The Mass Media and Politics
3 credits

Examination of the role of the mass media in the political process, including both campaigns and governance. Examination of political advertising, news coverage, polling, opinion formation strategies, and politicians’ use of new media technologies.

Cross-listed as: POLS 6420 and JCOM 5420/JCOM 6420.

Semester(s) Traditionally Offered: Fall

POLS 5480 - International Trade Policy
3 credits

Examines governance and politics of international trade relations, focusing in particular on cooperation, conflict, and dispute resolution in the GATT/WTO, European community, NAFTA, and Asian cooperative regimes.

Semester(s) Traditionally Offered: Spring, Taught Alternate Years

POLS 5770 - Strategic Culture
3 credits

Evaluates the extent to which national and organizational cultures impact security policy.

Prerequisite/Restriction: POLS 2100 or POLS 2200

Semester(s) Traditionally Offered: Spring, Taught Alternate Years

POLS 5890 - Special Topics
1-5 credits

This course provides an examination of special topics in political science. It is intended to be a vehicle for new or unique courses not offered as part of the regular curriculum.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

POLS 5900 - Government and Policy Internship Seminar
3 credits

A semester government and policy internship in Washington, DC or in Salt Lake City, UT

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 5910 - Campaign Internship
1-12 credits

A semester campaign internship.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 5920 - Washington Internship
1-12 credits

A semester congressional, administrative, or legal internship in Washington, D.C.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 5930 - State Government Internship
1-12 credits

A semester legislative, lobbying, or administrative internship in the state government of Utah or those of any other state government.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 5940 - Administrative Internship
1-12 credits
A semester administrative internship at the local or state level.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 5950 - International Internship
1-12 credits

A semester internship at the international level.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 5960 - International Studies Internship
1-12 credits

Internship for students with an International Studies major

Prerequisite/Restriction: Enrollment in International Studies major and instructor permission

Repeatable for credit

Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 6010 - Research Design
3 credits

A graduate survey of the philosophy and methods of political analysis. Topics ranging from the methodology of inquiry to elementary statistical methods will be covered.

Semester(s) Traditionally Offered: Fall

POLS 6020 - Public Policy Analysis
3 credits

Examines and reviews leading theories of policy analysis and the policy-making process at an advanced level.

Semester(s) Traditionally Offered: Spring

POLS 6030 - Political Theory, Political Economy, and Capitalism
3 credits

Provides an introduction to the study of political economy by considering the connections among political theory, political economy, and capitalism.

POLS 6040 - Public Choice
3 credits

Introduction to applying the microeconomic theory of markets to political processes.

POLS 6050 - Qualitative Methods
3 credits

This course offers an introduction to qualitative methods at the graduate level. It provides theoretical frameworks and practical knowledge and skills for conducting independent, robust political science projects that can be applied in different settings, issue-areas, and cultural terrains.

Semester(s) Traditionally Offered: Taught Alternate Years

POLS 6110 - Budgeting and Finance
3 credits

Surveys all major activities concerning allocation, investment, and control of public funds, as well as budgeting and revenues in context of fiscal policy making.

Semester(s) Traditionally Offered: Spring alternate years

POLS 6130 - Law and Administration
3 credits

Exploration and analysis of constitutional and legal basis in which American Public Administration is set, including separation of powers, checks and balances, delegation of discretionary authority, and common law and equity.

Semester(s) Traditionally Offered: Summer, Alternate Years

POLS 6140 - Leadership in Public Organizations
3 credits

Analysis of leadership behavior and managerial activities. Examination of major theories of leadership and motivation, including leadership vs. management,
leadership qualities and characteristics, and leadership skills.

Semester(s) Traditionally Offered: Summer, Alternate Years

POLS 6210 - International Security 3 credits

Explores the many causes of conflict at different levels. Identifies the means by which resolution can be achieved, as well as the challenges and barriers associated with such efforts.

Semester(s) Traditionally Offered: Spring

POLS 6215 - Seminar on Comparative Grand Strategies 3 credits

This seminar examines the relationship between grand strategies and international conflict and stability.

Semester(s) Traditionally Offered: Alternate Years

POLS 6220 - Theories of Comparative Politics 3 credits

Examines the social science of comparative politics by surveying important theoretical assumptions and paradigms and by evaluating the logic of proposed arguments and the evidence presented in support of those arguments.

Effective Term Spring

POLS 6230 - Terrorism and Counter-Terrorism 3 credits

Explores the history, causes, and consequences of terrorism, as well as its impact on the global arena. Teaches students why understanding of terrorism is crucial, in order to allow effective, intelligent responses.

Semester(s) Traditionally Offered: Spring

POLS 6240 - Democratic Theories and Practice 3 credits

Explores the many different perspectives and theories on the concept of democracy, ranging from the 18th Century to writings of the 21st Century.
POLS 6405 - Seminar on Intelligence and Covert Action
3 credits
This seminar provides graduate students with the ability to evaluate the role and impact of intelligence, counterespionage, and covert action politics on national security and international relations.

Semester(s) Traditionally Offered: Spring, Taught Alternate Years

POLS 6420 - The Mass Media and Politics
3 credits
Examination of the role of the mass media in the political process, including both campaigns and governance. Examination of political advertising, news coverage, polling, opinion formation strategies, and politicians' use of new media technologies.

Cross-listed as: POLS 5420 and JCOM 6420/JCOM 5420.

Semester(s) Traditionally Offered: Fall

POLS 6810 - Graduate Seminar
1-4 credits
American politics; comparative politics; political theory; international politics; public law; public administration.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 6910 - Graduate Tutorial
1-3 credits
Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 6920 - Internship
1-15 credits
Internship in a public administration agency.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Spring

POLS 6970 - Thesis Research
1-9 credits
Prerequisite/Restriction: Admission to candidacy
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

POLS 6990 - Continuing Graduate Advisement
1-3 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Portuguese
PORT 1010 - Portuguese First Year I
4 credits
Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.
Course Fee: $24.00

PORT 1020 - Portuguese First Year II
4 credits
Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.
Prerequisite/Restriction: PORT 1010 or equivalent
Course Fee: $24.00

PORT 1050 - Intensive Portuguese for Spanish Speakers
4 credits
Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs. Intensive course for Spanish speakers.
Semester(s) Traditionally Offered: Fall, Spring, Summer
PORT 1800 - Portuguese I Study Abroad
1-4 credits
Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.
Campus: Taught only in USU’s overseas Portuguese Program.
Semester(s) Traditionally Offered: Summer

PORT 2010 - Portuguese Second Year I
4 credits
Continued development of communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.
Prerequisite/Restriction: PORT 1020 or equivalent
Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

PORT 2020 - Portuguese Second Year II
4 credits
Continued development of communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.
Prerequisite/Restriction: PORT 2010 or equivalent
Semester(s) Traditionally Offered: Spring
Course Fee: $24.00

PORT 2800 - Portuguese II Study Abroad
1-4 credits
Continued development of communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.
Campus: Taught only in USU’s overseas Portuguese Program.
Semester(s) Traditionally Offered: Summer

PORT 2880 - Individual Readings
1-4 credits
Individual study of selected readings in Portuguese.
Prerequisite/Restriction: Instructor’s permission

PORT 3040 - Advanced Portuguese Grammar and Composition (CI)
CI Communications Intensive
3 credits
Review of the more complex Portuguese grammatical points and development of writing skills through composition.
Prerequisite/Restriction: PORT 2020 or equivalent
Semester(s) Traditionally Offered: Fall, Spring

PORT 3400 - Popular Music in the Portuguese-Speaking World
3 credits
This is an introduction to the popular music of Brazil and the other Portuguese speaking countries. Close attention is paid to the historical, socio-cultural, and political forces that have shaped the formation of popular music in those countries.
Prerequisite/Restriction: PORT 3040
Semester(s) Traditionally Offered: Spring

PORT 3510 - Business Portuguese
3 credits
This course is designed to help students develop knowledge and understanding in the Portuguese business language and culture. It emphasizes business vocabulary, concepts, conversation, reading, interview skills, and resume writing in the target language.
Prerequisite/Restriction: PORT 3040 or instructor permission based on demonstration of equivalent proficiency through testing
Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2015

PORT 3540 - Introduction to Translation Studies in Portuguese
3 credits
This course introduces students to translation concepts and strategies. Students will be exposed to different methods of researching unfamiliar terminology and options for dealing with terms that cannot be found in ordinary bilingual language dictionaries.

Prerequisite/Restriction: PORT 3040

Semester(s) Traditionally Offered: Spring

PORT 3570 - Brazilian Culture and Civilization (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Historical, social, political, economic, and cultural conditions and institutions of Brazil.

Prerequisite/Restriction: PORT 3040 or instructor permission

Semester(s) Traditionally Offered: Fall, Spring

PORT 3630 - Survey of Brazilian Literature (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Selected readings and discussions of major works and authors in Brazilian literature.

Prerequisite/Restriction: PORT 3040

Semester(s) Traditionally Offered: Fall, Spring

PORT 3700 - Film Studies in Portuguese
3 credits

This course will introduce students to the study of Lusophone cinema and culture through films from the Portuguese-speaking world.

Prerequisite/Restriction: PORT 3040 or instructor permission based on demonstration of equivalent proficiency through testing

Semester(s) Traditionally Offered: Fall, alternate years

Effective Term

Spring 2015

PORT 3800 - Portuguese III Study Abroad
1-4 credits

Intense review of selected problematic areas of Portuguese grammar for students with advanced language skills.

Prerequisite/Restriction: PORT 2020 or equivalent

Campus: Taught only in USU’s overseas Portuguese program.

Semester(s) Traditionally Offered: Summer

PORT 4880 - Individual Readings
1-4 credits

Readings in Brazilian and/or Portuguese literature.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring

PORT 4920 - Portuguese Language Tutoring
1 credit

Allows students to develop tutoring skills by assisting professors in lower-division courses or fulfilling instructional duties for a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated to a maximum of 3 credits.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring

Psychology

PSY 0710 - Career Exploration
1 credit

Designed to equip the student with skills and information used for job hunting, interview, writing resumes and job applications. It is also designed to aid the student in choosing a career through the use of videos, printed materials and personal contact with professionals and vocational experts. This course covers information on more than 150 careers.

Campus: USU Eastern only

PSY 1010 - General Psychology (BSS)
BSS Breadth Social Sciences
3 credits

Explores basic areas of psychology, and how each explains human thought and behavior at the individual, familial, and cultural levels.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 1100 - Lifespan Development
3 credits

Covers theories and stages of development across the lifespan.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Fall, Spring

PSY 1400 - Analysis of Behavior: Basic Principles
3 credits

A laboratory course about the scientific methods used in the study of animal and human behavior.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 1410 - Analysis of Behavior: Basic Principles Lab
1 credit

Laboratory experience accompanying PSY 1400.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $35.00

PSY 1740 - Academic Literacy and College Reading Skills
3

Helps students understand and adapt reading skills to fit their learning needs. Philosophy of the class is for students to discover new reading strategies and test them by practicing and applying them to college reading material. Also emphasizes reading comprehension and understanding a variety of texts.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term

Spring

PSY 2010 - Orientation to Psychology as a Career and Profession
2 credits

Overview of the field and major. Students clarify career goals, identify steps necessary to achieve goals, prepare a vita, and gain major-relevant skills (e.g., APA-style writing, ethics, and library usage).

Prerequisite/Restriction: PSY 1010 and consent of Psychology Advising Office

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 2100 - Developmental Psychology: Adolescence
3 credits

Characteristics of adolescents and their psychological, educational, and adjustment problems are discussed in detail.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Spring, Odd Years

PSY 2250 - Introductory Cooperative Work Experience
1-6 credits

Educators and employers cooperate to provide opportunities for students to apply classroom theory and principles in job environments, thereby gaining practical experience in their field.

Prerequisite/Restriction: Approval of Psychology Department coop education counselor

Repeatable for credit

Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 3010 - Psychological Statistics (QI)
QI Quantitative Intensive
4 credits

An introduction to descriptive and inferential statistics for the behavioral sciences. Topics include measures of central tendency and variability, sampling distributions, and hypothesis testing procedures including t-tests, analysis of variance, and correlation and regression.

Prerequisite/Restriction: STAT 1040 or STAT 1045
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $5.00

PSY 3110 - Health Psychology
3 credits


Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Spring, Odd Years

PSY 3120 - Abuse, Neglect, and the Psychological Dimensions of Intimate Violence (DSS)
DSS Depth Social Sciences
3 credits

Focuses primarily on child maltreatment and neglect. Course covers historical, legal, medical, and psychological approaches to causes, consequences, and interventions for child maltreatment and neglect. Literatures concerning animal abuse, dating, domestic violence, and abuse of the elderly may be covered.

Prerequisite/Restriction: PSY 1010

Campus: Online.
Semester(s) Traditionally Offered: Summer, Fall

PSY 3210 - Abnormal Psychology (DSS)
DSS Depth Social Sciences
3 credits

Introduction to “abnormal” human behavior. Covers characteristics, etiology, and treatment of a variety of psychological disorders.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Fall, Spring

PSY 3400 - Analysis of Behavior: Advanced (DSS)
DSS Depth Social Sciences
4 credits

In-depth examination of principles introduced in PSY 1400. Considers principles governing more complex human and animal behavior, as well as emotional and motivational factors in behavior. Lab included as part of credit.

Prerequisite/Restriction: PSY 1400 and PSY 1410

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $60.00

PSY 3450 - Sensation and Perception
4

Introduction to the sensation and perception field presented from both a cognitive and neurocognitive perspective. Analysis of how sensory processes influence how one senses the world, and how the body interprets these sensations, with a large range of applications including music, sports, learning, memory, attention, and clinical applications.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Fall

Effective Term
Fall 2016

PSY 3460 - Neuroscience I
4 credits

Introductory course examining relationship between central nervous system anatomy and physiology in controlling behavior and emotional functioning. Also considers neural and biochemical substrates of behavior.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Fall

Effective Term
Fall 2016

PSY 3500 - Research Methods in Psychology (DSS/CI)
DSS/CI Depth Social Sciences and Communications Intensive
3 credits

Comprehensive introduction to research methods in psychological science. Students will understand, analyze, and evaluate existing research and develop their own research proposal. Content includes: defining and measuring variables; selecting research participants; application of different research designs; and conducting ethical research.
Prerequisite/Restriction: PSY 1010 and ENGL 2010

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 3510 - Social Psychology (DSS)
DSS Depth Social Sciences
3 credits

Study of the individual in society; problems, theories, and methods of social psychology; will relate reading assignments to current social issues.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Fall

PSY 3660 - Educational Psychology for Teachers
2 credits

Principles and practices for development of conditions for effective learning. Lab required.

Prerequisite/Restriction: PSY 1100 or PSY 2100

Semester(s) Traditionally Offered: Fall, Spring

PSY 3720 - Behavior Assessment and Intervention I
3 credits

Approaches to applied behavior analysis in a variety of settings and populations.

Prerequisite/Restriction: PSY 1010, PSY 1400, PSY 1410

Semester(s) Traditionally Offered: Fall

PSY 4000 - Mental Aspects of Sports Performance
3 credits

Provides an understanding of theory and applications in the specialty area of sports psychology, including enhancement of motivation and performance, stress, anxiety, aggression and time management, and the relation of these issues to physical development and coaching styles.

Cross-listed as: PEP 4000.

Semester(s) Traditionally Offered: Fall

PSY 4210 - Personality Theory (DSS)
DSS Depth Social Sciences
3 credits

Explanatory study of various personality theories, their origin, and approaches to the understanding of human behavior.

Prerequisite/Restriction: PSY 1010 and PSY 3010

Semester(s) Traditionally Offered: Spring

PSY 4230 - Psychology of Gender (DSS)
DSS Depth Social Sciences
3 credits

Critical analysis of evidence for sex differences, gender roles, the effect of gender on traditional psychology, and other topics, including parenthood, cultural influence, and sexual orientation.

Semester(s) Traditionally Offered: Spring, Even Years

PSY 4240 - Multicultural Psychology (DSS)
DSS Depth Social Sciences
3 credits

Explores cultural influences on basic psychological processes, including perception, cognition, language, emotion, intelligence, attitudes, values, and intergroup relations.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Fall

PSY 4250 - Advanced Cooperative Work Experience
1-12 credits

Cooperative education work experience position; increased level of complexity and a more professional level of experience as student advances toward completion of the program.

Prerequisite/Restriction: Approval of Psychology Department cooperative education coordinator

Repeatable for credit
Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 4420 - Cognitive Psychology (DSS)
DSS Depth Social Sciences
3 credits
In-depth study of basic concepts, methods, and theories involved in perception, memory, and thinking. Lab required.

Prerequisite/Restriction: PSY 1010

Semester(s) Traditionally Offered: Spring

PSY 4430 - Cognitive Psychology Laboratory
1 credit

Required laboratory, designed to accompany PSY 4420. Focuses on conducting cognitive experiments via computer simulations and sampling data collection. Designed to increase skills in designing data collection and interpreting experimental data.

Semester(s) Traditionally Offered: Spring

PSY 4460 - Neuroscience II
4 credits

Advanced course examining relationship between central nervous system anatomy and physiology in controlling behavior and emotional functioning. Details neural and biochemical substrates of behavior. Lab required.

Prerequisite/Restriction: PSY 1010 and either PSY 3460 or BIOL 1610

Semester(s) Traditionally Offered: Spring

Course Fee: $60.00

PSY 4510 - Effective Social Skills Interventions (CI)
CI
3

Examination of theory and practice of social skills training with children, adolescents, and adults.

Prerequisite/Restriction: PSY 1010, PSY 1100, PSY 3210 or PSY 3510

Semester(s) Traditionally Offered: Spring

Effective Term

Fall

PSY 4720 - Behavioral Assessment and Intervention II Lab
2 credits

Approaches to applied behavior analysis in a variety of settings and populations. This course builds upon material taught in PSY 3720 by introducing advanced concepts taught through primary source material and hands-on experience through a required laboratory component.

Prerequisite/Restriction: PSY 3720

Semester(s) Traditionally Offered: Spring

PSY 4730 - Behavioral Assessment and Intervention II Lab
3 credits

Laboratory experience accompanying PSY 4720. Students will gain supervision experience in Applied Behavior Analysis.

Prerequisite/Restriction: PSY 3720

Corequisite: PSY 4720

Semester(s) Traditionally Offered: Spring

Effective Term

Fall

PSY 4790 - Psychological Principles and Individuals who are Deaf and Hard of Hearing
3 credits

Psychological theories and research used to describe the deaf and hard of hearing. Exploration of principles that can be used in helping these individuals achieve emotional well-being.

Cross-listed as: PSY 6790 and COMD 4790/COMD 6790.

Semester(s) Traditionally Offered: Spring

PSY 4910 - Undergraduate Research Creative Opportunity
1-3 credits

A cooperative process of discovery, investigation, research, or creativity between faculty and one or more students.

Prerequisite/Restriction: Approval of Psychology Department URCO coordinator

Repeatable for credit.
PSY 4920 - Practicum
1-3 credits
Field work in applied psychological setting at BS level.
Repeatable for credit.
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 4950 - Undergraduate Apprenticeship (CI)
CI Communications Intensive
3 credits
Students plan and execute their apprenticeship experience in a research setting (with faculty members) and an applied setting (e.g., community service agency or school). Students are encouraged to take this course three or more semesters prior to graduation.
Prerequisite/Restriction: PSY 2010
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 4980 - Psychological Aspects of Sports Performance
3 credits
Psychological theory and principles applied to sports. Includes motivational techniques, psychological evaluation, stress and anxiety in sports, personality and sports performance.
Cross-listed as: PSY 6050 and PEP 5050/PEP 6050.
Semester(s) Traditionally Offered: Spring

PSY 5020 - Multicultural Issues in Psychology
3
Examines role of culture in human development, with emphasis on understanding relations between culture, ethnicity, and identity and how images of “cultural selves” and “cultural others” are produced and “naturalized.”
Semester(s) Traditionally Offered: Fall
Effective Term
Fall

PSY 5050 - Psychological Aspects of Sports Performance
3 credits
Organizational Behavior Management is the application of behavior-analytic methods and principles to address performance issues in the workplace. Students will refresh their understanding of these methods and principles and will then learn to apply them in business settings. Students will use the skills they acquire in their class to design a performance management intervention.
Prerequisite/Restriction: PSY 1400, PSY 1410
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

PSY 5100 - History and Systems of Psychology
3 credits
Theoretical and historical developments in psychology with primary emphasis on nineteenth and twentieth century developments, although earlier precursors are also considered.
Prerequisite/Restriction: PSY 1010
Cross-listed as: PSY 6100.

PSY 5200 - Introduction to Interviewing and Counseling (CI)
CI Communications Intensive
3 credits
Theory, models, and practice in basic principles of interviewing and counseling, including listening skills, facilitation of verbal interaction, gathering information, attending to nonverbal behavior, interpersonal dynamics, and promoting helping relationships.
Prerequisite/Restriction: Psychology major or minor, matriculation in master’s program requiring PSY 5200, or instructor permission

PSY 5280 - Organizational Behavior Management
3
Organizational Behavior Management is the application of behavior-analytic methods and principles to address performance issues in the workplace. Students will refresh their understanding of these methods and principles and will then learn to apply them in business settings. Students will use the skills they acquire in their class to design a performance management intervention.
Prerequisite/Restriction: PSY 1400, PSY 1410
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

PSY 5330 - Principles of Psychological Measurement and Test Theory
3 credits
This course covers psychological test and measurement theories, including statistical theories for defining
reliability and validity. It also discusses the application of psychometric theory to psychological scale development and evaluation.

**Prerequisite/Restriction:** PSY 1010 and PSY 3010

Cross-listed as: PSY 6330

**Semester(s) Traditionally Offered:** Fall

**PSY 5500 - Interdisciplinary Workshop**
1-3 credits

Repeatable for credit.

**PSY 5600 - Psychology Honors Seminar**
1 credit

This course is a seminar for honors students in Psychology. Students will read and discuss research and have the opportunity to connect with faculty to become involved in research projects.

**Prerequisite/Restriction:** Must be an honors student majoring in Psychology

Repeatable for credit.
Pass/Fail only

**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**PSY 5720 - Assessment for Eligibility, Programming and IEP Development**
3 credits

Covers principles of standardized assessment, curriculum-based assessment, and direct child observation. Instructs teachers in how to use assessment results to determine student eligibility for special education services and IEP development.

**Prerequisite/Restriction:** Instructor permission

Cross-listed as: SPED 5720.

**Semester(s) Traditionally Offered:** Fall

**PSY 5900 - Independent Study**
1-3 credits

Individual discussion and intensive study of a particular problem or area.

**Prerequisite/Restriction:** Instructor permission

Repeatable for credit.
Pass/Fail only

**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**PSY 5910 - Independent Research**
1-3 credits

Experiments and demonstration projects are conducted and reported.

**Prerequisite/Restriction:** Instructor permission

Repeatable for credit.
Pass/Fail only

**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**PSY 5930 - Instructional Apprenticeship in Psychology**
1-3 credits

Didactic and applied experience in course preparation and instructional techniques applicable to the teaching of psychology. Intended for students planning careers as instructors at the secondary and postsecondary levels.

**Prerequisite/Restriction:** Instructor permission

Repeatable for credit.
Pass/Fail only

**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**PSY 6010 - Introduction to Program Evaluation: Evaluation Models and Practical Introduction to Program Evaluation**
3 credits

Alternative approaches and practical guidelines for conducting evaluation studies. Through case studies and simulations, addresses impact of social, political, and ethical issues on evaluation.

Cross-listed as: EDUC 6010.

**Semester(s) Traditionally Offered:** Fall

**PSY 6050 - Psychological Aspects of Sports Performance**
3 credits

Psychological theory and principles applied to sports. Includes motivational techniques, psychological
evaluation, stress and anxiety in sports, personality and sports performance.

Cross-listed as: PSY 5050 and PEP 6050/PEP 5050.

Semester(s) Traditionally Offered: Spring

PSY 6100 - History and Systems of Psychology
3 credits

Theoretical and historical developments in psychology with primary emphasis on nineteenth and twentieth century developments, although earlier precursors are also considered.

Prerequisite/Restriction: PSY 1010

Cross-listed as: PSY 5100.

PSY 6130 - Evidence-Based Practice: School Intervention
3 credits

To prepare students to design and implement evidence-based intervention in K-12 school populations.

Semester(s) Traditionally Offered: Fall

PSY 6150 - Evidence-Based Practice I: Children and Adolescents
2 credits

Introduction to application of evidence-based practice in psychology, focusing on child and adolescent populations.

Semester(s) Traditionally Offered: Fall

PSY 6200 - Fundamentals of Neuroscience I
3 credits

Comprehensive introductory neuroscience course for graduate students. Course covers basic principles of organization and function of the nervous system, as well as references to neurological and psychiatric disorders.

Semester(s) Traditionally Offered: Fall, Alternate Even Years
Effective Term
Fall 2015

PSY 6210 - Fundamentals of Neuroscience II
3 credits

Comprehensive introductory neuroscience course for graduate students building on material learned in Neuroscience I. Course provides an overview of brain circuits and higher brain functions. Neuropsychiatric disease is also discussed.

Prerequisite/Restriction: PSY 6200

Semester(s) Traditionally Offered: Spring, Odd Years
Effective Term
Fall 2015

PSY 6220 - Group Counseling
3 credits

Introduction to theory of group counseling with illustrative experiences to show how theory may be applied.

Prerequisite/Restriction: PSY 6350

Semester(s) Traditionally Offered: Spring

PSY 6230 - Effective Interventions with Parents
1 credit

Covers effective implementation of collaborative home-school interventions with a focus on working with parents to address difficulties children are exhibiting in home and schools. Behavioral parent training covered extensively.

Prerequisite/Restriction: Matriculation into Psychology graduate program or instructor permission

Semester(s) Traditionally Offered: Summer

PSY 6240 - Comprehensive School Counseling Programs
3 credits

Students will examine the role of the professional school counselor and attain the skills necessary to establish an effective school counseling program using national and Utah comprehensive school counseling models.

Semester(s) Traditionally Offered: Spring

PSY 6250 - Internship in School Counseling and Guidance
1-10 credits

Internship in approved school system involving
comprehensive guidance activities, under supervision of licensed school counselor.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6260 - Career Development for School Counselors
2 credits

Designed for students who plan to license for and enter professional school counseling, this course provides an opportunity for exploration of career patterns and factors influencing career development and effectiveness.

Prerequisite/Restriction: Admission to the Professional School Counselor Education program, or approval by the program director

Semester(s) Traditionally Offered: Summer

PSY 6270 - Child Psychopathology
3

Focuses on issues relevant to the understanding of child emotional and behavioral disorders. Discussion of symptom characteristics, assessment, and treatment protocols, as well as research pertaining to the major mental health problems found in children and adolescents.

Prerequisite/Restriction: Admission to graduate program in psychology or instructor permission

Semester(s) Traditionally Offered: Fall
Effective Term
Spring

PSY 6280 - Organizational Behavior Management
3

Organizational Behavior Management is the application of behavior-analytic methods and principles to address performance issues in the workplace. Students will refresh their understanding of these methods and principles and will then learn to apply them in business settings. Students will use the skills they acquire in the class to design a performance management intervention. Additional work is required for graduate class.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

PSY 6290 - Diversity Issues in Treatment and Assessment
1-3 credits

Course will advance cultural competence development in trainees; particular focus on specific skills in psychotherapy and psychological/educational assessment with ethnic, linguistic, and culturally diverse clients/families/groups/schools/communities. Students will acquire skills in training others in developing cultural self-awareness, knowledge, and skills.

Prerequisite/Restriction: PSY 6350 or instructor's consent

Repeatable for credit.
Semester(s) Traditionally Offered: Spring

PSY 6310 - Intellectual Assessment
3 credits

Training and supervised experience in administering and interpreting individual intellectual ability tests, such as the Wechsler and Stanford-Binet scales.

Prerequisite/Restriction: Matriculation into School Psychology program or Combined Psychology program

Semester(s) Traditionally Offered: Fall
Course Fee: $40.00

PSY 6320 - Objective Assessment of Personality and Affect
3 credits

Research bases and clinical applications of objective psychological assessment instruments and techniques, designed to measure adolescent and adult personality, affect, and psychotherapy.

Prerequisite/Restriction: PSY 6310

Semester(s) Traditionally Offered: Spring
Course Fee: $20.00

PSY 6330 - Principles of Psychological Measurement and Test Theory
3 credits

This course covers psychological test and measurement theories, including statistical theories for defining reliability and validity. It also discusses the application of psychometric theory to psychological scale development
Prerequisite/Restriction: PSY 1010 and PSY 3010  

Cross-listed as: PSY 5330  

Semester(s) Traditionally Offered: Fall  

PSY 6340 - Consultation in the Schools  
3 credits  

Students will learn to create positive collaborative efforts between school professionals, students, parents, community organizations and health care providers, including mental health professionals.  

Prerequisite/Restriction: Admission into the School Counseling graduate program  

Semester(s) Traditionally Offered: Summer  

PSY 6350 - Introduction to Theories of Intervention in Psychology  
3 credits  

Introduction to empirically based psychological practice (EBPP) and basic theories of psychological intervention. Explores basic models of EBPP, common factors associated with therapeutic change, and core theories of psychological intervention.  

Prerequisite/Restriction: Matriculation into School Psychology/School Counseling or Combined Psychology program  

Semester(s) Traditionally Offered: Fall, Summer  

PSY 6360 - Introduction to the Practice of Professional Psychology  
3 credits  

Observation and practice of clinical skills, while linking theory to case conceptualization and techniques of intervention. Introduction and evaluation of students on logistical aspects of psychological practice. Course has strong applied focus, while integrating theories of practice.  

Prerequisite/Restriction: PSY 6350  

Repeatable for credit.  

Semester(s) Traditionally Offered: Spring  

PSY 6370 - Practicum in School Counseling  
3 credits  

Supervised practicum in public school setting, under direction of licensed school counselor. Taken by students in School Counseling master’s program.  

Repeatable for credit.  
Pass/Fail only.  

Semester(s) Traditionally Offered: Spring  

PSY 6380 - Practicum in School Psychology  
3 credits  

Supervised practicum in school psychology in public school or closely related setting. Taken by second-year students in School Psychology master’s program.  

Repeatable for credit.  

Semester(s) Traditionally Offered: Fall, Spring, Summer  

PSY 6390 - Program Evaluation in the Schools: Models and Guidelines  
3 credits  

Models and guidelines for conducting ethical, valid and reliable evaluation studies in the schools, with emphasis on state-required data projects for school counseling centers.  

Prerequisite/Restriction: Admission into the School Counseling graduate program or prior approval  

Semester(s) Traditionally Offered: Summer  

PSY 6410 - Psychoeducational Assessment  
3 credits  

Training and supervised experience in assessment of school-age and preschool-age children. Administration and interpretation of cognitive, developmental, and academic achievement measures, along with other psychoeducational assessment instruments and methods.  

Semester(s) Traditionally Offered: Spring  
Course Fee: $40.00  

PSY 6420 - Group Counseling in the Schools  
3 credits  

Theories and models of group counseling with emphasis on application with children and adolescents in school
settings.

Prerequisite/Restriction: Admission into the School Counseling graduate program

Semester(s) Traditionally Offered: Spring

PSY 6440 - Legal and Ethical Issues in the Schools
2 credits

Theories, legal, ethical and professional standards and issues in the practice of school psychology will be discussed. Case studies will be presented and discussed to learn responsive ethical and professional decision-making.

Prerequisite/Restriction: Matriculation into Psychology graduate program or instructor permission

Semester(s) Traditionally Offered: Spring

PSY 6450 - Introduction to School Psychology
1 credit

Introductory overview of field of school psychology. Role and function of school psychologist, historical context of school psychology, and trends and new developments in service provision.

Prerequisite/Restriction: Matriculation into School Psychology master's program or Combined Psychology doctoral program

Semester(s) Traditionally Offered: Fall

PSY 6460 - Ethical, Legal and Professional Issues in School Counseling
3 credits

Exploration of ethical, legal and professional issues related to school counselor responsibilities, including advocacy, leadership, collaboration and systemic change.

Prerequisite/Restriction: Graduate standing in psychology or instructor’s consent

Semester(s) Traditionally Offered: Spring

PSY 6470 - Health Psychology
3 credits

Explores psychological and behavioral principles relating to health and illness. Focuses on development and maintenance of health behaviors. Emphasizes integration of research findings with clinical intervention.

Prerequisite/Restriction: Graduate standing in Psychology; or graduate standing in Health, Physical Education and Recreation

Semester(s) Traditionally Offered: Fall

PSY 6450 - Introduction to School Psychology
1-2 credits

Series of self-instructional modules and videos and a variety of elective training. Module topics include developmental disabilities, legal aspects and issues, assessment, intervention, assistive technology, transition, and prevention/intervention for aggression and violence.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Page: 1 <- Back 10 ... 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 ... Forward 10 -> 64

Psychology

PSY 6510 - Social Psychology
3 credits

Provides students with common knowledge base in social psychology. Emphasizes recent developments in the field, while providing an in-depth overview of classic research in the field.

Semester(s) Traditionally Offered: Spring

PSY 6530 - Developmental Psychology
3 credits

Advanced survey course in general developmental psychology. Theory and research in human development across the lifespan, with particular emphasis on child and adolescent development.

Semester(s) Traditionally Offered: Fall

PSY 6570 - Introduction to Educational and Psychological Research
3 credits
Provides introduction to research methods, including identification of research problem, review and evaluation of research literature, and design and implementation of research project.

Prerequisite/Restriction: PSY 3010

Cross-listed as: EDUC 6570.

Semester(s) Traditionally Offered: Spring, Fall
Effective Term
Spring 2016

PSY 6600 - Research Design and Analysis I
3 credits

Research design and statistical concepts for research in education, human services, and psychology, with emphasis on the selection and interpretation of statistical analyses.

Prerequisite/Restriction: EDUC 6570/PSY 6570, passing score on 6600 Pretest via Tarl lab, and instructor permission

Cross-listed as: EDUC 6600.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6610 - College and Career Readiness for School Counselors
3 credits

Designed for pre-service and practicing school counselors, this course teaches effective strategies for preparing all students for post-secondary education.

Prerequisite/Restriction: Admission into the Schools Counseling graduate program

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6620 - Instructional Interventions and Consultation
3 credits

This course examines theories and practice of school-based consultation, emphasizing Instructional Consultation. Students explore the role of consultation in prevention and intervention. Students practice collaborative communication; problem identification; and intervention design, implementation and evaluation.

Prerequisite/Restriction: Matriculation into a Psychology graduate program

Semester(s) Traditionally Offered: Fall

PSY 6630 - Supervision and Consultation in Psychological and Educational Settings
3 credits

Introduction to skills and research fundamental to consultation and supervision, with particular emphasis on educational settings. Majority of course devoted to instruction in the skills required through applied case work.

Prerequisite/Restriction: Matriculation into School Psychology or Combined Psychology Program

Semester(s) Traditionally Offered: Spring

PSY 6650 - Theories of Learning: The Behavioral Perspective
3 credits

In-depth examination of the major behavioral theories of learning, including classical and operant conditioning.

Semester(s) Traditionally Offered: Fall

PSY 6660 - Cognition and Instruction
3 credits

Survey of theory and principles in cognitive psychology, with special emphasis on applying these principles in instructional settings.

Semester(s) Traditionally Offered: Spring

PSY 6670 - Neuropsychopharmacology
3 credits

This is an advanced graduate seminar examining the psychopharmacological mechanisms of action of psychotropic drugs. It considers abnormalities in neurotransmission underlying major psychiatric disorders, including depression, anxiety disorders, psychosis, cognitive disorders, and substance abuse.

Prerequisite/Restriction: PSY 6210

Semester(s) Traditionally Offered: Fall, Alternate Odd Years
PSY 6680 - Neuroeconomics
3 credits

Status and trends in Neuroeconomics, and interdisciplinary field that seeks to explain decision making, the ability of the brain to process multiple alternatives and to choose a course of action. Studies how neuroscientific discoveries constrain and guide models of economics.

Prerequisite/Restriction: PSY 6200

Semester(s) Traditionally Offered: Spring, Alternate Even Years
Effective Term
Fall 2015

PSY 6700 - Grant Writing for School Counselors
2 credits

Guided experience in preparation of grant proposals, with emphasis on funding sources for K-12 schools. Students write mock grant proposal sections for submission to funding agencies to support school initiatives.

Prerequisite/Restriction: Admission to School Counselor Education program or instructor permission

Semester(s) Traditionally Offered: Summer

PSY 6750 - Evidence-Based Practice II: Adults
2 credits

Introduction to application of evidence-based practice, focusing on adults.

Semester(s) Traditionally Offered: Spring

PSY 6760 - Fundamentals of Acceptance and Commitment Therapy
3 credits

This class covers the fundamentals of Acceptance and Commitment Therapy (ACT). The theory behind ACT as well as the research that informs ACT and the processes targeted will be covered. Delivery of ACT will be practiced in class.

Semester(s) Traditionally Offered: Fall, Alternate Even Years
Effective Term
Fall 2015

PSY 6790 - Psychological Principles and Individuals Who Are Deaf and Hard of Hearing
3 credits

Psychological theories and research used to describe the deaf and hard of hearing. Exploration of principles that can be used in helping these individuals achieve emotional well-being.

Cross-listed as: PSY 4790 and COMD 6790/COMD 4790.

Semester(s) Traditionally Offered: Spring

PSY 6800 - Addictive behaviors
3 credits

Provides students with an overview of the theoretical issues, research, and models that underlie our understanding of behavioral syndromes commonly referred to as “addictive behaviors.” Emphasizes chemical dependency problems, as well as the well-studies pattern of “addiction.”

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

PSY 6810 - Seminar
1-3 credits

Special topics designed to help students develop in-depth knowledge of emerging research, theory, and practice in psychology. Taught in seminar format by USU faculty or visiting scholars.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6850 - Introduction to the Combined Doctoral Program
1 credit

This seminar is designed to orient beginning PhD students to the combined program and to the School of Graduate Studies. Opportunity provided for students to meet and talk with all faculty members concerning their research. Students also begin their own research and
become acquainted with required paperwork for their program.

Pass/Fail only
Semester(s) Traditionally Offered: Fall

PSY 6880 - Transcultural assessment lab
1

Psychoeducational assessment laboratory experience to be taken by students in the School Psychology and Combined Psychology programs.

Corequisite: PSY 6290.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

PSY 6890 - Assessment of Child and Adolescent Psychopathology and Personality
3 credits

Theoretical foundations and applied training in methods of assessing and classifying behavioral, social, and emotional problems of children and adolescents.

Prerequisite/Restriction: Matriculation into Combined Psychology doctoral program or School Psychology program

Semester(s) Traditionally Offered: Summer

PSY 6900 - Independent Study
1-3 credits

Individual discussion and intensive study of a particular problem or area.

Repeatable for credit.
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6910 - Independent Research
1-3 credits

Experiments and demonstration projects are conducted and reported.

Repeatable for credit.
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6930 - University Teaching Apprenticeship
1 credit

Prepares graduate students for college teaching. Students learn to prepare study guides, examinations, and lectures, and learn to use audio-visual aids. Students also examine various current methods of instruction and course evaluation schemes.

Repeatable
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6950 - Internship in School Psychology
1-3 credits

Internship in approved school system involving assessment, counseling, consultation, and program development, under the supervision of a certified school psychologist.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6970 - Thesis
1-6 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 6990 - Continuing Graduate Advisement
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7020 - Advanced Evaluation Methodology and Techniques
3 credits

Provides advanced theory and practice in focus group interviews, on-site visit techniques, observation and anchor scales, multiple-site evaluation standards, and advanced reporting techniques.

Prerequisite/Restriction: EDUC 6010/PSY 6010

Semester(s) Traditionally Offered: Spring
PSY 7030 - Instrument Development  
3 credits

In-depth study of factors and techniques critical for designing and developing evaluation and research instruments.

Semester(s) Traditionally Offered: Fall

PSY 7040 - Practicum in Evaluation Planning and Contracting  
3 credits

Provides detailed information on methods for planning program evaluations, negotiating agreements with client/sponsor, and finalizing evaluation contract.

Prerequisite/Restriction: EDUC 6010/PSY 6010

Semester(s) Traditionally Offered: Spring

PSY 7050 - Internship in Program Evaluation  
1-9 credits

Experience in practical aspects of program evaluation through planned, supervised evaluation project participation approved by student’s supervisory committee.

Prerequisite/Restriction: EDUC 6010/PSY 6010

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7060 - Internship in Research  
1-9 credits

Research experience gained through conducting planned, supervised research project.

Prerequisite/Restriction: Approval by supervisory committee and EDUC 6570/PSY 6570

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7070 - Advanced Measurement Theories and Practice  
3 credits

This course covers classical test theory (CTT), latent state-trait theory (LSTT), and item-response theory (IRT). Students learn how to estimate, evaluate, and interpret measurement models of CTT, LSTT, and IRT in the software Mplus. We also discuss advanced topics in the test validity and test validation literature.

Prerequisite/Restriction: EDUC 6600 or PSY 6600

Semester(s) Traditionally Offered: Spring, Even Years

PSY 7090 - Experimental and Applied Psychological Science Program Seminar  
1 credit

Provides opportunity for doctoral students in the Experimental and Applied Psychological Science Program to meet on a regular basis to discuss journal articles and explore student and faculty research projects.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

PSY 7100 - Biological Basis of Behavior  
3 credits

Explores normal and abnormal behavior from a basic neuroanatomical/neurophysiological perspective. Discusses pharmacological/nonpharmacological applications.

Semester(s) Traditionally Offered: Spring

PSY 7110 - Cognitive Neuroscience  
3 credits

In-depth study of theories, models, and current research in the field of cognitive neuroscience, including memory, perception, problem-solving, and decision making.

Prerequisite/Restriction: PSY 4420 or PSY 6660

Semester(s) Traditionally Offered: Fall, Taught Alternate Years, Odd Years

PSY 7140 - Methods in Neuroscience  
3 credits

Comprehensive course for graduate students, providing an overview of modern neuroscience methods, from molecular and cellular methods to pharmacology, in vivo electrophysiology, optogenetics, imaging and behavioral...
methods.

Prerequisite/Restriction: PSY 6200

Semester(s) Traditionally Offered: Fall, Odd Years
Effective Term
Fall 2015

PSY 7230 - Theory and Research in Personality
3 credits

Overview of theoretical approaches, research, and clinical applications regarding personality differences.

Semester(s) Traditionally Offered: Spring

PSY 7250 - Professional Ethics and Standards
1-3 credits

Designed to train clinicians and researchers in the field of psychology to operate within the professional ethics and standards of the field.

Semester(s) Traditionally Offered: Spring

PSY 7270 - Lifespan Psychopathology
3 credits

Summarizes research on risk, epidemiology, and etiological perspectives regarding emotional and behavioral disorders of children, adolescents, and adults. Emphasizes classification and diagnosis of these disorders utilizing the DSM system.

Semester(s) Traditionally Offered: Fall

PSY 7350 - Integrated Practicum with Adults, Adolescents, and Children
3 credits

Doctoral-level practicum in a community setting. Supervised experience with evidence-based practice applied to diverse clients, including adults, adolescents, and children. Appropriate assessment, intervention, and consultation relevant to diverse clients and problems.

Prerequisite/Restriction: Permission of program chair

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7370 - Practicum in Counseling/Clinical Psychology
3 credits

Doctoral-level practicum in a clinical/counseling setting, focused on intervention with young adult and adult populations. Supervised experience in individual, group, and/or family intervention. Includes psychological assessment and consultation with relevant individuals.

Prerequisite/Restriction: Permission of program chair

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7380 - Practicum in Psychology
1-6 credits

Doctoral-level practicum in a variety of health service settings. Supervised experience in individual, group, and family psychotherapy assessment and consultation as needed.

Prerequisite/Restriction: Permission of program chair

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7390 - Externship in Adult Clinical/Counseling Psychology
1 credit

Students in the course are engaged in applied training experiences (generally paid) across a variety of practice settings focused on adult assessment and/or intervention. Student goals and objectives are developed individually with program faculty and on-site supervisors. Students must complete a competency evaluation form with their supervisor and submit their
contact hours (direct, indirect, and supervision) to receive a grade in the course.

Prerequisite/Restriction: Successful completion of PSY 7350 and approval of Combined Clinical/Counseling Program faculty. On rare occasion, students may take the course while enrolled in 7350 with Combined Program faculty approval.

Repeatable

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term: Fall

PSY 7530 - Advanced Developmental Psychology
3 credits

In-depth study of theories, models, and current research in the field of developmental psychology, including memory, perception, language, and social development.

Semester(s) Traditionally Offered: Fall

Effective Term: Fall 2015

PSY 7610 - Measurement, Design, and Analysis II
3 credits

Advanced treatment of research design and statistical concepts and issues in educational, human services, and psychological research.

Prerequisite/Restriction: EDUC 6600 or PSY 6600 and STAT 5200

Cross-listed as: EDUC 7610

Semester(s) Traditionally Offered: Fall, Summer

PSY 7630 - Supervision and Consultation in Applied Psychology
1 credit

Introduces knowledge foundations of clinical supervision, as well as consultation theories and models in diverse settings. Discusses ethical, legal, and evaluation issues. Focuses on exposure to a knowledge base, rather than on applied practice.

Prerequisite/Restriction: Matriculation into School Psychology or Combined Psychology Program

Semester(s) Traditionally Offered: Spring, Summer

PSY 7650 - Multilevel and Marginal Models for the Social Sciences
3 credits

Coverage of multilevel (ie, mixed-effects, hierarchical linear) and marginal (ie, GEE) models for both continuous and categorical outcomes. Includes application of these methods to many types of cross-sectional and longitudinal research designs (eg, experimental, case-control, cohort, cross-over, complex sample, randomized controlled trials).

Prerequisite/Restriction: PSY 7610 or EDUC 7610

Semester(s) Traditionally Offered: Spring, Even Years

PSY 7670 - Literature Reviews in Education and Psychology
2 credits

Advanced concepts in designing, writing, and critiquing literature reviews.

Prerequisite/Restriction: PSY 6600/EDUC 6600 or instructor permission

Cross-listed as: EDUC 7670.

Semester(s) Traditionally Offered: Spring

PSY 7700 - Grant Writing
3 credits

Students learn to identify funding sources, select strategies for seeking resources, and write proposals for research, development, training, and service activities in education, psychology, and related fields.

Prerequisite/Restriction: PSY 6570/EDUC 6570

Semester(s) Traditionally Offered: Spring

PSY 7740 - Behavioral Pharmacology
3 credits

This course covers the history and scope of behavioral pharmacology, which is the synthesis of the experimental analysis of behavior and pharmacology. Topics include drugs and drug abuse, foundations and methodology, and
current issues.

Semester(s) Traditionally Offered: Fall, Alternate Even Years
Effective Term
Fall 2015

PSY 7750 - Behavioral Economics
3 credits
A survey of major findings in the broad field of behavioral economics. Topics range from essential value derivations from consumer demand functions, to Prospect Theory, to intertemporal choice.

Semester(s) Traditionally Offered: Spring, Alternate Odd Years
Effective Term
Spring 2016

PSY 7780 - Multivariate Statistical Analysis I: Observed Variables
3 credits
Focuses on application of multivariate methods (e.g. factor analytic techniques, multivariate analysis of variance, survival analysis) in research and measurement in psychology, education, and other social and behavioral sciences.

Prerequisite/Restriction: EDUC 7610 or PSY 7610

Semester(s) Traditionally Offered: Fall, Taught Alternate Years

PSY 7790 - Multivariate Statistical Analysis II: Latent Variable Modeling
3 credits
This course covers the theory of multivariate statistical models including continuous latent variables (confirmatory factor analysis and structural equation modeling) and categorical latent variables (latent class and latent profile analysis) with applications in the software Mplus.

Prerequisite/Restriction: PSY 7780

Semester(s) Traditionally Offered: Spring, Alternate Years

PSY 7810 - Seminar
1-3 credits
Special topics designed to help students develop in-depth knowledge of emerging research, theory, and practice in psychology. Taught in seminar format by USU faculty or visiting scholars.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7820 - Neuropsychology: Principles and Assessment
2 or 4 credits
Overview of neuropsychological symptoms, common syndromes, and underlying neural structures. Coverage of neuropsychological assessment approaches, diagnostic issues, and supervised experience with selected neuropsychological tests. Includes some discussion of rehabilitation, but primarily emphasizes assessment.

Semester(s) Traditionally Offered: Summer

PSY 7830 - Mechanisms of Neuropsychiatric Disease
3 credits
Course for graduate students, discussing the clinical presentation and current therapeutical approaches for the brain disorders in the context of neurobiology, neuropsychology, imaging and genetics.

Prerequisite/Restriction: PSY 6200

Semester(s) Traditionally Offered: Odd Years

Effective Term
Fall 2015

PSY 7840 - Psychopharmacology
1 credit
Provides psychology graduate students with basic working knowledge of the field of psychopharmacology and the medical use of psychotropic drugs.

Prerequisite/Restriction: PSY 6320

PSY 7850 - Internship and Professional Development Seminar
1 credit
Advanced orientation to issues and trends in professional psychology. Internship, including application process.
Also overviews remaining program requirements. Focuses on continuing development of good professional decision-making skills.

Pass/Fail only
Semester(s) Traditionally Offered: Spring

PSY 7900 - Independent Study
1-3 credits

Individual discussion and intensive study of a particular problem or area.

Repeatable for credit.
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7910 - Independent Research
1-3 credits

Experiments and demonstration projects are conducted and reported.

Repeatable for credit.
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7950 - Internship in Professional Psychology
0 credit

One-year, supervised, full-time internship required of doctoral candidates in professional psychology (clinical, counseling, and/or school psychology).

Prerequisite/Restriction: All doctoral coursework completed, with the possible exception of the dissertation if approved by the student’s committee, prior to initiating the internship

Repeatable
Pass/Fail only
Semester(s) Traditionally Offered: Spring, Fall, Summer

Effective Term
Summer 2016

PSY 7970 - Dissertation
1-18 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSY 7990 - Continuing Graduate Advisement
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Public Health

PUBH 3120 - Family and Community Health
3 credits

Focuses on health aspects of various population groups within the community. Particular emphasis placed on guidelines for optimal family health.

Semester(s) Traditionally Offered: Spring

PUBH 3310 - Occupational Health and Safety
3 credits

Covers the principles of occupational health and safety, including regulatory standards. Emphasizes on-the-job health and safety problems from the occupational health and safety professional and management view.

Semester(s) Traditionally Offered: Fall

PUBH 3610 - Environmental Management
3 credits

Introduction to environmental health, emphasizing relationships among environmental quality, public health, environmental and occupational health regulations, human health risk assessment, institutions, and engineered systems in environmental health management.

Prerequisite/Restriction: CHEM 1210; BIOL 1610 or University Studies Breadth Life Sciences (BLS) course; MATH 1210

Cross-listed as: CEE 3610

Semester(s) Traditionally Offered: Fall

Course Fee: $40.00

PUBH 3870 - Professional/Technical Writing in Civil and Environmental Engineering (CI)
CI Communications Intensive
2 credits
Gives CEE students intensive practice with oral and written communication in business and technical CEE writing.

Corequisite: CEE 3610

Semester(s) Traditionally Offered: Fall

PUBH 4000 - Public Health Field Experience
3-6 credits

Field experience in the practice of public health, as appropriate to each student's area of public health emphasis: public health education, environmental health, or industrial hygiene.

Prerequisite/Restriction: Junior standing in public health

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

PUBH 4030 - Communicable Disease Control
3 credits

Comprehensive study of communicable diseases, including etiological agents, reservoirs of infection, and mechanisms of transmission, control, and prevention.

Prerequisite/Restriction: BIOL 1610 or BIOL 2060 or BIOL 2420

Semester(s) Traditionally Offered: Fall

PUBH 4040 - Fundamentals of Epidemiology
3 credits

Introduction to the study of the distribution and causes of communicable and noncommunicable diseases of humans and other animals.

Prerequisite/Restriction: Recommended a course in statistics

Semester(s) Traditionally Offered: Spring

PUBH 4300 - Industrial Hygiene Seminar
1 credit

Participant seminar on current developments in industrial hygiene.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

PUBH 4310 - Industrial Hygiene Recognition of Hazards
4 credits

Through classroom and field experiences, provides an introduction to industrial hazards and familiarizes students with manufacturing and industrial processes in which industrial hygienists commonly work.

Prerequisite/Restriction: PUBH 3310 (may be taken concurrently)

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

PUBH 4320 - Industrial Hygiene Chemical Hazard Evaluation
3 credits

Survey of principles and methods used to evaluate industrial chemical health hazards. Practical application in a field sampling project.

Prerequisite/Restriction: PUBH 3310

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

PUBH 4330 - Industrial Hygiene Physical Hazards
3 credits

Through lectures and labs, covers the potential health effects, methods of exposure evaluation, and principles of control of noise, vibration, heat and cold, and nonionizing and ionizing radiation hazards that can occur in the workplace.

Prerequisite/Restriction: PUBH 3310 or PUBH 4310

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

PUBH 4380 - Industrial Hygiene Internship
3-6 credits

Field experience in the practice of industrial hygiene. Participation in an active program serving employees in either the private or public sector.

Prerequisite/Restriction: PUBH 4300, PUBH 4320, and
PUBH 4330

Repeatable for credit. Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $400.00

PUBH 4410 - Industrial Safety
3 credits

Through lectures, demonstrations, and hands-on activities, covers recognition and control of industrial safety hazards (including power tools, fire, electricity, excavations, confined spaces, and falls), material handling, process safety, protective equipment, safety promotion and training, and standards and programs.

Semester(s) Traditionally Offered: Spring

PUBH 4850 - Special Topics in Public Health
1-3 credits

Prerequisite/Restriction: Junior standing in public health
Repeatable for credit. Semester(s) Traditionally Offered: Fall, Spring, Summer

PUBH 5000 - Public Health Seminar
1 credit

Participant seminar on current problems in public health.
Repeatable for credit. Semester(s) Traditionally Offered: Spring

PUBH 5330 - Industrial Hygiene Chemical Hazard Control (QI)
QI Quantitative Intensive
3 credits

Covers methods to control chemical occupational health hazards, with an emphasis on the function, design, and management of local exhaust ventilation.
Prerequisite/Restriction: PUBH 4310, MATH 1210
Semester(s) Traditionally Offered: Fall
Course Fee: $25.00

PUBH 5340 - Industrial Hygiene and Safety Programs
2 credits

Provides students with the foundation to administer and manage occupational health and safety programs commonly encountered in the workplace.
Prerequisite/Restriction: PUBH 4320 and PUBH 4330
Semester(s) Traditionally Offered: Spring

PUBH 5400 - Environmental Toxicology
3 credits

Presents an in-depth survey of toxic chemicals present in the environment, environmental factors impacting fate of chemicals, potential biological effects associated with chemical exposures, and methods of reducing associated risks.
Prerequisite/Restriction: CHEM 1220 and BIOL 1620
Cross-listed as: ADVS 5400/ADVS 6400 and BIOL 5400/BIOL 6400 and PUBH 6400
Semester(s) Traditionally Offered: Spring

PUBH 5500 - Public Health Management (CI)
CI Communications Intensive
2 credits

Presentation of basic organizational and financial management tools that students will utilize in written and oral reports on an educational, environmental, or occupational health problem of their choice.
Prerequisite/Restriction: PUBH 4000 or PUBH 4380 or instructor permission
Semester(s) Traditionally Offered: Fall, Spring

PUBH 5670 - Hazardous Chemicals Handling and Safety
2 credits

Provides students with necessary skills and knowledge for working safely in areas associated with hazardous chemicals. Topics covered include: regulations, exposure routes, toxicology, chemical and physical hazards, personal protective equipment, sampling, monitoring, decontamination, and emergency response procedures.
Prerequisite/Restriction: CHEM 1210
Cross-listed as: CEE 5670
Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

PUBH 5730 - Environmental Chemistry of Organic Contaminants
3 credits

Provides students with understanding of methods used in analysis of environmental samples for organic contaminants. Examines various properties and processes determining the fate of organic contaminants in the environment.

Prerequisite/Restriction: Grades of C- or better in CHEM 1210 and CHEM 1215

Cross-listed as: PUBH 6730/CEE 6730 and CEE 5730

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00

PUBH 5790 - Accident and Emergency Management
3 credits

Introduction to fundamentals of accident, hazard, and emergency management. Topics include legislation; chemical safety fundamentals; fire, explosion, and spill fundamentals; contaminant air transport fundamentals; hazard and risk assessment; dispersion applications; and hazard and risk management applications.

Prerequisite/Restriction: CHEM 1220

Cross-listed as: CEE 5790

Semester(s) Traditionally Offered: Spring

PUBH 6400 - Environmental Toxicology
3 credits

Presents in-depth survey of toxic chemicals present in the environment, environmental factors impacting fate of chemicals, potential biological effects associated with chemical exposures, and methods of reducing associated risks.

Prerequisite/Restriction: CHEM 1220 and BIOL 1620

Cross-listed as: PUBH 5400 and ADVS 6400/ADVS 5400 and BIOL 6400/BIOL 5400.

Semester(s) Traditionally Offered: Spring

PUBH 6730 - Environmental Chemistry of Organic Contaminants
3 credits

Provides students with understanding of methods used in analysis of environmental samples for organic contaminants. Examines various properties and processes determining the fate of organic contaminants in the environment. Taught first half of fall semester.

Prerequisite/Restriction: Grades of C- or better in CHEM 1210 and CHEM 1215

Cross-listed as: CEE 5730/PUBH 5730 and CEE 6730

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00

Rehabilitation Counseling

REH 1010 - Disability and Society (BSS)
BSS Breadth Social Sciences
3 credits

Discussion of definitions and types of disabilities, ethical issues, society's prejudice and discrimination against people with disabilities, and the individual's adjustment to the disability experience. Disability as a natural part of life.

Cross-listed as: SPED 1010.

Semester(s) Traditionally Offered: Fall, Spring

REH 6100 - Introduction to the Profession of Rehabilitation Counseling
2 credits

Overview of history, philosophy, and legal basis of rehabilitation programs, both public and private. Independent living programs. Roles of the rehabilitation counselor and the process of rehabilitation. Skill development including literature use, writing, and professional organizations.

Semester(s) Traditionally Offered: Fall

REH 6110 - Medical Aspects of Disability
3 credits

Overview of basic medical issues affecting employment and independent living for persons with disabilities.
Explores basic anatomy and systems, as well as disorders and diseases of these systems. Covers medical terminology applicable to rehabilitation counseling.

**Semester(s) Traditionally Offered:** Fall

**REH 6120 - Psychosocial Aspects of Disability**
3 credits

Explores psychological and sociological aspects of disabilities, including adjustment factors in living with disabilities (i.e., individual, family, sexuality, other service providers, etc.). Examines societal attitudes, women's issues, and deaf culture issues. Includes group counseling applications for persons with disabilities.

**Semester(s) Traditionally Offered:** Summer

**REH 6130 - Rehabilitation Counseling Skill Development**
3 credits

Utilizes role playing of simulated interviews and rehabilitation counseling sessions to develop the basic skills necessary to function as a human service helper.

**Prerequisite/Restriction:** Instructor permission

**Corequisite:** REH 6140.

**Semester(s) Traditionally Offered:** Summer

**REH 6140 - Practicum in Rehabilitation**
1-3 credits

Under faculty supervision, students receive minimum of 100 hours of firsthand experience working with persons with disabilities in rehabilitation agency or facility. Must be taken the first time concurrently with REH 6130. With faculty approval, may be repeated for credit.

**Prerequisite/Restriction:** Instructor permission

**Repeatable for credit.**

**Pass/Fail only.**

**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**REH 6150 - Rehabilitation Services and Resources**
3 credits

Coordination of community resources, individual assessment information, ethical issues, eligibility determination, and development of individualized rehabilitation programs and independent living plans. Time, fiscal, and caseload management skills for rehabilitation professionals. Emphasizes client choice in rehabilitation planning.

**Semester(s) Traditionally Offered:** Spring

**REH 6160 - Job Analysis, Development, and Placement for Persons with Disabilities**
3 credits

Applies career development theories to job placement. Presents job placement factors resulting in employment for persons with disabilities, including job analysis, job development and retention, advocacy, assistive technology, ADA, occupational information systems, and labor market analysis.

**Semester(s) Traditionally Offered:** Spring

**REH 6170 - Internship in Rehabilitation Counseling**
3-12 credits

Direct supervised provision of rehabilitation services to persons with disabilities in a community facility or agency. Total of 300 hours of direct service required for each 6 semester credits. Repeatable for up to 12 credits.

**Prerequisite/Restriction:** Instructor permission

**Repeatable for credit.**

**Pass/Fail only.**

**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**REH 6180 - Rehabilitation of Persons with Severe Mental Illness**
2 credits

Overview of rehabilitation of persons with severe mental illness, including psychopharmacology, housing, case management, job placement, diagnosis (DSM IV), and social learning programs. Includes information on rehabilitation of persons experiencing substance abuse, dual diagnoses, and learning disorders.

**Semester(s) Traditionally Offered:** Spring

**REH 6190 - Introduction to Assessment in Rehabilitation**
2 credits

Addresses vocational assessment for persons with disabilities. Includes overview of traditional vocational
assessment, but focuses on contemporary methodology developed for individuals with severe disabilities. Discussion of functional assessment, including client choice and ecological assessment issues.

Semester(s) Traditionally Offered: Fall

REH 6200 - Theories of Counseling Applied to Persons with Disabilities
3 credits

Introduction to established counseling theories and their implications for providing services to persons with disabilities. Discussion of individual and group counseling paradigms. Emphasizes development of students' individual counseling philosophies.

Semester(s) Traditionally Offered: Fall

REH 6210 - Advanced Assessment in Rehabilitation
2 credits

Introduction to vocational evaluation principles and their application in using commercially available vocational evaluation systems. Actual practice with the systems (including integrated report writing) in the rehabilitation services clinic.

Semester(s) Traditionally Offered: Summer
Course Fee: $10.00

REH 6220 - Culturally Valid Rehabilitation Practices
3 credits

Analysis of the effect of cultural/ethnic/racial/linguistic background in the rehabilitation counseling setting, including acceptance/perception of disability, and successful application, process, and rehabilitation outcome. Practice applications include provision of culturally sensitive counseling, vocational evaluation, and job placement.

Semester(s) Traditionally Offered: Summer

REH 6230 - Introduction to Rehabilitation Research
3 credits

Provides introduction to research methods in rehabilitation and disability studies, including the various types of research designs and the use of statistical methods. Introduces students to empirical research journals in rehabilitation.

Semester(s) Traditionally Offered: Spring

REH 6240 - Ethical Decision-Making in Counseling
2 credits

Ethical standards and decision-making, current issues, and multicultural considerations concerning counseling, with emphasis on professional practice. Discussion of competency areas including professional identity, social and cultural diversity, counselor roles in social justice, advocacy, conflict resolution, and technological strategies.

Semester(s) Traditionally Offered: Spring

REH 6250 - Group Counseling Techniques and Theories in Rehabilitation Counseling
3 credits

Introduction to group counseling, including theory and practice specific to persons with disabilities. Students will participate in small and large group sessions while learning about group formation, significant stages of the group process, and ethical/legal issues related to group counseling.

Semester(s) Traditionally Offered: Summer

REH 6260 - Human Growth and Development in Rehabilitation
3 credits

Overview of major developmental theories and the way in which these theories relate to various types of disabilities with differing times of onset. Explores issues faced by individuals with disabilities at each of the life stages, as well as methods for providing effective and appropriate support.

Semester(s) Traditionally Offered: Fall

REH 6320 - The Diagnostic and Statistical Manual and Mental Health Assessment in Counseling
2 credits
Provides an in-depth exploration of the process of assessing mental health using the Diagnostic and Statistical Manual, including etiology, diagnostic criteria and process, disorder subtypes, and associated features and disorders. Training is provided in the use of the DSM by practicing counselors.

Semester(s) Traditionally Offered: Fall

REH 6350 - Treatment Approaches for Addiction Disorders
2 credits

Covers the theory and practice of a variety of treatment modalities and settings for addiction disorders. Explores interdisciplinary treatment planning, evidence-based practices, and family, individual, and group intervention strategies. Attention is given to holistic intervention strategies and recovery supports.

Semester(s) Traditionally Offered: Spring

REH 6510 - Transition to Supported/Competitive Employment
2 credits

This course provides students with knowledge to understand and analyze evidence-based transition to employment for individuals with disabilities.

Corequisite: REH 6520 or SPED 6520

Cross-listed as: SPED 6510

Semester(s) Traditionally Offered: Spring, Even Years

REH 6520 - Transition Practicum I: Services Leading to Supported/Competitive Employment
2 credits

This practicum (i.e., field based applied course) provides students with competencies necessary to carry out evidence-based transition services leading to post-secondary education of individuals with disabilities.

Corequisite: REH 6530 or SPED 6530

Cross-listed as: SPED 6540

Semester(s) Traditionally Offered: Fall, Even Years

REH 6540 - Transition Practicum II: Services Leading to Post-Secondary Education
2 credits

Students with knowledge to understand and analyze evidence based transition to post-secondary education for individuals with disabilities.

Corequisite: REH 6530 or SPED 6530

Semester(s) Traditionally Offered: Fall, Even Years

REH 6560 - Special Topics in Rehabilitation
1-6 credits

Opportunity to provide specialized training in topics unique to rehabilitation. Topics cover many disability, employment, and independent-living issues.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

REH 6900 - Independent Study
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

REH 6910 - Independent Research
1-3 credits

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
REH 6970 - Thesis
1-6 credits
Repeatable for credit.
REH 6990 - Continuing Graduate Advisement
1-3 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
REH 7040 - Literature Review
1-3 credits
Guided experience in conducting a comprehensive and systematic review of literature on a topic related to rehabilitation counseling.
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring
REH 7060 - Research Internship
1-3 credits
Guided experience in conducting rehabilitation/disability research.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
REH 7070 - REH Grant Writing Internship
1-3 credits
Guided experience in preparation of grant proposals.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Pass/Fail only.
REH 7080 - Writing for Publication
1-3 credits
In-depth, individualized experience in which student chooses a topic area and writes a scholarly manuscript, which is submitted for publication in an academic journal.
Semester(s) Traditionally Offered: Fall, Spring, Summer
REH 7090 - Professional Conference Presentation
1-3 credits
Individualized, supervised experience in which student makes professional conference presentation. Emphasizes value of intellectual discourse with one’s colleagues on a topic of interest, chosen by the student.
Semester(s) Traditionally Offered: Fall, Spring, Summer
REH 7330 - Supervision Internship
1-3 credits
Guided experience in supervising master's students during practica and internship, as well as during other clinical experiences.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
REH 7340 - College Teaching Internship
1-3 credits
Guided experience in teaching university courses.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
REH 7710 - Disability Studies in the Humanities
2 credits:
This course is an introduction to disability as represented in the arts and humanities.
Semester(s) Traditionally Offered: Spring: Odd Years
REH 7720 - The Emerging Role of Disability Studies in Academe
2 credits:
The purpose of this course is to explore the domain of Disability Studies, to understand the limitations of traditional presentations of disability, the epistemological foundations in society, and the place of Disability in civic and academic cultures.
Semester(s) Traditionally Offered: Spring, Odd Years

REH 7730 - Disability Law and Policy
3 credits

Examines disability issues as addressed through legislative process. Analyzes key statutes and case law, reflecting historical and current landmarks in disability policy, in the context of the disability rights movement, societal perceptions, and barriers to implementation.

Semester(s) Traditionally Offered: Spring

REH 7740 - Sociopolitical Construction of Disability
3 credits

Examines disability experience from four different perspectives: biomedical, environmental, functional, and sociopolitical. Also explores society's response to disability. Discusses history and perspective of the Disability Rights movement.

Semester(s) Traditionally Offered: Fall

REH 7750 - Social and Legal Context of Disability
3 credits

This course places the disability experience in its social and legal context by exploring models of disabilities. Key statutes and case law reflecting historical landmarks in disability law and policy will be discussed as the codification of societal values.

Cross-listed as: SPED 7750

Semester(s) Traditionally Offered: Fall, Even Years

REH 7760 - Clinical Supervision
3 credits

Clinical supervision is a unique intervention process that is focused on the professional identity and skill development of the supervisee. This course will focus on developing a quality supervisory working alliance, conceptualization skills, evaluation, teaching and consultation skills, and developing skills in both group and individual supervision modalities.

Semester(s) Traditionally Offered: Spring, Odd Years

REH 7770 - College Teaching
3 credits

The purpose of this course is to gain an understanding of the college course development and delivery. The topics of learning theories, course design, student evaluation, course evaluation, and the use of technology will be covered.

Semester(s) Traditionally Offered: Spring, Odd Years

REH 7820 - Special Topics in Rehabilitation Counseling
1-3 credits

Critical analysis of a variety of rehabilitation counseling issues and trends. Empirical and theoretical information presented in a seminar format.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

REH 7840 - Preliminary Examinations
1 credit

Preparation for the examination and successful completion of the written examination. Students analyze published rehabilitation research and demonstrate their ability to integrate knowledge of theoretical and empirical issues, providing an early assessment of doctoral-level competencies.

Semester(s) Traditionally Offered: Summer

REH 7900 - Independent Study
1-3 credits

Individual discussion and intensive study of particular problem or area.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

REH 7910 - Independent Research
1-3 credits

Students outline and conduct research under supervision.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

REH 7930 - Internship in Rehabilitation Counseling
1-12 credits

Professional, supervised internship experience for doctoral students.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

REH 7940 - Journal Reading Group
1-2 credits

Seminar discussion of recent empirical and theoretical articles concerning rehabilitation counseling, disability policy, and related fields.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

REH 7970 - Dissertation
1-15 credits

Variable credit for dissertation project associated with doctoral program in disability disciplines.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

REH 7990 - Continuing Graduate Advisement
1-9 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Religious Studies

RELS 1010 - Introduction to Religious Studies (BHU)
BHU Breadth Humanities
3 credits

Historical and comparative survey of the principal beliefs and practices of the world's religions, as well as an exploration of their interplay with the cultures in which they exist. Following general introduction to the study of religion, course includes units on Hinduism, Buddhism, Chinese and Japanese religions, Islam, Judaism, Christianity, and the “new religions” in America.

RELS 2050 - The Historical Jesus in a First Century Jewish Context
3

This course exposes students to the ways in which scholars use historical data to understand who Jesus was and how his views and teaching relate to his original social and religious context.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

RELS 2060 - Religion & Science: Examining a Complex History of Interaction
3

This course is a historical study of the relationship between religion and science. We explore evolving definitions of science and religion, important figures during the early modern period, and the emergence of modern science and religion in the 19th-20th centuries.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

RELS 3010 - Introduction to Buddhism
3 credits

General survey of historical development, basic doctrine, and practice of Hinayana and Mahayana Buddhism.

Cross-listed as: HIST 3010.

RELS 3020 - Introduction to Hinduism (DHA)
DHA
3 credits

Surveys history, doctrinal developments, and sociological concerns of Hinduism from the Vedic Period through the Modern Period. Focuses primarily on Hindu religious thought as applied to Hindu life through various modes of religious action.

Cross-listed as: HIST 3020.

RELS 3030 - Introduction to Islam (DHA)
DHA Depth Humanities and Creative Arts
This course will focus on understanding Islam through the examination of what Muslim jurists, theologians, exegetes and traditionalists think of their own traditions. This course will focus on the core beliefs, practices, scriptures and sentiments that have defined historically Muslim communities. In addition, the course aims to examine the spiritual dimensions, the theological discourses and the legal maxims of the Muslim traditions.

Cross-listed as: ARBC 3030 and HIST 3030

RELS 3040 - Religion, Evil and Human Suffering
3 credits

Considers religion’s contrasting understandings of and responses to the world’s most perpetual and pressing problem: evil and human suffering.

RELS 3050 - Introduction to Christianity (DHA)
DHA Depth Humanities and Creative Arts
3 credits

This course is intended to be a general survey of the historical development, basic doctrine and practice of Christianity.

RELS 3060 - Introduction to Judaism
3 credits

This course provides a multidisciplinary survey of Judaism, from its Biblical origins to modern times, including an introduction to its sacred texts, religious practices, and social dimensions.

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring 2015

RELS 3090 - Introduction to Shamanism: Shamanic Healing for Personal and Planetary Transformation
3 credits

Course provides introduction to methods utilized by shamanic healers as well as background information on indigenous views of relationships between matter, mind and spirit to help students understand how shamanic healing is used in multiple settings.

Cross-listed as: ANTH 3090

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $25.00

RELS 3120 - Early Modern Philosophy (CI)
CI Communications Intensive
3 credits

Philosophers and philosophical disputes in Western Europe from 1400-1750. Figures and topics may include: Bacon, Hobbes, Descartes, Locke, Hume, nominalism, empiricism, rationalism, religion, politics, and morals.

RELS 3150 - Kant and the Nineteenth Century (CI)
CI Communications Intensive
3 credits

Study of Kant and nineteenth-century European philosophers, which may include, Hegel, Kierkegaard, Mill, Marx, Schopenhauer, and Nietzsche.

Prerequisite/Restriction: PHIL 1000 or PHIL 3120/RELS 3120 or instructor permission

RELS 3160 - Anthropology of Religion (DSS)
DSS Depth Social Sciences
3 credits


Cross-listed as: ANTH 3160

Semester(s) Traditionally Offered: Fall

RELS 3170 - Descent and Return: Ancient Views of Hades and the Afterlife
3

This course will focus on classical views of Hades and the afterlife, paying special attention to the gods and heroes, such as Persephone, Odysseus, Orpheus, and Aeneas, who were able to make the journey down into Hades while alive and then return back to the upper world. We will also discuss the historical background to the works and related religious and literary themes.

Cross-listed as: CLAS 3170/HIST 3170

Effective Term
Spring 2017
RELS 3210 - Classical Mythology
3 credits
Introduces major myths of the Classical world. Explores how these myths serve as keys to understanding the documents and arts of Classical civilization.

Cross-listed as: ARTH 3210, CLAS 3210 and HIST 3210

Semester(s) Traditionally Offered: Fall, Spring

RELS 3220 - Medieval European Civilization, 500-1500 (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits
Provides students with overview of major themes in medieval European history from 500 to 1500 A.D. Also introduces major historiographical problems related to this period. Writing intensive and document based.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Cross-listed as: HIST 3220

RELS 3270 - The Crusades (DHA)
DHA Depth Humanities and Creative Arts
3 credits
This course follows the evolution of the concept of holy war in Europe, western Asia and North Africa from the European campaigns to Jerusalem in the 1000s CE to the expansion of the Muscovite and Ottoman empires in the 1500s.

Cross-listed as: HIST 3270

Semester(s) Traditionally Offered: Fall

RELS 3420 - Gods and Goddesses of India
3 credits
This course explores the living traditions dedicated to the goddesses and gods of Hinduism. We will examine themes such as dance, drama, sculpture, pilgrimage, possession, and the worship of river goddesses.

Semester(s) Traditionally Offered: Spring

Effective Term
Spring

RELS 3470 - Religion and Politics in South Asia
3 credits
This course offers an introduction to South Asian religious-political history combined with an examination of how religion and politics intersect in India and Pakistan, with a focus on the 19th and 20th centuries.

Cross-listed as: HIST 3470

Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Spring

RELS 3482 - Ancient China to 1800
3 credits
This course traces the emergence of political states within China and their eventual unification into a single empire, an institution that persisted for millennia. The development of literature, religion, philosophy, and material culture in Chinese society all played a role in shaping the character of what became China today.

Cross-listed as: HIST 3482

RELS 3510 - Islamic Visual Cultures (CI/DHA)
Depth Humanities
3 credits
Explores the emergence and development of Islamic visual cultures in Asia and around the Mediterranean between 622 and 1250.

Semester(s) Traditionally Offered: Spring, Alternate Years
Effective Term
Spring

RELS 3710 - Topics in Folklore (CI)
CI Communications Intensive
3 credits
Issues, problems, and methodologies in folklore study. Focus and instructor variable.

Cross-listed as: ENGL 3710 and HIST 3710.
Repeatable
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2017

RELS 3820 - Hindu Sacred Texts (CI)
CI Communications Intensive
3 credits

An intensive study of two influential sacred texts from the Hindu traditions—the Upanisads and Bhagavad Gita. The course addresses key philosophical issues raised in these texts, including the problem of evil, free will, and the nature of God. We will use several translations, traditional commentaries, and modern expositions.

Prerequisite/Restriction: RELS 1010 or RELS 3020

RELS 3990 - Theory and Method in Religious Studies
3 credits

Pre-major course helping students to understand the discipline of religious studies. Explores the questions asked by religious studies, as well as the methods used to answer these questions. Helps students gain an understanding of the various approaches to the study of religion and the history of attempts to understand religion in cultural contexts.

Prerequisite/Restriction: RELS 1010

Effective Term
Spring 2017

RELS 4010 - Yoga Theory
2 credits

This course introduces the students to the study of yoga philosophy through major Hindu texts such as the Bhagavad Gita, the Yoga Sutras of Patanjali and The Upanishads.

Effective Term
Fall 2016

RELS 4230 - The History of Christianity in the West (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits

Introduces students to history of Christian spirituality, asking how Christianity has been lived and how it has shaped lives over two thousand years. Uses original sources to introduce both the history and the historiographical problems surrounding the Christian religion. Writing intensive.

Cross-listed as: HIST 4230

RELS 4350 - Greek Intellectual History
3 credits

Through reading and discussing Greek literature and philosophy, attempts to understand the major Greek philosophers, in the context of the major literary authors of the period and contemporary political developments.

Prerequisite/Restriction: CLAS 3210

Cross-listed as: HIST 4350

Semester(s) Traditionally Offered: Spring

RELS 4520 - Editing Internship
2 credits

Training in requirements of editorial work for scholarly journals and books. Emphasizes editing techniques and mechanics of editorial work. Can be repeated for credit only once.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

RELS 4560 - Women in Islam (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Within a religious and historical framework, it explores topics such as gender and social roles, women’s rights, veiling and dress, female circumcisions, arranged marriages, education, employment, parenting, honor killings, and politics in the lives of Islamic women. A basic knowledge of Islam is recommended before enrolling.

Cross-listed as: HIST 4560

RELS 4565 - Early Islamic History (DHA)
DHA Depth Humanities and Creative Arts
3 credits

This course focuses on the history of the Islamic world to the 1400s, beginning in sixth-century Arabia and ending with the conversion of the western Mongol states to
Islam and the rise of the Ottoman Empire.

Cross-listed as: HIST 4565

Semester(s) Traditionally Offered: Fall

RELS 4566 - Modern Islamic Thought
3

This course introduces students to the history of the Islamic world in the modern era (1500s to 2000s) through the lenses of intellectual and legal history. This was a turbulent period for Muslim societies. Within the space of a few centuries, Muslims went from being the rulers of powerful empires to being under the rule or influence of Europe's colonial powers, and, finally, forming or being divided into post-colonial nation states. These processes have shaped the way that Muslim leaders, legal specialists, and intellectuals have approached the question of what it means to be Muslim, how an ideal Muslim society should look, and how Muslims should relate to one another and to the non-Muslim societies they encounter in an increasingly globalized world.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

RELS 4730 - History of Black America (CI)
CI Communications Intensive
3 credits

Study of African-American experience from slavery to freedom, as well as the difficult quest for democracy and equality in contemporary America. Includes both creative and research writing components.

Cross-listed as: HIST 4730

Semester(s) Traditionally Offered: Spring

RELS 4795 - Biography, Autobiography and Joseph Smith
3 credits

Examines the life and thought of one of America's most complex and creative religious figures.

Cross-listed as: HIST 4795.

RELS 4910 - Special Topics in Religious Studies
1-3 credits

Examination of special areas and themes in religious studies.

Repeatable for credit.

RELS 4930 - Directed Readings
1-3 credits

Directed readings in any special religious studies field. For each credit granted, a minimum of four books must be read.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

RELS 4990 - Religious Studies Capstone
3 credits

Students write a substantial research paper dealing with a religious studies topic and demonstrating their command of the research methods, documentation, and style of professional communications used in the discipline.

Semester(s) Traditionally Offered: Fall, Spring

RELS 5740 - Art and Religion: Topics in Sacred Art
3 credits

Discussion-based course investigating relationships between religion and the arts. May focus on any period of history or region of the world, depending on scholarly interests of instructor.

Cross-listed as: ARTH 5740.

Semester(s) Traditionally Offered: Spring
Russian
RUSS 1010 - Russian First Year I
4 credits
Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.
Prerequisite/Restriction: Not open to those with more than one year high school Russian or equivalent
Course Fee: $24.00

RUSS 1020 - Russian First Year II
4 credits
Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.
Prerequisite/Restriction: RUSS 1010, or not more than three years of high school Russian
Course Fee: $24.00

RUSS 2010 - Russian Second Year I
4 credits
Further development of first-year competencies with emphasis on language structure, vocabulary expansion, reading, writing, and conversation in the context of culture.
Prerequisite/Restriction: RUSS 1020 or two or more years of high school Russian

RUSS 2020 - Russian Second Year II
4 credits
Further development of first-year competencies with emphasis on language structure, vocabulary expansion, reading, writing, and conversation in the context of culture.
Prerequisite/Restriction: RUSS 2010 or three or more years of high school Russian
Course Fee: $24.00

RUSS 2880 - Individual Readings
1-4 credits
Individual study of selected readings in Russian.
Prerequisite/Restriction: Instructor permission
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

RUSS 2988 - Special Problems
1-3 credits
An elective course intended for advanced students. Students will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Russian culture will also be emphasized. Significant reading and work outside of class are required.
Repeatable for credit
Campus: USU Eastern only

RUSS 3040 - Advanced Russian Grammar and Composition
3 credits
Detailed presentation of Russian grammar. Class discussions and work on oral and written assignments.
Prerequisite/Restriction: RUSS 2020 or equivalent
Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

RUSS 3050 - Advanced Russian Grammar and Composition
3 credits
Detailed presentation of Russian grammar. Class discussions and work on oral and written assignments.
Prerequisite/Restriction: RUSS 2020 or equivalent
Semester(s) Traditionally Offered: Spring
Course Fee: $24.00

RUSS 3300 - Contemporary Russian Language and Culture (DHA)
DHA Depth Humanities and Creative Arts
3 credits
Reading and discussion of contemporary popular, literary, and scientific materials in Russian. Also cultural and historical considerations of today’s Russia.
Prerequisite/Restriction: RUSS 2020 or equivalent

Semester(s) Traditionally Offered: Fall

RUSS 3510 - Business Russian (CI)
CI Communications Intensive
3 credits

Study of current Russian business and commercial terminology and practices. Development of communication skills for international Russian business purposes.

Prerequisite/Restriction: RUSS 2020 or equivalent

RUSS 3540 - Russian Translation for Science, Business, and Culture
3 credits

Familiarization with approaches to translation, special grammatical structures, specialized vocabulary, and reference materials and aids. Practical exercises.

Prerequisite/Restriction: RUSS 2020 or equivalent

RUSS 4880 - Individual Readings
1-4 credits

Readings in technical, scientific, or literary Russian.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

RUSS 4920 - Russian Language Tutoring
1 credit

Allows students to develop tutoring skills by assisting professors in lower-division courses or fulfilling instructional duties for a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated to a maximum of 3 credits.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

Secondary Education

SCED 1000 - Volunteer Experience
1 credit

Optional course providing orientation to agencies coordinating volunteer experiences in the community; such experiences are part of standards for admission to secondary teacher education.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SCED 3100 - Motivation and Classroom Management
3 credits

Addresses two questions: (1) What diverse traits, talents, attitudes, and experiences do pre-adolescent and adolescent students bring to the middle school, junior high school, and high school environment? and (2) In light of these diverse traits, talents, attitudes, and experiences, how should teachers work with students to build cooperative classroom communities where students are motivated to engage in productive learning activities? A grade of C or better in this course is required for advancement to student teaching.

Prerequisite/Restriction: Program Admission

Semester(s) Traditionally Offered: Fall, Spring

Effective Term
Fall 2016

SCED 3210 - Educational and Multicultural Foundations (DSS/CI)
DSS/CI Depth Social Sciences and Communications Intensive
3 credits

Provides preservice teachers with the opportunity to critically examine the political, economic, and educational policies influencing students’ access to equitable educational experiences. Examines historical and philosophical foundations influencing the nature of multicultural education in our democratic society, how personal biases can influence instructional practices, and development of multicultural curriculum relevant to specific content areas.

Prerequisite/Restriction: Program Admission

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $25.00
SCED 3300 - Clinical Experience I
1 credit

First clinical practicum (30 hours minimum) in middle and secondary schools, arranged by instructors. Required at level 1.

Prerequisite/Restriction: Admission into Teacher Education

Pass/Fail only
 Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

SCED 3400 - Teaching Science I
3 credits

Laboratory practicum focused on design, practice, and performance of secondary science demonstrations and investigative lab activities. Must be taken at Level 1. A grade of C or better is required in this course for advancement to student teaching.

Prerequisite/Restriction: Program admission

Semester(s) Traditionally Offered: Fall
Course Fee: $25.00
Effective Term
Fall 2016

SCED 3500 - Teaching Social Studies
3 credits

Methods course focused on social studies curriculum and instruction for preservice secondary teachers with teaching majors or minors in history or any of the social sciences. Should be taken at Level 1. A grade of C or better is required in this course for advancement to student teaching.

Prerequisite/Restriction: Program admission

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

SCED 3600 - Teaching English Language Arts
3

Methods course focused on English curriculum and instruction for preservice secondary teachers with teaching majors or minors in English. May be taken at either Level 1 or Level 2. A grade of C or better is required in this course for advancement to student teaching.

Prerequisite/Restriction: Program admission

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

SCED 4200 - Language, Literacy and Learning in the Content Areas (CI)
3 credits

Examines how theories and research about language, learning and literacy inform the teaching practices required to motivate and enable secondary students to comprehend, interpret, analyze, evaluate, integrate and use domain-specific and cross-curricular concepts. A grade of C or better in this course is required for advancement to student teaching.

Prerequisite/Restriction: Program admission and completion of Level 1

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

SCED 4210 - Assessment and Curriculum Design
3 credits

Addresses two questions: (1) How do teachers monitor student progress, evaluate and communicate their achievement, and interpret summative test results? (2) How do teachers design curriculum that meets student learning needs and incorporates effective, ongoing assessment? A grade of C or better is required in this course for advancement to student teaching.

Prerequisite/Restriction: Program admission and completion of Level 1

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2016

SCED 4300 - Clinical Experience II
1 credit

Second clinical practicum (30 hours minimum) in middle
Secondary Education

SCED 4400 - Teaching Science II
3 credits

Methods course focused on science curriculum and instruction for preservice secondary teachers with teaching majors in any of the science areas. Must be taken at Level 2. A grade of C or better is required in this course for advancement to student teaching.

Prerequisite/Restriction: Program admission, completion of Level 1, and SCED 3400

Semester(s) Traditionally Offered: Spring
Course Fee: $25.00
Effective Term
Fall 2016

SCED 4420 - Multiple Talent Approach to Thinking
2 credits

Explores one model for the teaching of creative and critical thinking embedded in regular curricula. Includes practical application requirements.

Cross-listed as: ELED 4420.

Semester(s) Traditionally Offered: As Needed

SCED 4900 - Senior Thesis
1-6 credits

Student-initiated research project under faculty supervision. Requires prior approval of department head, honors committee, and instructor.

Prerequisite/Restriction: Approval of department head

Semester(s) Traditionally Offered: Fall, Spring

SCED 5400 - Laboratory Practicum
3 credits

Laboratory practicum for in-service teachers, focused on design, practice, and performance of secondary science demonstrations and investigative lab activities.

Semester(s) Traditionally Offered: Fall, Spring

SCED 5500 - Student Teaching Seminar
2 credits

Capstone seminar focused upon student teaching issues, professional development, and principles of effective instruction, emphasizing reflective teaching.

Prerequisite/Restriction: Level 1 and Level 2 completion, and student teaching placement

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

SCED 5630 - Student Teaching in Secondary Schools
10 credits

Thirteen-week minimum culminating practicum in which students assume full-time teaching responsibilities under direction of cooperating teachers in major and minor fields.

Prerequisite/Restriction: Level 1 and Level 2 completion, and student teaching placement

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $300.00

SCED 5700 - Modified Student Teaching
2-5 credits

Culminating practicum experience for students seeking dual licensure, earning half of their student teaching credit in a secondary school setting.

Prerequisite/Restriction: Program admission and completion of Level 1 and Level 2

Repeatable

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $300.00

Effective Term
Spring

SCED 5800 - Secondary School Internship
2-6 credits

Advanced practical teaching experience under combined public school and University supervision. Offered only by arrangement with Director of Field Experiences.

Prerequisite/Restriction: Level 1 and Level 2 completion, and special recommendation

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $300.00

SCED 5810 - Social Studies Teaching Methods
3 credits

Guides students in developing a philosophical rationale for teaching social studies. Includes strategies for integrating best practices in and across the curriculum.

Semester(s) Traditionally Offered: Spring

SCED 5820 - Science Teaching Methods
3 credits

Guides students in understanding and identifying attributes of teaching and learning science that are critical to effective instruction. Focuses on developing a safe science learning environment.

Semester(s) Traditionally Offered: Spring

SCED 5830 - English Teaching Methods
3 credits

Designed to give in-service ARL teachers the theoretical grounding for making decisions about all aspects of the secondary English curriculum, including: reading, writing, viewing, listening, and speaking. Examines instruction and assessment.

Semester(s) Traditionally Offered: Fall

SCED 5900 - Independent Study
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

SCED 6270 - Introduction to Methods, Planning, Assessment, and Technology
4 credits

As one of the pedagogical knowledge requirements for the Alternative Route to Secondary Licensure, this course introduces new teachers to effective teaching methods. Teachers learn how to integrate research-based teaching methods, formal and informal assessments, and technology into their lessons.

Semester(s) Traditionally Offered: Spring

SCED 6305 - Graduate Clinical Experience
1 credit

Clinical experience (30 hours minimum) in middle school or high school. Arranged by the instructor and the Office of Field Experiences.

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

SCED 6555 - Practicum Improvement in Instruction/Seminar
1 credit

To meet the requirements of the Alternative Route to Secondary Licensure program, students should take this practicum during fall semester and then again during spring semester.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring

Social Science (USU Eastern)

SLSC 1010 - New Student Orientation
1 credit

Designed to provide incoming students with a working knowledge of the opportunities and services available to them at USU Eastern. This two-phase course will assist in the student’s transition to college and successful completion of his/her academic goals. During Phase I of orientation, instruction includes an overview of academic
regulations, graduation requirements, USU Eastern policies and procedures, the advising process, and course registration. Students are familiarized with USU Eastern resources, personnel, and functions of academic and student support services. During Phase II, students have the opportunity to interact in a social setting with student leaders, student service personnel, faculty advisors, and fellow students, as we seek to establish a connection between the student and campus community.

Campus: USU Eastern only

SLSC 1030 - International Student Orientation
1 credit

Provides first-semester students with knowledge of the services and regulations governing international students while attending USU Eastern. Aids students in their cultural transition to U.S. education and will provide particulars of complying with BCIS (Bureau of Citizenship and Immigration Service) rules and regulations governing F-1 visa holders. Includes an overview of academic regulations, graduation requirements, USU Eastern policies and procedures. Class meets daily for the first three weeks of each semester. Course is required of all new F-1 international students.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring, Summer

SLSC 1050 - College Success Skills
2 credits

Designed to increase the student’s success during the college experience. Emphasizes test-taking strategies, effective note-taking, listening skills, time management and personal issues necessary to survive college.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring, Summer

SLSC 1110 - Leadership Perspectives
1-3 credits

This course is the first course in a leadership series. The purpose of this course is to introduce students to basic concepts of leadership. Students will learn theories and principles related to leadership and learn about their own personal leadership characteristics.

Prerequisite/Restriction: Approval of the course coordinator

Campus: USU Eastern only
Effective Term
Fall 2016

SLSC 1120 - Leadership Perspectives 1120
2

This course is the second course in a leadership series. The purpose of this course is to introduce students to group leadership. Students will learn concepts and theories which will assist them in working in groups. Students will complete a final group project on a topic of their choice.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

SLSC 1130 - Leadership Perspectives 1130
2

This course is a discussion of various leadership situations, as well as how to utilize leadership skills to work with groups, lead groups, and tackle conflict in groups.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

SLSC 1140 - Leadership Perspectives 1140
2

This course is the fourth course in a leadership series. Students will complete a series of observations in which they learn about people who are different from themselves. The final project for this course will be a presentation “My Journey in Diversity” in which students discuss what they learned about themselves.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016
SLSC 1150 - College Student Affairs  
1 credit

Course is the first part of an ongoing educational, development, and training program intended to help students be successful as resident assistants and student leaders.

Campus: USU Eastern only

SLSC 1300 - Tutoring Training  
1 credit

Designed to teach tutors how to effectively provide students with quality academic assistance, while promoting independent learning. Course covers the following: tutoring policies and procedures, basic tutoring techniques, learning styles, learning disabilities, study skills techniques, and communication and active listening skills. Course will use several types of information delivery including: lectures, videos/DVD’s, and reading material.

Campus: USU Eastern only

SLSC 1800 - Leadership in Civic Engagement  
2 credits

Provides students who have been selected as a service leader an opportunity to strengthen leadership skills, work with community agencies, organize and carry out service projects, and work with and encourage students to become involved with service.

Prerequisite/Restriction: Must apply and be selected as a SUN Involvement Center Leader

Campus: USU Eastern only

Social Work

SW 1010 - Introduction to Social Welfare  
3 credits

Foundation course to facilitate development of an approach to thinking about social welfare. Explores broad common base of social work professional values, knowledge, skills, social policies, and programs.

Semester(s) Traditionally Offered: Fall, Spring

SW 2100 - Human Behavior in the Social Environment  
3 credits

Interrelatedness of social, cultural, and environmental factors that combine with biological and psychological components to mold human behavior. Relevance of these factors to generalist social work practice.

Prerequisite/Restriction: SW 1010

Semester(s) Traditionally Offered: Spring

SW 2400 - Social Work with Diverse Populations  
3 credits

Examines characteristics of various populations, including patterns, dynamics, and consequences of discrimination, economic deprivation, and oppression. Emphasis placed on empowerment of groups and individuals, as well as the accumulation of multicultural competence.

Prerequisite/Restriction: SW 1010

Semester(s) Traditionally Offered: Spring

SW 3050 - Practice I  
3 credits

Introduction of generalist social work framework as an integrative tool, with special attention shown to strengths and empowerment perspective. Individuals as targets for change.

Prerequisite/Restriction: Admission to advanced standing in social work bachelor’s program, SW 1010, SW 2100, SW 2400

Semester(s) Traditionally Offered: Fall

SW 3350 - Child Welfare  
3 credits

Developments in programs for meeting such needs of children as substitute parental care, adoptions, delinquency problems, mental retardation, and unmarried motherhood.

Prerequisite/Restriction: SW 1010, SW 2100, SW 2400

SW 3360 - Adolescents: Theories, Problems, and Issues  
3 credits
Focuses on major social problems confronting youth today: teenage pregnancy, substance abuse, unemployment, education, and mental health. Investigation of theories explaining these problems and society's efforts to resolve these problems.

Prerequisite/Restriction: SW 1010, SW 2100, SW 2400

SW 3450 - School Social Work
3 credits

Overview of social work practice in an educational setting.

Prerequisite/Restriction: SW 1010

Semester(s) Traditionally Offered: Spring

SW 3550 - Social Gerontology
3 credits

Overview of field of aging and its connection to the practice of social work.

Prerequisite/Restriction: SW 1010

Semester(s) Traditionally Offered: Spring

SW 3650 - Mental Health
3 credits

Services offered for the prevention and treatment of mental illness and the feasibility of social action programs on a community level.

Prerequisite/Restriction: SW 1010, SW 2100, SW 2400

SW 3750 - Medical Social Services
3 credits

Introduction to role of social worker in health settings. Emphasizes definition of health and disease, patient rights, and consumer participation. Examination of basic health programs, major trends in health planning, and alternate models of health delivery.

Prerequisite/Restriction: SW 1010, SW 2100, SW 2400

SW 3850 - Spirituality and Social Work
3 credits

Provides a framework of knowledge, values, skills, and experiences for spiritually sensitive social work practice.

Prerequisite/Restriction: SW 1010

Semester(s) Traditionally Offered: Fall

SW 4100 - Social Work Research (CI)
CI Communications Intensive
3 credits

Survey of qualitative and quantitative scientific methods of research in social work. Articulation of research with practice and policy.

Prerequisite/Restriction: SW 1010, SW 2100, SW 2400

Semester(s) Traditionally Offered: Fall

SW 4150 - Practice II
3 credits

Introduction to generalist social work practice at the micro level. Emphasizes study of skills from a strengths and empowerment perspective with individuals, families, and small groups. Special attention paid to ethical issues and working with diverse population.

Prerequisite/Restriction: SW 3050

Semester(s) Traditionally Offered: Spring

SW 4160 - Practice III
3 credits

Introduction to generalist social work practice at the macro level. Emphasizes study of skills from a strengths and empowerment perspective with groups, organizations, and community systems. Special attention paid to ethical issues and working with diverse populations.

Prerequisite/Restriction: SW 3050

Semester(s) Traditionally Offered: Spring

SW 4870 - Beginning Field Practicum
6 credits

Practical experience in a social service agency. Seminar integrates field work experiences and academic knowledge. Emphasizes use of self and integration of
knowledge, values, skills, and methods of practice, with special emphasis given to the code of ethics.

Prerequisite/Restriction: Instructor’s permission and by application

Repeatable for credit.
Semester(s) Traditionally Offered: Fall
Course Fee: $50.00

SW 4900 - Topical Issue Seminar
3-6 credits

Advanced seminar, designed as a forum for students from varied social science disciplines. Seminars may include issues involved in social work values and ethics, diversity, promotion of social and economic justice, and/or populations-at-risk.

Prerequisite/Restriction: SW 1010, SW 2100, SW 2400, and instructor permission

Repeatable for credit.

SW 4950 - Directed Readings
1-5 credits

Independent readings in various areas of social work: practice, policy, HBSE, research, populations-at-risk, values and ethics, social and economic justice, and diversity.

Prerequisite/Restriction: Instructor’s permission and a plan for study

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

SW 5350 - Social Welfare Policy (CI)
CI Communications Intensive
3 credits

Introduction to policy making in social welfare. Principles of social and economic justice used to analyze selected social policies and programs within a historical and contemporary context. Attention given to differential impact on at-risk populations.

Prerequisite/Restriction: SW 1010, SW 2100, SW 2400

Semester(s) Traditionally Offered: Fall

SW 5870 - Advanced Field Practicum
6 credits

Supervised social work practice and projects. Provides opportunities for advanced social work students to apply classroom learning in a field setting. Minimum of 240 hours in a social service agency required.

Prerequisite/Restriction: Instructor’s permission and SW 4870

Repeatable for credit.
Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

SW 5901 - Dimensions of Human Behavior: Person and Environment
3 credits

This foundation course is designed to address the SSW licensing needs of non-social work majors seeking employment in the social work profession. The purpose of this course is to study and understand why people behave as they do and make application of this knowledge to professional social work practice.

Semester(s) Traditionally Offered: Summer

SW 5902 - Generalist Social Work Practice
3 credits

This foundation course is designed to address the SSW licensing needs of non-social work majors seeking employment in the social work profession. This course combines readings, lectures, discussions, classroom exercises, and experiential activities to develop students’ competencies for generalist practice.

Semester(s) Traditionally Offered: Summer

SW 5903 - Social Policy and Social Change
3 credits

This foundation course is designed to address the SSW licensing needs of non-social work majors seeking employment in the social work profession. This course introduces students to social problems which are purportedly addressed by social welfare policies. Students will apply a policy analysis framework to determine the rudimentary elements of, strengths and limitations of certain social welfare policies.
Semester(s) Traditionally Offered: Summer

**SW 6000 - Principles and Philosophy of Social Work**
3 credits

Explores history, traditions, ethics, purpose, philosophy, and knowledge base of the social work profession. Introduces generalist social work problem-solving approach.

Semester(s) Traditionally Offered: Fall

**SW 6050 - HBSE I: Individuals and Families in Their Environment**
3 credits

Presents and critiques knowledge of human development from infancy to late adolescence in the context of individuals and families. Identifies relationships between theoretical frameworks and various biopsychosocial environments.

Semester(s) Traditionally Offered: Fall

**SW 6100 - Generalist Practice I: SW Practice with Individuals, Families, and Groups**
3 credits

Provides a beginning and general base of practice knowledge, values, and skills for work with individuals, families, and treatment groups in a variety of community and agency contexts.

Semester(s) Traditionally Offered: Fall

**SW 6150 - Generalist Practice II: SW Practice with Groups, Organizations, and Communities**
3 credits

Provides a beginning and general base of practice knowledge, values, and skills for work with groups, organizations, and communities.

Semester(s) Traditionally Offered: Spring

**SW 6200 - Social Work Research Methods**
3 credits

Introduction to qualitative and quantitative social work research in context of generalist problem-solving approach.

Semester(s) Traditionally Offered: Fall, Summer

**SW 6250 - HBSE II: Groups, Organizations, and Communities**
3 credits

Presents and critiques knowledge of human development in the context of groups, communities, organizations, and institutions.

Semester(s) Traditionally Offered: Spring

**SW 6300 - Social Policy Analysis**
3 credits

Foundation policy course providing comprehensive exploration of theory, history, structure, and impact of social welfare policy on individuals, families, groups, organizations, and institutions.

Semester(s) Traditionally Offered: Spring

**SW 6400 - Field Practicum I**
4 credits

Provides supervised educational and practical social work experience with specified educational objectives in a human-service organization.

Semester(s) Traditionally Offered: Fall

**SW 6425 - Foundation Optional Practicum**
1-5 credits

Allows students to complete an optional or extended foundation practicum experience. Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

**SW 6450 - Field Practicum II**
5 credits

Continuation of SW 6400, providing supervised educational and practical social work experience with specified educational objectives in a human-service organization.

Semester(s) Traditionally Offered: Spring

**SW 6475 - Foundation Block Field Practicum**
9 credits
Provides a concentrated supervised educational and practical social work experience with specified educational objectives in a human-service organization.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SW 6500 - Advanced Child Welfare Practice in Rural Settings
3 credits

Provides overview of services provided to abused/neglected children and their families, with emphasis on rural contexts. Explores assessment and treatment of problems commonly experienced by child welfare populations.

Semester(s) Traditionally Offered: Fall

SW 6525 - Social Work Practice with Mature and Aging Adults
3 credits

Examines the social context of aging, as well as the aging process and implications for planning and management of direct services for older adults. Discusses practice approaches for older adults, used for purposes of appropriate assessment and intervention.

Semester(s) Traditionally Offered: Fall

SW 6550 - Advanced Practice with Victims and Perpetrators of Family Violence
3 credits

Familiarizes students with problem of family violence, as well as with micro and macro intervention approaches to working with individuals and families impacted by family violence.

Semester(s) Traditionally Offered: Spring, Summer

SW 6575 - Social Work Practice with Substance Abusing Clients
3 credits

Addresses practice in the field of substance abuse, including understanding of substance abuse policy and treatment issues.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SW 6590 - Advanced Standing Seminar I: Social Work Generalist Practice-Theories and Methods
3 credits

This course prepares advanced standing students for the advanced MSW curriculum. The course reviews generalist social work practice theories and methods.

Semester(s) Traditionally Offered: Summer, Alternate Years

SW 6595 - Advanced Standing Seminar II: Social Work Generalist Practice-Research and Policy
3 credits

This course prepares advanced standing students for the advanced MSW curriculum. The course reviews generalist social work research and policy concepts and methods.

Semester(s) Traditionally Offered: Summer, Alternate Years

SW 6600 - Policy and Administration
3 credits

Addresses planning and program development of human service organizations. Studies theories, types, levels, applications, and issues of planning and policy implementation.

Semester(s) Traditionally Offered: Spring

SW 6650 - Advanced Research Methods
3 credits

Students apply their understanding of research methods, theories, and social work values (learned in SW 6200) while completing a research project.

Semester(s) Traditionally Offered: Spring, Summer

SW 6700 - Advanced Generalist Practice I: Individuals and Families
3 credits

Focuses on advanced application of generalist problem-solving theories and skills in working with individuals and families.

Semester(s) Traditionally Offered: Fall
SW 6750 - Advanced Generalist Practice II: Groups
3 credits
Focuses on advanced application of generalist problem-solving theories and skills in working with task and treatment groups.
Semester(s) Traditionally Offered: Spring

SW 6775 - Forensic Social Work Practice
3 credits
Provides introduction to and overview of forensic social work practice.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SW 6800 - Law and Ethics for Social Workers
3 credits
Provides students with basic understanding of law and ethics within the context of social work practice, including legal rights of individuals, legal processes, the legal system, and ethical dilemmas and issues.
Semester(s) Traditionally Offered: Fall, Summer

SW 6850 - Advanced Clinical Practice with Individuals and Families
3 credits
Emphasizes differential assessment and treatment of individuals, families, and family subsystems. Introduction to primary mental disorders in children and adults. Examines causal theory and prognosis, as well as theories about family dysfunction.
Semester(s) Traditionally Offered: Spring, Summer

SW 6875 - Clinical Practice with Women
3 credits
Explores treatment approaches for working with women in both individual and group settings.

SW 6900 - Field Practicum III
6 credits
Provides advanced supervised educational and practical social work experience with specified educational objectives in a human-service organization reflecting the student's selected focus area.
Semester(s) Traditionally Offered: Fall, Spring

SW 6925 - Advanced Optional Practicum
1-5 credits
Allows students to complete an optional or extended advanced practicum experience.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SW 6950 - Field Practicum IV
6 credits
Continuation of SW 6900, providing advanced supervised educational and practical social work experience with specified educational objectives in a human-service organization reflecting the student's selected focus area.

SW 6975 - Advanced Block Field Practicum
12 credits
Provides concentrated advanced supervised educational and practical social work experience with specified educational objectives in a human-service organization reflecting the student's selected focus area.

SW 6990 - Independent Study
1-3 credits
Independent Study courses contracted between faculty member in the Social Work Program and MSW student.
Prerequisite/Restriction: Approval of Social Work Program director and department head
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SW 6993 - Research Project
1-3 credits
MSW student research projects supervised by a faculty member in the Social Work Program.
Prerequisite/Restriction: Approval of the Social Work Program director and the department head
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SW 6995 - Special Topics on Social Work Practice
1-3 credits

Course content varies. Follows strict guidelines determined by the Social Work Program.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Sociology

SOC 1010 - Introductory Sociology (BSS)
BSS Breadth Social Sciences
3 credits

Examination of social behavior of humans and social institutions. Theories and methods for studying society and social issues, along with insights from related disciplines.

Semester(s) Traditionally Offered: Fall, Spring

SOC 1020 - Social Problems (BSS)
BSS Breadth Social Sciences
3 credits

Study of major U.S. and international social problems. Examination of how issues are defined as social problems and ways groups attempt to solve the problems.

Semester(s) Traditionally Offered: Fall, Spring

SOC 2370 - Sociology of Gender
3 credits

Examines impacts of social constructions of gender on individual and collective experience. Investigates how gender is shaped through social processes and through the effects of social institutions. Particular attention given to relation of gender to social stratification.

Semester(s) Traditionally Offered: Fall

SOC 2500 - Research Methods for the Social Sciences
3 credits

Introduction to theory and research methodology which will prepare the student to understand, evaluate, and do empirical research. (i.e., an inquiry that seeks general verified explanations for any class of phenomena.) Course includes, but is not limited to, instruction in data collection, sample selection, definition and measurement, surveys, and statistical analysis. Course is a must for every student of the social sciences.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Bi-annually

SOC 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

SOC 2999 - Workshop
1-3 credits

Designed to meet the changing needs of the student in Sociology.

Repeatable for credit
Campus: USU Eastern only

SOC 3010 - Social Inequality (DSS)
DSS Depth Social Sciences
3 credits

Examines theories and research concerning how race, class, and gender intersect in the lives of societal members.

Semester(s) Traditionally Offered: Fall, Spring

SOC 3110 - Methods of Social Research (CI)
CI Communications Intensive
3 credits

Methods and techniques of analyzing social data. Examines surveys, field research, observational studies, and other social science techniques. Emphasizes analysis of data and published research.

Prerequisite/Restriction: Completion of 6 credits in departmental courses

Semester(s) Traditionally Offered: Fall, Spring
SOC 3120 - Social Statistics I (QI)
QI Quantitative Intensive
3 credits

Examines use of statistics in social sciences. Focus on statistical analysis with surveys and census-type data. Includes parametric and nonparametric statistics utilized most in social analysis.

Prerequisite/Restriction: Six credits in department and completion of the Quantitative Literacy (QL) requirement with a grade of C or better

Semester(s) Traditionally Offered: Fall, Spring, Summer

SOC 3200 - Population and Society (DSS)
DSS Depth Social Sciences
3 credits

Examination of interrelationships between population change and social structure in national and international context. Examines contributions of fertility, mortality, and migration to population characteristics, particularly sex, age, and ethnic composition. Stresses demographic data and analysis.

Semester(s) Traditionally Offered: Fall, Spring

SOC 3260 - Politics and Society in Post-Colonial States
3

Post-colonial states, including the states of the former USSR, have faced violent conflict, environmental destruction, political and economic turmoil, and demographic upheaval as they emerge from empire. This study abroad course mixes classroom experiences with internships in local organizations in order to address issues of post-colonial institutional reform, ethnic conflict, and population change.

Cross-listed as: POLS 3260

Semester(s) Traditionally Offered: Summer
Effective Term
Summer 2016

SOC 3320 - Sociology of Work and Inequality
3 credits

Stresses contribution of sociology to the understanding of industry as a social system.

Semester(s) Traditionally Offered: Spring

SOC 3330 - Medical Sociology (DSS)
DSS Depth Social Sciences
3 credits

In-depth analysis of major contributions of sociology to field of medicine.

Semester(s) Traditionally Offered: Fall

SOC 3410 - Juvenile Delinquency
3 credits

Focuses on nature, extent, and causes of delinquent behavior. Examines workings of juvenile justice system and programs for delinquency prevention.

Semester(s) Traditionally Offered: Fall, Spring

SOC 3420 - Criminology
3 credits

Examines theoretical explanations for crime in the U.S. Describes characteristics of major forms of criminal behavior.

Semester(s) Traditionally Offered: Fall, Spring

SOC 3430 - Social Deviance
3 credits

Examination of sociological perspectives on deviance as they apply to lifestyles, commitment, and social control in American society.

Semester(s) Traditionally Offered: Fall

SOC 3500 - Social Psychology
3 credits

Explores interaction between the social system and the individual. Examines human behavior in terms of positions people occupy in the social structure.

Semester(s) Traditionally Offered: Spring, Alternate Years

SOC 3520 - Sociology of Mental Illness
3 credits

The class provides a broad overview of the history and
sociology of mental illness focusing on the US experience. Beginning with an introduction to the history of “mental illness”, followed by an overview of US mental health policy. The social construction of mental illness is examined as are the experiences of people managing both mental health challenges and in the US criminal justice system.

Semester(s) Traditionally Offered: Spring

SOC 3600 - Sociology of Urban Places (DSS)
DSS Depth Social Sciences
3 credits

Provides historical and international perspective on social, cultural, and spatial characteristics of urban places. Examines changes associated with urbanization processes and the effect of urbanization on community, crime, neighborhoods, and urban space.

Semester(s) Traditionally Offered: Fall

SOC 3610 - Rural Sociology (DSS)
DSS Depth Social Sciences
3 credits

Examines patterns and processes of social change in rural and nonmetropolitan sectors of the U.S. and other advanced industrial societies. Considers how rural social change is influenced by demographic, economic, political, and natural resource conditions at regional, national, and global scales.

Semester(s) Traditionally Offered: Fall

SOC 3750 - Sociology of Aging
3 credits

Examination of social context in which aging occurs, the social implications of aging, and attendant social policy issues. Considers both individual and societal aging, using an historical and global approach.

Semester(s) Traditionally Offered: Fall

SOC 4010 - Contemporary Sociological Theory
3 credits

Critical analysis of major theorists and schools of theory in sociology from the late nineteenth century through recent and current works. Emphasizes contemporary issues, insights, and uses of sociological theory.

Semester(s) Traditionally Offered: Fall, Spring

SOC 4350 - Political Sociology
3 credits

Examines prevalent theories and concepts related to global development, underdevelopment, and social change, while building an understanding of contemporary global social issues accompanying these processes. Particular emphasis placed on understanding global inequality and regional differences.

Semester(s) Traditionally Offered: Fall, Spring

SOC 4410 - Race and Crime
3 credits

A history of the United States criminal justice system is a history of race relations in America. No aspect of the American criminal justice—from policing to the courts to corrections—is untouched by issues tied to race. This course will examine one of the most persistent and divisive issues in criminal justice—racial and ethnic incarceration disparity in the United States. In particular, the class will focus on examining the potential sources of this disparity—differential involvement, bias in administration, and bias in policy—and assessing what historical and contemporary evidence exists to support each explanation. In addition, this course will look at the social and political consequences of disproportionate minority involvement in the criminal justice system.

Prerequisite/Restriction: SOC 3420

Semester(s) Traditionally Offered: Spring

Effective Term

Spring

SOC 4420 - Criminal Law and Justice (CI)
CI Communications Intensive
3 credits

Sociological analysis of relationship between law and social control and social change, especially regarding law
enforcement, courts, and corrections.

Semester(s) Traditionally Offered: Spring

SOC 4600 - Senior Research Capstone Seminar
3 credits

Students undertake sociological analysis from research question through hypotheses, research design, data collection, data analysis, and presentation. Synthesis of student training in critical thinking and substantive areas in sociology.

Prerequisite/Restriction: SOC 1010, SOC 3010, SOC 3110, SOC 3120, SOC 4010, or instructor permission

Semester(s) Traditionally Offered: Fall, Spring

SOC 4620 - Sociology of the Environment and Natural Resources (DSS)
DSS Depth Social Sciences
3 credits

Social aspects associated with the environment and natural resources. Topics include: environmental attitudes and perceptions, environmentalism as a social movement, resource scarcity and land use, and social change in resource-based communities.

Semester(s) Traditionally Offered: Spring

SOC 4640 - Managing Community Conflict
3 credits

This course covers fundamental techniques in successful conflict management at the public/community scale. It has much more a skill-building focus than a theory/literature review emphasis. Process design, facilitation, negotiation, and collaborative problem solving are all addressed. A number of the cases are drawn from natural resource/inter-organizational conflict that is so common in the western U.S.

Cross-listed as: SOC 5640

Semester(s) Traditionally Offered: Spring

SOC 4720 - Effective Community Engagement
3 credits

This course uses service learning principles to teach about the practice of community development. The students are exposed to concepts of community development as well as the practice operation of community serving organizations. Each students get a personalized placement with an organization aligned with their career goals. Section 01 is limited to sociology majors and section 02 is open to all USU students with at least junior standing.

Cross-listed as: SOC 6720.

Semester(s) Traditionally Offered: Spring

SOC 4800 - Seminar in Sociology
1-3 credits

Seminars in various areas of sociology: (a) theory, (b) methodology, (c) demography, (d) social organization, (e) social deviance, (f) social psychology, (g) human ecology, (h) gerontology.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring

SOC 4900 - Independent Readings in Sociology
1-5 credits

Independent readings in various areas of sociology: (a) theory, (b) methodology, (c) demography, (d) social organization, (e) social deviance, (f) social psychology, (g) human ecology.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SOC 5120 - Population and Health
3 credits

Examines current threats to health and longevity among populations in industrialized and developing nations. Evaluates debates surrounding the history of mortality decline. Emphasis is given to the demographic, socioeconomic and environmental determinants of poor health and premature mortality.

Cross-listed as: SOC 6120

Semester(s) Traditionally Offered: Alternate Years

SOC 5130 - Ethnographic Field School
3-6 credits
Provides practical training in use of ethnographic field methods, qualitative data analysis, and ethnographic report-writing. Combines classroom instruction with supervised off-campus field research, while living in a cross-cultural setting. Fulfills program methods requirement. Application and additional fee required.

Cross-listed as: SOC 6130 and ANTH 5130/ANTH 6130.

Semester(s) Traditionally Offered: Summer
Course Fee: $42.00

SOC 5460 - Sociology of Health
3 credits

Examination of social and cultural factors influencing health. Analysis of health behaviors as consequences of variety of diverse personal and social processes.

Cross-listed as: SOC 6460

Semester(s) Traditionally Offered: Spring, Even Years

SOC 5640 - Managing Community Conflict (CI)
CI Communications Intensive
3 credits

This course covers fundamental techniques in successful conflict management at the public/community scale. It has much more a skill-building focus than a theory/literature review emphasis. Process design, facilitation, negotiation, and collaborative problem solving are all addressed. A number of the cases are drawn from natural resource/inter-organizational conflict that is so common in the western U.S.

Cross-listed as: SOC 4640

Semester(s) Traditionally Offered: Spring

SOC 5650 - Developing Societies (DSS)
DSS Depth Social Sciences
3 credits

Reviews how sociology, cultural geography, and economic anthropology analyze processes of globalization in postcolonial societies. Examines changing livelihoods, patterns of spatial incorporation and societal evolution, and emergent policy problems associated with rapid socioeconomic change.

Cross-listed as: SOC 5120

Semester(s) Traditionally Offered: Alternate Years

SOC 6100 - Development of Sociological Theory
3 credits

Examines development of social theory from early to premodern times. Special attention given to nineteenth century European influences on development of American sociological theory.

Semester(s) Traditionally Offered: Fall

SOC 6020 - Modern Social Theory
3 credits

Examines current analytical and empirical theories from sociology as science perspective. Also explores network, exchange, conflict, functional, and interactionist approaches to, and difficulties with, scientific theorizing.

Semester(s) Traditionally Offered: Fall

SOC 6120 - Population and Health
3 credits

Examines current threats to health and longevity among populations in industrialized and developing nations. Evaluates debates surrounding the history of mortality decline. Emphasis is given to the demographic, socioeconomic and environmental determinants of poor health and premature mortality.

Cross-listed as: SOC 5120

Semester(s) Traditionally Offered: Alternate Years

SOC 6130 - Ethnographic Field School
3-6 credits

Provides practical training in use of ethnographic field methods, qualitative data analysis, and ethnographic
report-writing. Combines classroom instruction with supervised off-campus field research, while living in a cross-cultural setting. Fulfills program methods requirement. Application and additional fee required.

Cross-listed as: SOC 5130 and ANTH 6130/SOC 5130.

Semester(s) Traditionally Offered: Summer
Course Fee: $42.00

SOC 6150 - Social Statistics II
3 credits

Statistical procedures for sociological analysis; nonparametric statistics; inferential statistics, crosstabulation, and log-linear analysis; correlation; regression; ANOVA; and other multivariable social science statistical treatments.

Semester(s) Traditionally Offered: Spring

SOC 6200 - Social Demography
3 credits

Focuses on relationships between demographic and sociological processes. Study of theoretical perspectives and empirical analyses of the determinants. Consequences of change in population size, composition, and distribution, as well as changes in demographic processes.

Semester(s) Traditionally Offered: Fall

SOC 6230 - Techniques of Demographic Analysis
3 credits

Provides instruction in use of rates, ratios, life tables, and related measures to describe, analyze, and estimate population. Review of measures designed to examine the three demographic processes: fertility, mortality, and migration. Utilization of analytical tools to explore population composition. Special emphasis placed on use of U.S. Census data to create population profiles.

Semester(s) Traditionally Offered: Spring

SOC 6250 - Sociology Internship/Co-op
1-6 credits

Professional level of educational work experience in an internship/cooperative education position for graduate students.

SOC 6270 - Global Migration
3 credits

This course introduces students to the ways that researchers have answered three key questions of migration: Why do people migrate? How does migration influence the destination society? How does migration shape the origin society?

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Spring, every other year
Effective Term
Spring

SOC 6310 - Sociology of Work and Occupations
3 credits

Uses an applied and comparative cross-cultural perspective to examine work in pre-industrial (agricultural/pastoral), industrializing, industrialized, and post-industrial societies.

Semester(s) Traditionally Offered: Spring

SOC 6420 - Gender and Social Inequality
3 credits

Contemporary American gender stratification, including (1) What is the problem? (2) Why is it a problem? (3) How does it interact with other stratifiers? (4) What caused or is causing it? (5) How and why is it maintained? and (6) When does it vary and why? Comparison of different views on these issues.

Semester(s) Traditionally Offered: Spring

SOC 6450 - Special Topics in Social Problems
3 credits

Seminars on various topics appropriate to sociological analysis of contemporary social problems. Subject matter will reflect current faculty research and interests.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring
SOC 6460 - Sociology of Health
3 credits
Examination of social and cultural factors influencing health. Analysis of health behaviors as consequences of variety of diverse personal and social processes.
Cross-listed as: SOC 5460

Semester(s) Traditionally Offered: Spring, Even Years

SOC 6620 - Environment, Technology, and Social Change
3 credits
Focuses on human interactions with the physical environment and changes brought about by this interaction. Topics of major emphasis include: approaches to environmental sociology; environmental values and attitudes; social movements pertaining to environmental concern; and social change responses to technology and resource scarcity.
Semester(s) Traditionally Offered: Spring

SOC 6630 - Natural Resources and Social Development
3 credits
Focuses on social dimensions of natural resources use, development, scarcity, and allocations. Examines ways in which changing resource conditions impact human social organization. Emphasis on topics including: social characteristics of resource-dependent communities and areas; social organizational responses to changes in availability of, or access to, natural resources; and social impacts of natural resource development activities.
Semester(s) Traditionally Offered: Spring

SOC 6650 - Developing Societies
3 credits
Reviews how sociology, cultural geography, and economic anthropology analyze processes of globalization in postcolonial societies. Examines changing livelihoods, patterns of spatial incorporation and societal evolution, and emergent policy problems associated with rapid socioeconomic change.
Cross-listed as: SOC 5650 and ANTH 6650/ANTH 5650 and GEOG 6650/GEOG 5650.
Semester(s) Traditionally Offered: Fall

SOC 6650 - Advanced Rural Sociology
3 credits
Analysis of major developments in the study of rural society and rural communities. Emphasis on rural social changes related to economic, demographic, organizational, and technological trends at societal and global levels.

Semester(s) Traditionally Offered: Spring

SOC 6720 - Applied Community Development
3 credits
Uses asset-building model to explore current practice and theory of community development. Organized around service-learning placements with local and regional organizations. Includes reflective evaluation of theories based upon the service-learning experiences.
Prerequisite/Restriction: SOC 1010, SOC 3010, SOC 3110, SOC 3120, SOC 4010; or instructor permission
Cross-listed as: SOC 4720.

Semester(s) Traditionally Offered: Spring

SOC 6730 - Gender and International Development
3 credits
Examines gender issues in economic and social development. Focuses on theory and methodologies for gender analysis.
Semester(s) Traditionally Offered: Spring

SOC 6750 - Theory and Research in Social Change
3 credits
This seminar course engages contemporary sociological theories and exemplary empirical analyses in the area of social change. The course provides a broad understanding of theoretical perspectives and provides a foundation for students to conduct theory-driven research on social change.
Semester(s) Traditionally Offered: Fall, Even Years

SOC 6750 - Theory and Research in Social Inequality
3 credits
This graduate seminar provides perspectives on the
processes that generate and perpetuate social inequality. The focus is on foundational theoretical and empirical works as well as important contemporary scholarship.

**Semester(s) Traditionally Offered: Fall, Odd Years**

**SOC 6800 - Seminar in Sociology**
1-3 credits

Seminars in various areas of sociology: (a) theory, (b) methodology, (c) demography, (d) social organization, (e) social deviance, (f) social psychology, (g) social problems, (h) international development, (i) domestic development, (j) rural sociology, (k) environmental sociology, (l) other.

Repeatable for credit.

**Semester(s) Traditionally Offered: Fall, Spring, Summer**

**SOC 6900 - Independent Readings in Sociology**
1-3 credits

Independent readings in various areas of sociology: (a) theory, (b) methodology, (c) demography, (d) environmental/natural resource sociology, (e) sociology of development, (f) social problems.

Repeatable for credit.

**Semester(s) Traditionally Offered: Fall, Spring, Summer**

**SOC 6970 - Thesis Research**
1-12 credits

Repeatable for credit. Pass/Fail only.

**Semester(s) Traditionally Offered: Fall, Spring, Summer**

**SOC 6990 - Continuing Graduate Advisement**
1-3 credits

Repeatable for credit. Pass/Fail only.

**Semester(s) Traditionally Offered: Fall, Spring, Summer**

**SOC 7010 - Issues in Sociological Theory**
3 credits

Explores current philosophical discussions on theoretical approaches to understanding society. Examines feminist, post-structuralist, and post-modernist conceptualizations of power, knowledge, and identity.

**Semester(s) Traditionally Offered: Spring**

**SOC 7100 - Advanced Survey Techniques**
3 credits

Examines the empirical and methodological literature regarding techniques for designing and implementing mail, telephone, and internet surveys for sociological research. Focuses on practical lessons for sampling, data collection, and survey data organization.

**Semester(s) Traditionally Offered: Spring**

**SOC 7110 - Advanced Sociological Analysis**
3 credits

Provides review of several quantitative approaches utilized in contemporary social research. Students undertake small-scale analytical exercises in topics including, but not limited to, log-linear and structural equation modeling, logistic regression, and event history analysis.

**Semester(s) Traditionally Offered: Fall**

**SOC 7150 - Advanced Qualitative Methods in Sociology**
3 credits

Examines the empirical and methodological literature regarding techniques for designing and implementing qualitative data collection and analysis for sociological research. Emphasizes practical tools for graduate students seeking to use qualitative methods for their thesis or dissertation research.

**Semester(s) Traditionally Offered: Spring**

**SOC 7210 - Teaching Sociology**
3 credits

Provides a learning opportunity for graduate students who will be graduate instructors or teaching assistants. Reviews teaching strategies (meeting a class for the first time, teaching a large lecture class) and course development (constructing a syllabus, developing tests and writing assignments).

**Semester(s) Traditionally Offered: Fall**

**SOC 7250 - Advanced Seminar in Social Demography**
3 credits
Detailed comparative and multilevel examination of substantive and methodological issues in the study of nuptiality, fertility, morbidity and mortality, migration, and social mobility. Covers theories, data collection strategies, measurement issues, and analytical techniques.

Semester(s) Traditionally Offered: Spring
SOC 7350 - Political Sociology
3 credits

This graduate seminar familiarizes students with theory and research in political sociology. It explores fundamental relationships between state institutions, political processes, and social structure. Topics include democracy, political inclusion and exclusion, political participation, social movements, and culture and political ideology.

Semester(s) Traditionally Offered: Spring, Alternate Years
SOC 7400 - Perspectives on Inequality and Social Problems
3 credits

Examines major theoretical and empirical approaches to the sociological analysis of inequality and social problems.

Semester(s) Traditionally Offered: Fall
SOC 7440 - Crime and Society
3 credits

Explores the field of criminology, which is primarily concerned with describing and explaining patterns of deviance violating criminal laws. Reviews the epistemological foundations of criminology, and then addresses specific topics surrounding various legal definitions of criminal behavior.

Semester(s) Traditionally Offered: Spring
SOC 7620 - Sociology of Environmental Hazards and Risks
3 credits

Focuses on how individuals and organizations respond to environmental hazards and risks resulting from either natural events or human technological and industrial processes.

Semester(s) Traditionally Offered: Fall
SOC 7640 - Population and Environment
3 credits

In-depth exploration of relationship between human populations and their environment. Heavy emphasis placed on developing an understanding of contemporary research in this area, especially with regard to the association between environmental factors and population organization, change, and growth.

Semester(s) Traditionally Offered: Spring
SOC 7660 - Public Sociology: Ecological Justice and Community Action
3 credits

This class applies Public Sociology to ecological justice and community action. Public Sociology takes sociological knowledge beyond the “ivory tower” into communities. It stresses raising awareness of social issues, and the importance of civic engagement to a functional democratic society.

Semester(s) Traditionally Offered: Spring, Alternate Even Years
SOC 7720 - Community Theory and Research
3 credits

Explores theoretical and empirical sociological literature on the human community. Topics include: conceptualization and measurement of community well-being, dynamics and impacts of social and economic change on community life, and comparison of community research conducted in different settings.

Semester(s) Traditionally Offered: Spring
SOC 7800 - Topical Seminar in Sociology
3 credits

Seminars in various areas of sociology: (a) theory, (b) methodology, (c) demography, (d) environmental/natural resource sociology, (e) sociology of development, (f) social problems.
SOC 7900 - Independent Study
1-3 credits

Independent study in sociological areas emphasizing (a) theory, (b) methodology, (c) demography, (d) environmental/natural resource sociology, (e) sociology of development, (f) social problems.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SOC 7970 - Dissertation Research
1-12 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SOC 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Spanish

SPAN 1010 - Spanish First Year I
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: No more than one year of Spanish in high school or placement in this specific class by examination

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $24.00

SPAN 1020 - Spanish First Year II
4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: SPAN 1010 (or equivalent coursework) or placement in this specific class by examination

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $24.00

SPAN 1050 - Intensive First Year Spanish
8 credits

Intensive one-semester alternative course to SPAN 1010 and SPAN 1020, emphasizing active usage.

Semester(s) Traditionally Offered: Summer

SPAN 1800 - Spanish I Study Abroad
1-4 credits

Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Repeatable for credit.
Campus: Taught only in Studies Overseas in Spanish Program.
Semester(s) Traditionally Offered: Summer

SPAN 2010 - Spanish Second Year I
4 credits

Continued development of communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: SPAN 1020 (or equivalent coursework) or placement in this specific class by examination

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $24.00

SPAN 2020 - Spanish Second Year II
4 credits

Continued development of communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: SPAN 2010 (or equivalent coursework) or placement in this specific class by examination

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $24.00
SPAN 2800 - Spanish II Study Abroad
1-4 credits

Continued development of communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure to cultures and customs.

Prerequisite/Restriction: SPAN 1020 or equivalent

Repeateable for credit.
Campus: Taught only in Studies Overseas in Spanish Program.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPAN 2988 - Special Problems
1-3 credits

An elective course intended for advanced students. Students will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Hispanic culture will also be emphasized. Significant reading and work outside of class are required.

Repeateable for credit
Campus: USU Eastern only

SPAN 3010 - Hispanic Outreach Practicum
1-4 credits

Allows students of Spanish to improve their language skills and cultural awareness within a Hispanic community setting. May be repeated to a maximum of 4 credits, only 3 of which can be applied toward the Spanish major or minor.

Prerequisite/Restriction: Instructor permission

Repeateable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPAN 3040 - Advanced Spanish Grammar
3 credits

Intense review of selected problematic areas of Spanish grammar for students with advanced language skills.

Prerequisite/Restriction: SPAN 2020 (or equivalent coursework) or placement in this specific class by examination

Semester(s) Traditionally Offered: Fall, Spring (Summer distance ed. only)

SPAN 3060 - Advanced Spanish Conversation and Composition (CI)
CI Communications Intensive
3 credits

Development of advanced conversation and writing skills through debate and composition on contemporary controversial topics.

Prerequisite/Restriction: SPAN 2020 or demonstration of equivalent proficiency through testing

Semester(s) Traditionally Offered: Fall, Spring

SPAN 3100 - Spanish for Healthcare Professionals
3 credits

Study of medical terminology in Spanish and exploration of Hispanic cultural issues and beliefs affecting delivery of effective, equitable healthcare. Provides conversational practice for medical situations. May feature guest lectures relevant to providing healthcare to Hispanics and other minority populations.

Prerequisite/Restriction: SPAN 3040 or instructor permission

Semester(s) Traditionally Offered: Fall

SPAN 3300 - Introduction to Hispanic Literature and Literary Analysis
3 credits

Readings in Hispanic literatures, focusing on literary analysis (both oral and written) in the principle literary genres: narrative, drama, and poetry.

Prerequisite/Restriction: Grade of B- or better in SPAN 2020 or instructor permission

Semester(s) Traditionally Offered: Fall, Spring

SPAN 3510 - Business Spanish
3 credits

Development of communication skills in Spanish for international Hispanic business purposes.
Prerequisite/Restriction: SPAN 2020 or demonstration of equivalent proficiency through testing

SPAN 3520 - Business Spanish Practicum
1-4 credits

Allows students of Spanish to gain practical work experience in a Hispanic Business context. May be repeated to a maximum of 4 credits, only 3 of which can be applied toward the Spanish major or minor.

Prerequisite/Restriction: Instructor permission

Repeatable for credit. Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPAN 3550 - Spanish Culture and Civilization (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Historical, social, political, economic, and cultural conditions and institutions of Spain.

Prerequisite/Restriction: SPAN 2020 or demonstration of equivalent proficiency through testing

Semester(s) Traditionally Offered: Fall, Spring (Summer distance ed. only)

SPAN 3560 - Introduction to U.S. Latino/a Culture
3 credits

An introduction to U.S. Latino/Latina history, civilization, literature, and culture. Students will examine the socio-historical, cultural, and political contexts that shape the educational experience of Latinos in the U.S.

Prerequisite/Restriction: SPAN 2020 or demonstration of equivalent proficiency through testing

Semester(s) Traditionally Offered: Spring

SPAN 3570 - Hispanic American Culture and Civilization (DHA)
DHA Depth Humanities and Creative Arts
3 credits

A thematic approach to Hispanic American cultures and civilization. Individual course sections may focus alternately on topics such as Contemporary Art, Cinema, Popular Music, Cuisine, Dictatorship and Democracy, Globalization, Popular Resistance, Human Rights, Exile and/or Immigration.

Prerequisite/Restriction: SPAN 2020 or demonstration of equivalent proficiency through testing

Repeatable for credit when the content changes

Semester(s) Traditionally Offered: Fall, Spring

SPAN 3600 - Survey of Spanish Literature I (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Selective readings and discussions of major works and authors in Spanish literature from El Cid through Calderon.

Prerequisite/Restriction: SPAN 3300 or instructor permission

Semester(s) Traditionally Offered: Fall

SPAN 3610 - Survey of Spanish Literature II (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Selective readings and discussions of major works and authors in Spanish literature from the eighteenth to twentieth centuries.

Prerequisite/Restriction: SPAN 3300 or instructor permission

Semester(s) Traditionally Offered: Fall, Spring

SPAN 3620 - Survey of Hispanic American Literature I (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Selective readings and discussions of major works and authors in Hispanic American literature from the Pre-Columbian period up to the beginning of the Wars of Independence (1810).

Prerequisite/Restriction: SPAN 3300 or instructor permission

Semester(s) Traditionally Offered: Fall, Spring

SPAN 3630 - Survey of Hispanic American Literature II (DHA)
DHA Depth Humanities and Creative Arts
3 credits
Selective readings and discussions of major works and authors in Hispanic American literature from the Wars of Independence (1810) through contemporary literary production.
Prerequisite/Restriction: SPAN 3300 or instructor permission
Semester(s) Traditionally Offered: Fall, Spring

SPAN 3640 - Introduction to U.S. Latino/a Literature
3 credits
This course introduces students to contemporary Latino/Latina in the United States. This course will familiarize students with an important part of American Literature that is often ignored.
Prerequisite/Restriction: SPAN 3300 or instructor permission
Semester(s) Traditionally Offered: Fall, Spring

SPAN 3650 - Spanish Literature - Study Abroad
1-4 credits
Selective readings and discussions of major works and authors in Spanish literature.
Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement; SPAN 3040 or instructor permission
Repeatable for credit.
Campus: Taught only in Studies Overseas in Spanish Program.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPAN 3800 - Spanish III Study Abroad
1-4 credits
Intense review of selected problematic areas of Spanish grammar for students with advanced language skills.
Prerequisite/Restriction: SPAN 2020 or demonstration of equivalent proficiency through testing
Repeatable for credit.
Campus: Taught only in Studies Overseas in Spanish Program.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPAN 4200 - Introduction to Hispanic Linguistics
3 credits
This course is designed for future Spanish teachers. Students enrolled in this course will learn about the most important aspects of Hispanic linguistics, such as the morphology, syntax, semantics and the history of the Spanish language.
Prerequisite/Restriction: SPAN 3040
Semester(s) Traditionally Offered: Spring

SPAN 4800 - Hispanic Culture and Civilization - Study Abroad
1-4 credits
Historical, social, political, economic, and cultural conditions and institutions of Hispanic countries.
Prerequisite/Restriction: SPAN 2020 or demonstration of equivalent proficiency through testing
Repeatable for credit.
Campus: Taught only in Studies Overseas in Spanish Program.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPAN 4880 - Individual Readings
1-4 credits
Individual readings or projects in Spanish.
SPAN 4900 - Topics of Spanish Cultural Production
3 credits

Select topics of Spanish cultural production, such as literature, art, cinema, or music.

Prerequisite/Restriction: At least two of the following: SPAN 3600, SPAN 3610, SPAN 3620, SPAN 3630, SPAN 3640, SPAN 3650, SPAN 3660; or instructor permission

Repeatable for credit when topics change
Semester(s) Traditionally Offered: Fall, Spring

SPAN 4910 - Topics of Hispanic American Cultural Production
3 credits

Select topics of Hispanic American cultural production, such as literature, art, cinema, or music.

Prerequisite/Restriction: At least two of the following: SPAN 3600, SPAN 3610, SPAN 3620, SPAN 3630, SPAN 3640, SPAN 3650, SPAN 3660; or instructor permission

Repeatable for credit when topics change
Semester(s) Traditionally Offered: Fall, Spring

SPAN 4920 - Spanish Language Tutoring
1 credit

Allows students to develop tutoring skills by assisting professors in lower-division courses or fulfilling instructional duties for a comparable amount of time in the language laboratory, public schools, or similar activities with departmental approval. May be repeated to a maximum of 3 credits.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

SPAN 4930 - Topics of U.S. Latina/o Literature and Culture
3 credits

Students will gain a deep understanding of the historical and cultural complexity of Latina/o communities in the U.S. Through an interdisciplinary approach, drawing from various comparative critical frameworks, students will examine a wide range of issues tied to the Latina/o community.

Prerequisite/Restriction: Completion of at least two of the following courses: SPAN 3600, SPAN 3610, SPAN 3620, SPAN 3630 and SPAN 3640

Repeatable for credit
Semester(s) Traditionally Offered: Fall

SPAN 4990 - Spanish Degree Assessment
1 credit

Includes review of coursework and comprehensive exit examination, individualized according to the courses taken for the degree.

Prerequisite/Restriction: Instructor permission

SPAN 6200 - Spanish Linguistics and Phonetics
3 credits

Analysis of phonology, morphology, and syntax of the Spanish language.

Prerequisite/Restriction: SPAN 2020, another 3000-level or higher SPAN course, or demonstrated proficiency through testing

Semester(s) Traditionally Offered: Spring

Special Education

SPED 0100 - Strategies for Reading
1-3 credits

Practical course with major emphasis on improvement of reading, writing, and comprehension skills that are essential for academic success. Remedial class not carrying USU or transfer credit. Remedial fee required.

Repeatable for credit
Remedial
Semester(s) Traditionally Offered: Fall, Spring

SPED 1000 - Principles of Effective Peer Teaching
2 credits
High school peer tutors are given university credit for tutoring low readers for one hour each day. Tutors are taught a systematic tutoring and mentoring process. In addition, specific criteria are included to evaluate tutors' instructional performance.

**Repeatable for credit**
Campus: Available only to high school students at pre-approved sites.

Semester(s) Traditionally Offered: Fall, Spring

**SPED 1010 - Society and Disability (BSS)**
BSS Breadth Social Sciences
3 credits

Discussion of definitions and types of disabilities, ethical issues, society's prejudice and discrimination against people with disabilities, and the individual's adjustment to the disability experience. Disability as a natural part of life.

Cross-listed as: REH 1010.

Semester(s) Traditionally Offered: Fall, Spring

**SPED 1020 - Career Exploration I**
2

This is an Aggies Elevated course designed to aid the student in exploring career options through the use of videos, printed materials and personal contact with professionals and vocational experts. Activities will focus on equipping the student with skills and information used for job-hunting, interviewing, resume preparation, and job applications.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

**SPED 1030 - Orientation to Adult Learning & Independent Living**
3

This is an Aggies Elevated course designed to provide supplemental instruction and support to students as they develop independent living skills and navigate life as a USU student. Topics that will be covered include: problem solving, conflict resolutions, conversations, doing household chores, meeting new people, navigating campus, etc.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

**SPED 1040 - Career Exploration II**
3

This is an Aggies Elevated course designed to provide students with skills and information used for job hunting, interviewing, writing resumes and job applications. It is also designed to aid the student in choosing a career through the use of videos, printed materials and personal contact with professionals and vocational experts. This is a continuation of Career Exploration.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

**SPED 1050 - Self-Determination and Self-Management Skills**
2

This is an Aggies Elevated course designed to provide basic self-management and self-determination skills contributing to personal effectiveness in the workplace, school, or independent living. This course will address understanding differences among people, asking for accommodations, expressing preferences, making informed choices, goal setting, disability disclosure, and self-advocacy.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

**SPED 2010 - Effective Behavior Management Practices for Paraeducators**
1-3 credits

Teaches paraeducators to apply effective behavior management practices to individuals with disabilities in a variety of settings. Introduction to proactive behavior management strategies, basic concepts of behavior management, and the application of intervention plans.
Repeatable for credit.

SPED 2100 - Career Related Social Skills
2

This is an Aggies Elevated course designed to provide students with social skills necessary for keeping a job. These skills include: following instructions, asking questions, responding to criticism, communicating assertively, interviewing, asking for accommodations, and having appropriate conversations in the workplace.

Semester(s) Traditionally Offered: Fall
Effective Term
Fall

SPED 2110 - Work Internship
3

Participation in this internship allows the student to combine on-the-job learning experience with related course work to complement the educational experience. This will allow the student to document and accumulate work experience in an area of their interest to be used in their future pursuit of careers. This could be an opportunity to be offered full-time employment by the employer upon graduation.

Repeatable
Semester(s) Traditionally Offered: Fall, Spring, Summer
Effective Term
Fall

SPED 2120 - Navigating Adulthood
2

This is an Aggies Elevated course designed to cover a variety of topics including: practicing problem solving and decision making by; looking for an apartment, finding paid employment, creating a budget, and making a plan for the future. This course will also discuss sensitive topics such as dating, sex, STD’s, rape and other vulnerabilities that students with disabilities may face as they live independently in the future.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

SPED 2150 - Introductory Experience with Students with Disabilities
1-4 credits

Introductory seminar from which students learn basic instructional techniques from video simulations, then apply techniques in public schools.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 2790 - Special Topics
1-4 credits

Repeatable for credit.

SPED 3030 - Educational and Multicultural Foundations
1-3 credits

Explores historical and cultural aspects of schooling and the inclusion of students with disabilities and bilingual students in general education classrooms. Examines how schooling practices change from elementary to high school and commonalities that bind the teaching profession.

Semester(s) Traditionally Offered: Summer, Taught Alternate Odd Years

SPED 4000 - Education of Exceptional Individuals
2 credits

Characteristics of all types of exceptional children with emphasis on the educational and psychological implications of these conditions to the development of the child.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 4790 - Special Topics
1-4 credits

Repeatable for credit.

SPED 4910 - Undergraduate Research and Creative Opportunities
1-4 credits

Individually directed study at the undergraduate level.

Prerequisite/Restriction: Instructor permission required

Repeatable for credit.
Pass/Fail only.  
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 4970 - Honors Thesis
1-6 credits

Provides an opportunity for honors students in the Department of Special Education and Rehabilitation to interact with other honors students in the College of Education and Human Services and explore an interdisciplinary area of interest. A written paper will be required.

Repeatable for credit.  
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 5010 - Applied Behavioral Analysis 1: Principles, Assessment, and Analysis (QI)
QI Quantitative Intensive
3 credits

Covers topics related to collecting data, using data to make decisions, analyzing data, graphing data, and applying principles of behavior management and instruction to children and youth.

Prerequisite/Restriction: Admission to special education major or instructor permission

Semester(s) Traditionally Offered: Fall

SPED 5040 - Foundations of Effective Assessment and Instructional Practices
3 credits

Principles of standardized and curriculum-based assessment. Foundations for designing effective instructional programs to help students achieve mastery and proficiency.

Prerequisite/Restriction: Admission to special education major and SPED 5010 or instructor permission

Semester(s) Traditionally Offered: Fall

SPED 5050 - Applied Behavioral Analysis 2: Applications
3 credits

Expands knowledge of basic applied behavior analysis principles. Develops skills for remediating behavior problems using functional behavioral assessment.

Prerequisite/Restriction: Admission to special education major or instructor permission

Semester(s) Traditionally Offered: Spring

SPED 5060 - Consulting with Parents and Teachers
3 credits

Provides strategies for communicating with parents and teachers, as members of a multidisciplinary team, to assist parents and other teachers in collaborative problem solving.

Prerequisite/Restriction: Admission to special education major or instructor permission

Semester(s) Traditionally Offered: Spring

SPED 5070 - Policies and Procedures in Special Education
1-3 credits

Provides an understanding of federal and state laws for persons with disabilities and procedures for organizing a special education classroom and auxiliary staff.

Prerequisite/Restriction: Admission to special education major or instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

SPED 5110 - Social and Psychological Implications of Visual Impairments
2 credits

Explores attitudes and beliefs related to visual impairment and blindness. Emphasizes impact of vision loss on the psychosocial functioning of individuals and their families. Studies self-concept, self-esteem, and strategies to enhance these areas in visually impaired children.

Semester(s) Traditionally Offered: Summer

SPED 5120 - Ocular Disorders and Examination Techniques of Low Vision
4 credits

Students demonstrate the ability to identify the important parts of the visual system, to understand and interpret eye reports, and to translate the information into an educational plan. Participants also conduct and
supervise vision screening clinics. In addition, participants demonstrate a basic understanding of approaches and practices of low-vision services. Includes low-vision aids, optics, and environmental modifications.

Semester(s) Traditionally Offered: Fall

SPED 5130 - Literary Braille Codes and Technologies 5

Focuses on reading and writing literary braille. Includes literary braille contractions, short-form words, punctuation, and rules of usage for basic Grade 2 braille, using the Perkins Braille Writer. Emphasizes accuracy, beginning formatting, and ability to apply the rules. Using a slate and stylus, as well as computerized braille writers, students learn to write literary braille.

Semester(s) Traditionally Offered: Fall

Effective Term
Fall 2016

SPED 5140 - Nemeth Braille Codes and Braille Technologies 3 credits

Transcription of print mathematical symbols into appropriate formats, using Nemeth Braille Code of Mathematics. Computation skills using adapted abacus for basic mathematical operation. Explores braille music, foreign language braille, computer braille, and Grade 3 braille. Emphasizes literary braille in more extended writing projects.

Semester(s) Traditionally Offered: Spring

SPED 5150 - Teaching Children with Dual Sensory Impairments (Deaf/Blind) 3 credits

Provides basic understanding of the needs of learners (ages 0-22) having sensory impairments with multiple disabilities. Includes role and characteristics of the transdisciplinary team, learning environments, resources, assessment procedures, and instructional strategies. Identifies inclusion procedures, transitional issues, and methods of encouraging parental involvement.

Semester(s) Traditionally Offered: Summer

SPED 5160 - Introduction to Orientation and Mobility 2 credits

Introduces students to orientation and mobility, as well as basic assessment techniques. Students learn to use the results of these assessments, along with specific teaching techniques in pre-cane orientation and mobility skills, in teaching children with visual impairments. Students also become familiar with basic indoor (non-cane) mobility techniques, learn to identify and teach orientation cues in the environments, and develop lesson plans to teach concepts necessary for future cane travel.

Semester(s) Traditionally Offered: Summer

SPED 5170 - Instructional Management for Students with Visual Impairments (0-21) 4 credits

Emphasizes best practices for instructional management of children with visual impairments in early intervention settings, preschool programs, and early elementary grades. Also addresses practices for older students in upper elementary through high school grades. Explores strategies for development of basic concepts, socialization skills, emergent literacy, effective braille reading and writing, daily living skills, career understanding, and recreational and leisure skills. Focuses on understanding agency and community resources, family collaboration, modification and adaptation of materials and environments, and adapted technology.

Repeatable for credit
Semester(s) Traditionally Offered: Spring

SPED 5180 - Field Studies in Visual Impairments 1 credit

Participants work with visually impaired students in a variety of educational sites. Emphasizes use of adapted technology, implementation of teaching activities, student assessment, and modification of educational materials.

Corequisite: SPED 5130 or SPED 5170.

Semester(s) Traditionally Offered: Fall, Spring

SPED 5200 - Student Teaching in Special Education (CI) CI Communications Intensive 3-15 credits
Prerequisite/Restriction: Admission to special education major or instructor permission

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00

SPED 5210 - Student Teaching in Special Education: Dual Majors (CI)
CI Communications Intensive
3-15 credits

Undergraduate student teaching for dual majors.

SPED 5220 - Special Education Student Teaching Seminar
3 credits

Weekly seminar taken concurrently with student teaching. Focuses on problems arising during student teaching and the development of a teaching portfolio.

Prerequisite/Restriction: Admission to teacher education and completion of the SPED sequence
Corequisite: SPED 5200 or SPED 5210.

SPED 5300 - Orientation to Teaching Students with Mild/Moderate Disabilities
1-2 credits

Provides preservice teachers with overview of information and resources, examples, and practice in applying effective instructional and behavior management strategies in their classrooms. Emphasizes knowledge/skills first day and first week of school.

Semester(s) Traditionally Offered: Fall

SPED 5310 - Teaching Reading and Language Arts to Students with Mild/Moderate Disabilities
2-4 credits

Curriculum, instructional methods, assessment, and data-based decision making related to teaching reading and language arts to students with mild/moderate disabilities.

Semester(s) Traditionally Offered: Fall

SPED 5320 - Teaching Content Areas and Transition to Students with Mild/Moderate Disabilities
3 credits

Students learn to teach content area material, learning strategies, and transition-related skills to students with mild/moderate disabilities. Also includes assessment and decision making strategies related to these curricular areas.

Semester(s) Traditionally Offered: Spring

SPED 5330 - Eligibility Assessment for Students with Mild/Moderate Disabilities
1 credit

Covers topics of choosing and administering eligibility assessment tests for students who may have mild/moderate disabilities. Interpretation of test results and applying results to decisions regarding students’ eligibility for special education services.

Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $40.00

SPED 5340 - Teaching Math to Students with Mild/Moderate Disabilities
3 credits

Explains procedures for teaching mathematics to students with mild/moderate disabilities, so that each progresses as fast as his or her capabilities will allow.

Prerequisite/Restriction: Admission to special education major or instructor permission

Semester(s) Traditionally Offered: Spring
SPED 5350 - Teaching Students with Mild/Moderate Disabilities I
3 credits

Provides students with information and skills in the area of classroom and individual behavior management procedures. Emphasizes research-validated strategies that students will apply to everyday instructional situations.

Prerequisite/Restriction: Admission to the Alternative Teacher Preparation Licensure Program

Semester(s) Traditionally Offered: Fall

SPED 5360 - Teaching Students with Mild/Moderate Disabilities II
3 credits

Provides students with instructional and management skills. Through case studies and classroom simulations, students learn research-validated instructional and management skills.

Prerequisite/Restriction: Admission to the Alternative Preparation Licensure Program

Semester(s) Traditionally Offered: Spring

SPED 5370 - Technology Considerations for Students with M/M Disabilities
2 credits

Assistive technology is a special factor to be considered by IEP teams for students with disabilities. Understanding the function and use of technology is critical in selecting and implementing AT systems. Students’ needs for AT are as diverse as students themselves.

Semester(s) Traditionally Offered: Fall

SPED 5400 - Orientation to Teaching Students with Severe Disabilities
2 credits

Provides preservice teachers with overview of information, resources, examples, and practices in applying effective instructional and behavior management strategies to students with severe disabilities.

Semester(s) Traditionally Offered: Fall

SPED 5410 - Practicum: Direct Instruction Reading and Language Arts for Students with Mild/Moderate Disabilities
1-3 credits

Students learn to use Direct Instruction techniques, positive management, curriculum-based assessment, and data-based decision-making to teach reading and language arts to children with mild/moderate disabilities. Students are placed in a classroom, where they teach a group of children daily.

Semester(s) Traditionally Offered: Fall

Course Fee: $20.00

SPED 5420 - Practicum: Teaching Mathematics to Students with Mild/Moderate Disabilities
4 credits

Covers use of effective instructional techniques, positive management, curriculum-based assessment, and data-based decision making to teach mathematics content to children with mild/moderate disabilities. Students placed in a classroom, where they teach one or more group(s) of children daily.

Semester(s) Traditionally Offered: Spring

Course Fee: $25.00

SPED 5430 - Field-Based Applications for Students with Mild/Moderate Disabilities I
2 credits

Designed to help students acquire and consistently demonstrate effective teaching practices to aid students with mild/moderate disabilities. Teaches students to analyze and solve instructional and management problems.

Prerequisite/Restriction: Admission to the Alternative Teacher Preparation Licensure Program

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

SPED 5440 - Field-Based Applications for Students with Mild/Moderate Disabilities II
2 credits

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The purpose of this course is to help teachers acquire more advanced effective teaching practices. Students will continue to learn how to analyze and solve instructional and management problems by learning more in depth procedures and implementing and evaluating interventions.

Prerequisite/Restriction: SPED 5430

SPED 5510 - Curriculum for Students with Severe Disabilities
3-4 credits

Provides information about commercially available curricular materials, as well as how to plan for and design functional academic curricula, for persons with severe disabilities.

Prerequisite/Restriction: Admission to Special Education major or instructor permission

Semester(s) Traditionally Offered: Fall
Course Fee: $20.00

SPED 5520 - Curriculum for Secondary-Level Students with Severe Disabilities
3 credits

Provides information on developing and implementing secondary-level classroom, community, domestic, leisure, and transition instructional programs.

Prerequisite/Restriction: Admission to Special Education major or instructor permission

Semester(s) Traditionally Offered: Spring
Course Fee: $20.00

SPED 5530 - Technology for Teaching Exceptional Learners
3 credits

Familiarizes students with existing technology (IT and AT), federal and state technology legislation, and resources to fund technology in the classroom. Teaches methods for evaluating technology needs of individuals with disabilities.

Prerequisite/Restriction: Admission to Special Education major or instructor permission

Campus: Taught on campus during spring semester only.

Occasionally offered off campus during fall semester.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

SPED 5540 - Assessment of Persons with Severe Disabilities
1 credit

Provides students with knowledge and skills necessary for conducting assessment activities with pupils having severe disabilities. Covers norm-referenced/standardized, criterion-referenced, and alternative assessment instruments. Students complete assignments in administering, interpreting, and communicating results of each type of assessment.

Semester(s) Traditionally Offered: Spring

SPED 5560 - Practicum in Improving School System Programs
1-4 credits

Practicum or seminar providing information/experience in public school instruction.

Prerequisite/Restriction: Instructor permission required

Repeatable for credit.

SPED 5600 - Practicum: Instruction in Academic Skills
3 credits

A field-based class providing experience in observing and teaching functional academic curricula to students with severe disabilities.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall

SPED 5610 - Practicum: Instruction in Daily Living Skills
4 credits

Provides opportunity to assess students' needs and to design programs for community, domestic, leisure, and transitional skills.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring
SPED 5620 - Practicum: Introduction to Instruction of Students with Severe Disabilities
2 credits
This practicum provides on-the-job training experience in working with students with severe disabilities. It will provide the ATP teacher with exposure to requirements for running a classroom. Students will become familiar with IEP, setting up a classroom, scheduling activities, and data collection.

Semester(s) Traditionally Offered: Fall

SPED 5630 - Field-Based Applications for Students with Severe Disabilities
2 credits
Designed to help students acquire and consistently demonstrate effective teaching practices to aid students with severe disabilities. Teaches students to analyze and solve instructional and management problems.

Prerequisite/Restriction: Admission to Severe Alternative Teacher Preparation Program

Semester(s) Traditionally Offered: Spring

SPED 5640 - Advanced Field-Based Applications for Students with Severe Disabilities
2 credits
Designed to help students become competent in various effective teaching practices with students who have severe disabilities.

Prerequisite/Restriction: Admission to Severe Alternative Teacher Preparation Program and completion of SPED 5630

Semester(s) Traditionally Offered: Fall

SPED 5700 - Orientation to Teaching Young Children with Disabilities
2 credits
Provides an overview of recommended practices related to effective instruction and behavior management strategies for preschool-age children with disabilities. While emphasizing basic teaching skills and knowledge, prepares beginning early childhood special education teachers for the first days and weeks in their classrooms.

Pass/Fail only
Semester(s) Traditionally Offered: Fall
Effective Term
Fall

SPED 5710 - Young Children with Disabilities: Characteristics and Services
3 credits
Provides information about young children with disabilities, including historical development of services, skill areas, family involvement, teaming, and the array of service environments.

Prerequisite/Restriction: Admission to Special Education major or instructor permission

Semester(s) Traditionally Offered: Spring

SPED 5720 - Assessment for Eligibility, Programming and IEP Development
3 credits
Covers principles of standardized assessment, curriculum-based assessment, and direct child observation. Instructs teachers in how to use assessment results to determine student eligibility for special education services and IEP development.

Prerequisite/Restriction: Instructor permission

Cross-listed as: PSY 5720.

Semester(s) Traditionally Offered: Fall

SPED 5730 - Intervention Strategies for Young Children with Disabilities
3 credits
Provides information on curricula, instructional strategies, service environments, and staffing roles for teachers of young children (0-5) with disabilities.

Cross-listed as: SPED 6260.

Semester(s) Traditionally Offered: Fall

SPED 5740 - Effective Instruction I
2 credits
Provides information on curricula, instructional strategies, progress monitoring of children’s IEP goals,
service environments, and staffing roles for preschool special education teachers.

Semester(s) Traditionally Offered: Fall

SPED 5750 - Language and Communication in Diverse Learners
3 credits

Instructs teachers in how to adapt classroom activities and instruction to include and target children with various communication disabilities. Addresses the use of augmentative communication and various curricula to teach emergent literacy skills.

Semester(s) Traditionally Offered: Spring

SPED 5760 - Effective Instruction II
2 credits

Expands on the knowledge of curricula, instructional strategies, and progress monitoring of children’s IEP goals covered in SPED 5740. Addresses young children’s challenging behaviors, as well as the use of functional behavioral assessment and applied behavior analysis principles.

Semester(s) Traditionally Offered: Spring

SPED 5770 - Early Childhood Development and its Relationship to Teaching Young Children with Disabilities
2 credits

Addresses how to use knowledge of typical early childhood development to inform instruction and program development for preschool-age children with disabilities.

Semester(s) Traditionally Offered: Summer

SPED 5780 - Foundations in Special Education and Legal Issues
3 credits

Provides information about disabilities, the historical development of special education services, service-delivery environments, family involvement, teaming, and legal issues concerning the provision of special education services to young children with disabilities.

Semester(s) Traditionally Offered: Fall

SPED 5790 - Special Topics
1-4 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 5810 - Seminar and Field Experiences with Infants and Families
3-4 credits

Reviews infant medical issues, health, safety, syndromes, and low-incidence characteristics. Also includes a practicum component. Students participate, both in the home and in early intervention settings, with families having infants with disabilities.

Semester(s) Traditionally Offered: Spring

SPED 5820 - Preschool Practicum with Young Children with Disabilities in Community Environments
5 credits

Students participate in variety of environments serving preschoolers with disabilities, assist in developing a family service plan, and teach other staff to implement techniques.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

Course Fee: $35.00

SPED 5830 - Seminar Working with Peers on Multidisciplinary Teams
1 credit

Seminar for discussion of topics pertaining to how teams work with children, with and without disabilities, in a practicum. Students are assigned to a team for planning and problem solving throughout the semester.

Semester(s) Traditionally Offered: Fall, Spring

SPED 5840 - Practicum: Working with Young Children with Autism
1 credit

This course will provide majors an opportunity to practice ABA strategies with young children with Autism.

Repeatable for credit

Pass/Fail only

Semester(s) Traditionally Offered: Spring
SPED 5850 - Field Based Applications of Effective Instruction I
1 credit
Provides opportunities for teachers to apply in their classrooms the instructional principles learned in SPED 5740.
Semester(s) Traditionally Offered: Fall

SPED 5860 - Field Based Applications of Effective Instruction II
1 credit
Provides opportunities for teachers to apply in their classrooms the instructional principles learned in SPED 5760.
Semester(s) Traditionally Offered: Spring

SPED 5870 - Field Based Applications of Effective Instruction III
1 credit
Designed to help teachers prepare for student teaching. Identifies teaching skills in need of assistance, then develops action plans. Reviews classroom teaching and portfolio requirements.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall

SPED 5900 - Independent Study
1-3 credits
Prerequisite/Restriction: Instructor permission required
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 5910 - Independent Research
1-3 credits
Prerequisite/Restriction: Instructor permission required
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 6010 - Interventions for Parents and Families
2 credits
Explores special challenges faced by parents and families of at-risk students and students with disabilities. Emphasizes intervention strategies, supportive resources, and parent programs.

SPED 6020 - Design and Evaluation of Instruction
3 credits
Presents curriculum in which diagnosis and instruction are welded as a unit into the regular teaching procedures.
Semester(s) Traditionally Offered: Spring

SPED 6030 - Clinical Practicum: Student Teaching
2-12 credits
Supervised practicum in a clinical teaching setting.
Prerequisite/Restriction: Instructor permission
Pass/Fail only.
Course Fee: $200.00

SPED 6040 - Functional and Augmentative Communication Approaches and Technology
3 credits
Theory and methods of symbolic and nonsymbolic communication acquisition, especially for students with dual sensory impairments. Application of instruction and systems within natural routines.
Semester(s) Traditionally Offered: Fall

SPED 6050 - Issues with the Delivery of Services for Students with Dual Sensory Impairments
2 credits
In-depth presentation of best practices for educational services for students with dual sensory impairments.
Semester(s) Traditionally Offered: Fall

SPED 6060 - Legal Issues in Special Education
3 credits
Provides knowledge of a wide range of legal issues concerning the provision of special education services to students with disabilities.
Semester(s) Traditionally Offered: Fall, Spring, Summer
SPED 6070 - Infusing Mobility and Communication for Students with Dual Sensory Impairments
2 credits
Reviews methods for providing orientation and mobility training to students with dual sensory impairments. Provides methods for infusing these and communication objectives into normal age-based routine activities.

Semester(s) Traditionally Offered: Spring

SPED 6080 - Collaboration and Management of Services for Students with Dual Sensory Impairments
2 credits
Reviews methods of planning and coordination of services for students with dual sensory impairments (e.g., transition, lifestyle planning, transition team coordination). Service management addressing issues of scheduling, monitoring, and training of staff and peers.

Semester(s) Traditionally Offered: Spring

SPED 6090 - Curriculum and Environmental Variations and Management
2 credits
Presents instructional and curricular strategies to promote utilization of residual vision or hearing skills. Overviews tactile cuing and movement-based approaches, with emphasis on integration within natural context and functional activities. Review of model delivery methods.

Semester(s) Traditionally Offered: Spring

SPED 6200 - Characteristics of Children with Emotional and Behavioral Disorders
3 credits
Explores characteristics of children and youth with emotional and behavioral disorders. Covers definitions, prevalence and incidence, classification, causal factors, and facets of disordered behavior.

SPED 6230 - Education of Students with Emotional and Behavioral Disorders
2 credits
Methods of teaching students with emotional and behavioral disorders, including educational strategies and behavioral treatments.

SPED 6260 - Intervention Strategies for Young Children with Disabilities
3 credits
Provides information on curricula, instructional strategies, service environments, and staffing roles for teachers of young children (0-5) with disabilities.

Cross-listed as: SPED 5730.

Semester(s) Traditionally Offered: Fall

SPED 6290 - Teaching Social Skills, Self-Management, and Values
3 credits
Discussion of current research and practices related to teaching social skills, self-management, and values. Explores teaching procedures and curriculum programs.

Semester(s) Traditionally Offered: Spring

SPED 6300 - Effective Practices with Culturally and Linguistically Diverse Populations
3 credits
Students will learn evidence-based evaluation and intervention practices with culturally and linguistically diverse (CLD) populations. Bilingual development, working with CLD families and the impact of culture on development will also be covered.

Semester(s) Traditionally Offered: Fall

SPED 6320 - Seminars in Learning Characteristics of Students with Dual Sensory Impairments
2 credits

Semester(s) Traditionally Offered: Summer

SPED 6410 - Field Studies I: Analysis of Service for Students with Dual Sensory Impairments
2 credits
First of three field experiences for students in the DSI program. Emphasizes team-based review and analysis of services.
SPED 6420 - Field Studies II: Analysis of Service for Students with Dual Sensory Impairments
2 credits
Practicum in integrated programs for students with dual sensory impairments within the context of the model classroom. Emphasizes transdisciplinary methods for assessment, instructional design, and planning skills.

SPED 6430 - Field Studies III: Analysis of Service for Students with Dual Sensory Impairments
2 credits
Advanced practicum in integrated programs for students with dual sensory impairments. Emphasizes an overall management of instructional environment and services.

SPED 6500 - Interdisciplinary Workshop
1-3 credits
Series of self-instructional modules and videos and a variety of elective training. Module topics include developmental disabilities, legal aspects and issues, assessment, intervention, assistive technology, transition, and prevention/intervention for aggression and violence.
Repeatable for credit.

SPED 6510 - Transition to Supported/Competitive Employment
2 credits
This course provides students with knowledge to understand and analyze evidence-based transition to employment for individuals with disabilities.
Corequisite: REH 6520 or SPED 6510
Cross-listed as: REH 6510

SPED 6530 - Transition to Post-Secondary Education
2 credits
This course provides students with knowledge to understand and analyze evidence-based transition to post-secondary education for individuals with disabilities.
Corequisite: REH 6540 or SPED 6540
Cross-listed as: REH 6530

SPED 6540 - Transition Practicum II: Services Leading to Post-Secondary Education
2 credits
This practicum (i.e., field based applied course) provides students with competencies necessary to carry out evidence-based transition services leading to post-secondary education of individuals with disabilities.
Corequisite: REH 6530 or SPED 6530
Cross-listed as: REH 6540

SPED 6550 - Practicum in the Evaluation of Instruction
1-4 credits
Field-based research course contributing toward graduate degrees and supervisory licensure related to the assessment of an ongoing or newly proposed program of instruction.
Repeatable for credit.

SPED 6560 - Improvement of Instruction
1-4 credits
Focuses on effective teaching methodologies, teaching performance, and curriculum decision making.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 6700 - Introduction to Behavioral Research in Education
3 credits

Provides an introduction to behavioral research in education, with a special focus on measurement, observation, and ethics. Discussion of basic single-subject experimental designs. Exploration of how to select appropriate measures and experimental designs.

Repeatable for credit
Semester(s) Traditionally Offered: Fall

SPED 6710 - Concepts and Principles of Behavior Analysis in Education
3 credits

Expands students’ understanding of the theoretical and conceptual framework and experimental research of behavior analysis. Reviews philosophical underpinnings and experimental research in behavior analysis.

Prerequisite/Restriction: SPED 6700

Semester(s) Traditionally Offered: Spring

SPED 6720 - Educational Applications of Behavior Analysis I
3 credits

Expands students’ understanding of behavior analysis, as well as their ability to apply behavior analysis to practical situations.

Prerequisite/Restriction: SPED 6700

Semester(s) Traditionally Offered: Fall

SPED 6730 - Educational Applications of Behavior Analysis II
3 credits

Provides advanced instruction in educational applications of behavior analysis, including assessment and treatment of problem behavior and learning strategies.

Prerequisite/Restriction: SPED 6720

SPED 6740 - Single-Subject Research Methods and Designs
3 credits

Helps students develop competency in analyzing single-subject research. Students draft a written proposal describing research to be carried out in a master's thesis or project.

Prerequisite/Restriction: SPED 6720

SPED 6750 - Supervised Practicum in Applied Behavior Analysis
1-3 credits

Through this supervised practicum, students accrue supervised hours in applied behavior analysis.

Prerequisite/Restriction: SPED 6700

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

SPED 6760 - Supervised Practicum in Applied Behavior Analysis: Seminar
2 credits

This seminar is associated with the practicum in which students receive clinical supervision in applied behavior analysis and should be take in association with SPED 6750.

Semester(s) Traditionally Offered: Fall, Alternate Even Years
SPED 6770 - Coaching and Systems Change
3 credits

This course will give students the skills to facilitate effective academic and behavior support across each tier of need in the school. Students will ascertain strategies in the assessment and intervention of schools, learn to create effective teaming and meeting structures to better support all students, and methods to provide support for individual teachers in their classrooms through evidence-based coaching and walkthrough practices.

Semester(s) Traditionally Offered: Spring, Even Years

SPED 6780 - Ethics & Professional Behavior in Behavior Analysis
3 credits

The purpose of this course is to provide students with instruction and practice in the areas of ethics and professional behavior in the field of behavior analysis.

Semester(s) Traditionally Offered: Summer, odd years

SPED 6790 - Special Topics
1-4 credits

Repeatable for credit.

SPED 6810 - Seminar in Special Education
1-3 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 6900 - Independent Study
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 6910 - Independent Research
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Pass/Fail only

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 6930 - Internship in Special Education
2-10 credits

Professional and supervised intern experience for master’s program.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 6960 - Creative Project
1-6 credits

Culminating experience of MEd program.

Prerequisite/Restriction: Proposal approval by supervisory committee

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 6970 - Thesis
1-9 credits

Culminating experience of MS program.

Prerequisite/Restriction: Proposal approval by supervisory committee

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 6990 - Continuing Graduate Advisement
1-8 credits

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7040 - Literature Review
1-3 credits

Guided experience in conducting a comprehensive and systematic review of literature on a topic related to special education.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

SPED 7050 - Internship in Program Evaluation
1-5 credits
Guided experience in evaluation of educational programs in schools, treatment centers, homes, and communities.

Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7060 - Research Internship
1-5 credits
Guided experience in conducting educational research.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7070 - SPED Grant Writing Internship
1-3 credits
Guided experience in preparation of grant proposals.
Prerequisite/Restriction: Instructor permission
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7080 - Writing for Publication
1-3 credits
In-depth individualized experience in which the student chooses a topic area, then writes a scholarly manuscript which is submitted for publication in a peer-reviewed academic journal.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7090 - Conference Presentation
1-3 credits
Individualized, supervised experience in which the student identifies an important topic and appropriate conference, and then makes a professional conference presentation.

SPED 7330 - Supervision Internship
1-5 credits
Guided experience in supervising undergraduate and master's students during practica, student teaching, and other field experiences.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7340 - College Teaching Internship
1-3 credits
Guided experience in teaching university courses.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7400 - Cultural and Linguistic Diversity and Disability
3 credits
Surveys major issues, topics, and perspectives related to the intersection of cultural/linguistic diversity and disability.
Semester(s) Traditionally Offered: Fall

SPED 7500 - Leadership Education in Disabilities
1-3 credits
Workshop on current interdisciplinary issues and topics in special education and related fields.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall

SPED 7700 - Single-Subject Research Methods and Designs
3 credits
Examines single-subject research methods for applied research, including measurement, design, and analysis issues.
Prerequisite/Restriction: SPED 6700 or instructor permission
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Summer

SPED 7710 - Advanced Single-Subject Research Methods and Design
3 credits
Explores advanced concepts and procedures in within-subject research methods. Builds on knowledge and skills acquired in SPED 7700 regarding scientific questions, measures, research designs, data analysis, and inference. Students analyze research and design, conduct, and report a scientific study.

Prerequisite/Restriction: SPED 7700

Semester(s) Traditionally Offered: Spring

SPED 7720 - Advanced Applied Behavior Analysis
3 credits
Discussion of advanced topics in applied behavior analysis including: functional analysis, function-based interventions, behavioral acquisition procedures, and strategies for promoting generalization and maintenance of behavior. Specific discussion of how applied behavior analytic principles can be used in educational contexts.

Semester(s) Traditionally Offered: Spring

SPED 7730 - Advanced Topics in Behavior Analysis
3 credits
Discusses advanced topics and issues in behavior analysis, including generalization, higher-order learning, variability, novelty, rule-governed behavior, and private events.

Semester(s) Traditionally Offered: Spring

SPED 7750 - Social and Legal Context of Disability
3 credits
This course places the disability experience in its social and legal context by exploring models of disabilities. Key statutes and case law reflecting historical landmarks in disability law and policy will be discussed as the codification of societal values.

Cross-listed as: REH 7750

Semester(s) Traditionally Offered: Fall, Even Years

SPED 7800 - Seminar: Issues in Special Education and Rehabilitation
1-3 credits
Critical analysis of variety of special education and rehabilitation issues and trends. Empirical and theoretical information presented in a seminar format.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7810 - Research Seminar in Special Education and Rehabilitation
1-3 credits
Identification of research problems and discussion of research strategies and methods. Applications of research, data analysis, and statistical concepts.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7820 - Seminar: Special Topics
1-3 credits
In-depth study of special topics in special education and rehabilitation. Seminars examine historical aspects, relevant research, and theoretical positions on selected topics.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7830 - Personnel Preparation in Disability Disciplines
3 credits
Focuses on critical issues in preparing disability professionals in special education, rehabilitation counseling, speech and language, applied behavior analysis and disability studies. Includes an examination of current initiatives in clinical practice, supervision models, overall program development issues and emphasizes research and evidence-based practices.
Semester(s) Traditionally Offered: Spring, Even Years

SPED 7840 - Preliminary Exams
1 credit
Preparation for, and successful completion of, written preliminary examinations. Students demonstrate methodological and analytical skills, as well as scientific foundations, for doctoral studies in special education or applied behavior analysis.

Pass/Fail only.
Semester(s) Traditionally Offered: Summer

SPED 7900 - Independent Study
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7910 - Independent Research
1-3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

SPED 7920 - Doctoral Program Professional Seminar
3 credits

Orients new students to doctoral program, utilizing five goals: (1) familiarize students with requirements of the program and of the Graduate School, (2) acquaint students with the faculty and the resources available, (3) initiate a career planning process, (4) teach students some fundamental concepts underlying scientific research, and (5) teach students to conduct literature reviews.

Semester(s) Traditionally Offered: Fall

SPED 7930 - Internship in Special Education
1-12 credits

Professional, supervised internship experience for doctoral students.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

STAT 1040 - Introduction to Statistics (QL)
QL Quantitative Literacy
3 credits

Descriptive and inferential statistical methods. Emphasis on conceptual understanding and statistical thinking. Examples presented from many different areas.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of 19 or higher or equivalent SAT Math score, AP Calculus AB score of at least 3, Grade of C- or better in MATH 0995 or MATH 1010 (a passing grade of P is acceptable), Grade of C- or better in MATH 1050 or MATH 1100 (a passing grade of P is acceptable), or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer

Effective Term
Spring
STAT 1045 - Introduction to Statistics with Elements of Algebra (QL)
QL Quantitative Literacy
5 credits

Intro to statistics with an emphasis on conceptual understanding and statistical reasoning. Foundational algebra, types of studies, summarizing data, probability, hypothesis testing. NOTE: This course does NOT meet the prerequisites for MATH 1050.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of 16 or higher or equivalent SAT Math score, Grade of C- or better in MATH 0950 (a passing grade of P is acceptable), or satisfactory score on the MATH Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 2000 - Statistical Methods (QI)
QI Quantitative Intensive
4 credits

Introduction to statistical concepts, graphical techniques, probability, distributions, estimation, one and two sample testing, chi-square tests, and simple linear regression, one-way ANOVA.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of at least 25 or equivalent SAT Math score, Grade of C- or better in MATH 1050 or MATH 1100, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 2250 - Internship and Cooperative Studies
1-6 credits

Lower-division internship/cooperative work experience in statistics.

Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 2300 - Business Statistics (QL)
QL Quantitative Literacy
4 credits

Descriptive and inferential statistics, probability, sampling, estimation, tests of hypotheses, linear regression and correlation, chi-square tests, analysis of variance, and multiple regression.

Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of at least 25 or equivalent SAT Math score, Grade of C- or better in MATH 1050 or MATH 1100, or satisfactory score on the Math Placement Exam

Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 2950 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Prior arrangement with specific instructor

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 3000 - Statistics for Scientists (QI)
QI Quantitative Intensive
3 credits

Introduction to statistical concepts, graphical techniques, discrete and continuous distributions, parameter estimation, hypothesis testing, and chi-square tests.

Prerequisite/Restriction: C- or better in MATH 1100 or MATH 1210

Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 4250 - Advanced Internship/Co-op
1-6 credits

Advanced educational work experience in statistics.

Prerequisite/Restriction: Approval of instructor

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 4500 - Methods of Teaching Statistics in Secondary and Middle School
3 credits

Teaching methods course required for all prospective mathematics and statistics composite teaching majors.

Prerequisite/Restriction: MATH 3110; MATH 4200 or
MATH 4310; STAT 2000 or STAT 3000

Corequisite: MATH 4500.

Semester(s) Traditionally Offered: Fall, Spring

STAT 4950 - Directed Reading and Conference
1-3 credits

Prerequisite/Restriction: Prior arrangement with specific instructor

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 5100 - Linear Regression and Time Series (CI/QI)
CI/QI Communications Intensive and Quantitative Intensive
3 credits

Methods for prediction and hypothesis testing in multiple linear regression models, including analysis of variance and covariance, logistic regression, introduction to time series, and signal processing.

Prerequisite/Restriction: C- or better in STAT 2000 or STAT 3000

Semester(s) Traditionally Offered: Fall

STAT 5120 - Categorical Data Analysis
3 credits

Analysis of categorical data, contingency tables, goodness of fit, random sampling, log-linear and logistic regression models, and sampling for proportions, as well as stratified and cluster sampling.

Prerequisite/Restriction: C- or better in STAT 5100

Semester(s) Traditionally Offered: Fall

STAT 5200 - Design of Experiments
3 credits

Design, analysis, and interpretation of experiments, split plots, incomplete blocks, confounding, fractional factorials, nested designs, two- and three-way analysis of variance, covariance, and multiple regression.

Prerequisite/Restriction: C- or better in STAT 2000 or STAT 3000

Semester(s) Traditionally Offered: Spring

STAT 5410 - Applied Spatial Statistics
3 credits

Explores spatial point patterns, spatially continuous data, area (grid) data, nearest neighbor distances, K function, complete spatial randomness, variogram, kriging, correlogram, and Moran’s I. For graduate (6000-level credit), a major project is required.

Prerequisite/Restriction: C- or better in STAT 3000

Knowledge of a statistical package (e.g., S-Plus, R, SAS, etc) or any programming language (e.g., C/C++, FORTRAN, etc) is strongly recommended

Cross-listed as: STAT 6410.

Semester(s) Traditionally Offered: Fall

STAT 5500 - Biostatistics Methods
3 credits

Survey of statistical methods and relevant theory frequently seen in biomedical applications, such as survival analysis, group sequential design, meta-analysis, and nonparametric tests. For graduate (6000-level) credit, major project required.

Prerequisite/Restriction: C- or better in STAT 5100 or STAT 5200

Cross-listed as: STAT 6500

Semester(s) Traditionally Offered: Fall

STAT 5570 - Statistical Bioinformatics
3 credits

Introduction to current statistical issues in bioinformatics, primarily gene expression and sequence analysis, using bioconductor tools. Topics include data normalization and visualization, differential expression, annotation, scoring alignments, HMMs, and phylogenetic trees. For graduate (6000-level) credit, major project required.

Prerequisite/Restriction: C- or better in STAT 5100 or STAT 5200

Cross-listed as: STAT 6570.
Semester(s) Traditionally Offered: Spring
STAT 5600 - Applied Multivariate Statistics (CI)
CI Communications Intensive
3 credits
Introduction to multivariate statistical procedures for data analysis. Topics include MANOVA, principal component analysis, factor analysis, clustering, and classification.
Prerequisite/Restriction: C- or better in STAT 5100

Semester(s) Traditionally Offered: Spring
STAT 5810 - Topics in Statistics
1-3 credits
Repeatable for credit.
Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring
STAT 5820 - Topics in Statistics
1-3 credits
Repeatable for credit.
Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring
STAT 5890 - Problem Solving in Statistics (CI)
CI Communications Intensive
3 credits
Capstone course for Statistics majors, applying course material covered in the undergraduate major.
Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Spring
STAT 5940 - Directed Reading and Conference
1-3 credits
Prerequisite/Restriction: Prior arrangement with specific instructor
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
STAT 5970 - Seminar
1-3 credits
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring
STAT 5980 - Seminar
1-3 credits
Repeatable for credit.

A senior project, required for completion of the departmental honors program and developed under the direction of a departmental faculty member.
Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring, Summer
STAT 5970 - Seminar
1-3 credits
Review of current literature and developments in the field of statistics.
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring
STAT 6100 - Advanced Regression Analysis
3 credits
Explores the following topics in the theory of linear models: least squares estimation, the general linear hypothesis, regression diagnostics for multicollinearity, outliers, and influential points. Also includes discussion of robust regression, nonlinear regression, generalized linear models, ACE, generalized additive models, and regression models for survival data.
Prerequisite/Restriction: C- or better in MATH 5720 and STAT 5100

Semester(s) Traditionally Offered: Fall
STAT 6180 - Time Series
3 credits
Time and frequency domain time series analysis, including Box-Jenkins methods, spectral analysis and filtering, introduction to state space methodology.
Prerequisite/Restriction: C- or better in STAT 5100, MATH 5720

Semester(s) Traditionally Offered: Spring
STAT 6190 - Wavelet Methods for Time Series
3 credits
Explores time series models, time and frequency domain analysis, discrete wavelet transform, and wavelet ANOVA, as well as applications in physics and finance.
Prerequisite/Restriction: C- or better in MATH 5720 and STAT 5100

Semester(s) Traditionally Offered: Spring

STAT 6200 - Analysis of Unbalanced Data and Complex Experimental Designs
3 credits


Prerequisite/Restriction: C- or better in STAT 5200

Semester(s) Traditionally Offered: Spring

STAT 6250 - Graduate Internship/Co-op
1-8 credits

Educational work experience at the graduate level.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

STAT 6410 - Applied Spatial Statistics
3 credits

Explores spatial point patterns, spatially continuous data, area (grid) data, nearest neighbor distances, K function, complete spatial randomness, variogram, kriging, correlogram, and Moran’s I. For graduate (6000-level credit), a major project is required.

Prerequisite/Restriction: C- or better in STAT 3000
Knowledge of a statistical package (e.g., S-Plus, R, SAS, etc) or any programming language (e.g., C/C++, FORTRAN, etc) is strongly recommended

Cross-listed as: STAT 5410.

Semester(s) Traditionally Offered: Fall

STAT 6500 - Biostatistics Methods
3 credits

Survey of statistical methods and relevant theory frequently seen in biomedical applications, such as survival analysis, group sequential design, meta-analysis, and nonparametric tests. For graduate (6000-level) credit, major project required.

Prerequisite/Restriction: C- or better in STAT 5100 or STAT 5200

Cross-listed as: STAT 5500

Semester(s) Traditionally Offered: Fall

STAT 6530 - Modern Nonparametric Statistics
3 credits

Examines topics in resampling methods including: the jackknife and the bootstrap, bias, variance, and confidence intervals. Also explores the following topics in smoothing methods: histograms, kernel density estimates, and local polynomial regression. Includes testing procedures using ranks and empirical cumulative distribution functions.

Prerequisite/Restriction: C- or better in MATH 5710 and STAT 3000

Semester(s) Traditionally Offered: Spring

STAT 6550 - Statistical Computing
3 credits

Survey of algorithms and tools for modern statistical computing. Topics include simulation design and implementation, algorithms for linear regression and subset selection, smoothing algorithms, fast fourier transform, EM algorithm, numerical methods for maximum likelihood estimation, and neural networks.

Prerequisite/Restriction: C- or better in MATH 5720 and knowledge of a programming language

Semester(s) Traditionally Offered: Taught as needed

STAT 6560 - Graphical Methods
3 credits

Statistical graphics and scientific visualization of one, two, and higher dimensional data. Well-chosen and designed graphics are vital in exploratory data analysis, model diagnostics, and data presentation. Includes specific methods and general principles, such as effective use of color and motion.
Prerequisite/Restriction: C- or better in STAT 3000 and programming experience

Semester(s) Traditionally Offered: Taught as needed

STAT 6570 - Statistical Bioinformatics
3 credits

Introduction to current statistical issues in bioinformatics, primarily gene expression and sequence analysis, using bioconductor tools. Topics include data normalization and visualization, differential expression, annotation, scoring alignments, HMMs, and phylogenetic trees. For graduate (6000-level) credit, major project required.

Prerequisite/Restriction: C- or better in STAT 5100 or STAT 5200

Cross-listed as: STAT 5570.

Semester(s) Traditionally Offered: Spring

STAT 6650 - Stat Learning: Multivariate Stat Analysis for Bioinformatics, Data Mining, and Machine Learning
3 credits


Prerequisite/Restriction: C- or better in MATH 5720 and STAT 5100 Programming experience in R or a related language is strongly recommended

Semester(s) Traditionally Offered: Fall

STAT 6710 - Mathematical Statistics I
3 credits

Modes of convergence of random variables, laws of large numbers, characteristic functions, and the central limit theorem.

Prerequisite/Restriction: C- or better in MATH 5720

Semester(s) Traditionally Offered: Fall

STAT 6720 - Mathematical Statistics II
3 credits

Consistency, loss functions, risk, and notions of optimality of estimations. Hypothesis testing and confidence regions. Large sample theory, notions of robustness.

Prerequisite/Restriction: C- or better in STAT 6710

Semester(s) Traditionally Offered: Spring

STAT 6740 - Bayesian Statistics
3 credits

Conditional probability, Bayes’ theorem, conjugate and objective priors, Bayesian inference and decision theory, model averaging, multi-parameter and hierarchical models, sampling and numerical integration methods, linear models, generalized linear models, and models for correlated data.

Prerequisite/Restriction: MATH 5720 and STAT 5100

Semester(s) Traditionally Offered: Spring

STAT 6810 - Topics in Statistics (Topic)
3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

STAT 6820 - Topics in Statistics (Topic)
3 credits

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Taught as needed

STAT 6890 - Practical Statistical Consulting
1-3 credits

Introduction to statistical consulting for graduate students, for faculty in other research departments, and for business, industry, and government.

Prerequisite/Restriction: Instructor permission

Repeatable for credit.

Semester(s) Traditionally Offered: Taught as needed
STAT 6910 - Seminar in Statistics  
1-3 credits  
Review of current literature and developments in statistics.  
Prerequisite/Restriction: Instructor permission  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 6950 - Directed Reading and Conference  
1-4 credits  
Prerequisite/Restriction: Prior arrangement with specific instructor  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 6970 - Thesis and Research  
1-6 credits  
Repeatable for credit.  
Pass/Fail only.  
Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 6990 - Continuing Graduate Advisement  
1-9 credits  
Repeatable for credit.  
Pass/Fail only.  
Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 7110 - Linear Models (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7120 - Linear Models (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7180 - Time Series Analysis (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7190 - Time Series Analysis (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7210 - Experimental Design (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7220 - Experimental Design (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7310 - Business and Industrial Statistics (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7320 - Business and Industrial Statistics (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7510 - Nonparametric Statistics (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7520 - Nonparametric Statistics (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7550 - Computational and Graphical Statistics (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7560 - Computational and Graphical Statistics (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed

STAT 7610 - Multivariate Statistics (Topic)  
3 credits  
Repeatable for credit.  
Semester(s) Traditionally Offered: Taught as needed
Repeatable for credit.

STAT 7620 - Multivariate Statistics (Topic)
3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Taught as needed

STAT 7710 - Mathematical Statistics (Topic)
3 credits

Repeatable for credit.

STAT 7720 - Mathematical Statistics (Topic)
3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Taught as needed

STAT 7730 - Bayesian Statistics and Decision Theory (Topic)
3 credits

Repeatable for credit.

STAT 7740 - Bayesian Statistics and Decision Theory (Topic)
3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Taught as needed

STAT 7810 - Topics in Statistics (Topic)
1-3 credits

Repeatable for credit.

STAT 7820 - Topics in Statistics (Topic)
1-3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Taught as needed

STAT 7970 - Dissertation Research
1-15 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

STAT 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Teacher Education and Leadership

TEAL 1010 - Introduction to Education
3 credits

Students assess themselves as prospective teachers. Opportunities provided for students to observe in public schools (K-12), as well as to complete volunteer service in other community educational settings.

TEAL 3660 - Educational Psychology for Teachers
2 credits

Principles and practices for development of conditions for effective learning.

Prerequisite/Restriction: Admission to Teacher Education

Semester(s) Traditionally Offered: Fall, Spring Effective Term
Fall 2016

TEAL 4600 - Philosophy and Organization of the Middle Level School
3 credits

Focuses on characteristics of young adolescents and how middle level schools can be organized to meet those characteristics through interdisciplinary teaming, advisory programs, and exploratory mini-courses.

Cross-listed as: TEAL 6600.

Semester(s) Traditionally Offered: Fall

TEAL 4610 - Curriculum, Methods and Assessment for the Middle Grades
3 credits

Integrates current approaches to curriculum design with instructional models and assessment of learning
appropriate for grades 5-9.

Cross-listed as: TEAL 6610.

Semester(s) Traditionally Offered: Spring
TEAL 4620 - Service Learning Applications for the Middle Grades
3 credits

Examines literature related to service learning for the middle grades and application of service learning in curriculum.

Cross-listed as: TEAL 6620.

Semester(s) Traditionally Offered: Summer
TEAL 4630 - Methods for Teaching Middle Level Mathematics
3 credits

Teaching methods course for elementary teachers seeking a middle-level (Level II) mathematics endorsement.

Prerequisite/Restriction: Satisfactory completion of MATH 1210 and ELED 4060 or an equivalent elementary mathematics methods course

Cross-listed as: TEAL 6630.

Semester(s) Traditionally Offered: Fall
TEAL 4710 - Language and Cultural Diversity in Education
3 credits

Critically addresses sociocultural and political factors contributing to the education of English language learners, including racism, linguicism, and social distance between schools and families. Analyzes the role of schooling in advancing educational equity and social justice.

Semester(s) Traditionally Offered: Fall, Spring
TEAL 4730 - Educational Linguistics
3 credits

Examines theoretical foundations, functions, and characteristics of first language acquisition and language variation in the Pre-K-12 classroom context. Also emphasizes social context of language in K-12 classroom interaction, instruction, and curriculum. Additional requirements for graduate students.

Cross-listed as: TEAL 6730.

Semester(s) Traditionally Offered: Spring, Fall
TEAL 4745 - Second Language/Literacy Acquisition and Development
3 credits

Explores the dynamic process of second/third language/literacy acquisition, including the influences from linguistic, cognitive, and socio-cultural and dialogical perspectives. Emphasizes the role in which languages, culture, power and the educator play in the second/third language/literacy acquisition in the classroom. Additional requirements for graduate students.

Semester(s) Traditionally Offered: Spring, Fall
TEAL 4760 - Foundations of Dual Language Immersion/ESL/Bilingual Education
3 credits

Explores the historical socio-cultural contexts in which Dual Language Immersion/ESL and Bilingual Education programs have developed in the U.S. Addresses issues of purposes and effectiveness of multilingual programs. Also addresses the special needs and effective strategies to successfully teach the culturally and linguistically diverse student populations that these programs intend to serve.

Semester(s) Traditionally Offered: Spring, Fall
TEAL 4770 - ESOL Instructional Strategies in the Content Areas
3 credits

Focuses on methods which help English language learners in content-area classrooms to increase academic learning and integration into the larger school community.

Prerequisite/Restriction: Admission into a teacher education program

Cross-listed as: TEAL 6770.
TEAL 4780 - Assessment for Language Learners
3 credits
Explores principles and techniques for developing, analyzing, and interpreting assessment measures for English language learners, including oral, writing, reading, and content-area assessment, as well as assessments used in public schools.
Prerequisite/Restriction: Admission into a teacher education program
Cross-listed as: TEAL 6780.

TEAL 5230 - Evidence-based Literacy Instruction for K-6 Learners
3 credits
A study of current theories, research results and evidence-based practices for effectively teaching literacy for K-6 students.
Prerequisite/Restriction: Admission to Teacher Education or Literacy Endorsement Program

TEAL 5320 - Theories and Models of Reading
3
Examination of cognitive and sociocultural research related to K-12 students’ acquisition and use of reading, writing, and learning strategies. Explores implications for school policies and classroom instruction.
Prerequisite/Restriction: Admission to Teacher Education or Literacy Endorsement Program

TEAL 5340 - Adolescent Literacy Development
3
Focuses on instructional practices as well as research and theory related to the literacy development of students in grades 7-12.
Prerequisite/Restriction: Admission to Teacher Education or Literacy Endorsement Program

TEAL 5350 - Reading Assessment and Intervention
3
Covers the correlates and diagnosis of reading problems, as well as methods and materials for remedial reading instruction. This course has a K-12 focus.
Prerequisite/Restriction: Admission to Teacher Education or Literacy Endorsement Program

TEAL 5380 - Effective Writing Instruction
3
Investigates the nature of writing and its theoretical/research base. Primarily focuses on effective methods for teaching and assessing student writing. This course has a K-12 focus.
Prerequisite/Restriction: Admission to Teacher Education or Literacy Endorsement Program

TEAL 5390 - Teaching with Tradebooks in K-12 Classrooms
3
Explores the use of trade books in the elementary and secondary classroom. Focuses on how teachers can use various genres to invite children to read and write.
Prerequisite/Restriction: Admission to Teacher Education or Literacy Endorsement Program
TEAL 5400 - Multiple Talent Approach to Teaching
2 credits
Explores one model for embedding the teaching of creative and critical thinking in regular curricula. Includes practical application requirements. 5000-level and 6000-level syllabi are differentiated.

Cross-listed as: TEAL 6400.

Semester(s) Traditionally Offered: As Needed

TEAL 5420 - Education of Gifted and Talented Learners
2 credits
Multiple perspectives on giftedness. Characteristics and needs of gifted individuals. Overview of services for gifted learners. 5000-level and 6000-level syllabi are differentiated.

Corequisite: TEAL 5430/TEAL 6430.

Cross-listed as: TEAL 6420.

Semester(s) Traditionally Offered: Fall

TEAL 5430 - Practicum: Individual Case Study
1 credit
Supervised study of individual gifted child of student’s choice. 5000-level and 6000-level syllabi are differentiated.

Corequisite: TEAL 5420/TEAL 6420.

Cross-listed as: TEAL 6430.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

TEAL 5440 - Creativity in Education
2 credits
Exploration of theories, research, and strategies concerning creativity, and their application to personal creativity and to improvement of classroom practice. 5000/6000 level syllabi will be differentiated.

Cross-listed as: TEAL 6440

Semester(s) Traditionally Offered: Summer

TEAL 5450 - Social and Emotional Needs of Gifted and Talented Learners
2 credits
Explores social and emotional needs of gifted and talented learners (e.g., asynchrony, perfectionism, underachievement), as well as appropriate educational responses to those needs. Syllabi for 5000-level and 6000-level offerings are differentiated. Course taken at 5000 level may not be used toward a graduate degree in the School of TEAL.

Corequisite: TEAL 5455/TEAL 6455.

Cross-listed as: TEAL 6450.

Semester(s) Traditionally Offered: Spring

TEAL 5455 - Practicum: Gifted Social and Emotional Needs Application
1 credit
Application of appropriate educational responses to social/emotional needs of gifted learners. Syllabi for 5000-level and 6000-level offerings are differentiated. Course taken at 5000 level may not be used toward a graduate degree in the School of TEAL.

Corequisite: TEAL 5450/TEAL 6450.

Cross-listed as: TEAL 6455.

Pass/Fail only.

Semester(s) Traditionally Offered: Spring

TEAL 5460 - Assessment in Gifted Education
2 credits
Introduction to gifted identification. Includes strategies for pre-, formative, and summative assessments with gifted learners. 5000-level and 6000-level syllabi are differentiated.

Corequisite: TEAL 5470/TEAL 6470

Cross-listed as: TEAL 6460.

Semester(s) Traditionally Offered: Spring

TEAL 5470 - Practicum: Gifted Assessment Applications
1 credit
Application of strategies for pre-, formative, and summative assessments with gifted learners. 5000-level and 6000-level syllabi are differentiated.

Corequisite: TEAL 5460/TEAL 6460

Cross-listed as: TEAL 6470

Pass/Fail only.
Semester(s) Traditionally Offered: Spring

TEAL 5560 - Special Topics
0.5-4 credits

Field-based program focusing upon characteristics of effective teaching methodologies, teaching performance, curriculum decision making, value guidelines, and the characteristics of the learner. May be graded with a letter grade or graded as Pass/Fail, as determined by the instructor.

Cross-listed as: TEAL 6560 and EDUC 5560/EDUC 6560.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 5630 - Study Abroad Student Teaching
6 credits

Constitutes six semester credit hours of student teaching in an international setting. Student teachers need to demonstrate competency and professionalism in teaching. Students begin their transition from university student to professional teacher.

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

TEAL 5710 - Linguistic and Cultural Diversity for Teachers
3 credits

Explores social, cultural, and political factors impacting the education of English language learners. Examines the common disconnect between ESL students/families and schools. Strategies for working effectively working with families and communities are examined.

Semester(s) Traditionally Offered: Fall, Spring

TEAL 5730 - Educational Linguistics for Teachers
3 credits

Examines structures of human languages, and how they are learned and used in particular cultures. Also examined are the theoretical foundations and characteristics for first and second language acquisition.

Semester(s) Traditionally Offered: Fall, Spring

TEAL 5745 - Second Language Acquisition for Teachers
3 credits

Examines the multifaceted process of second language acquisition. Emphasized are the linguistic, cognitive, sociocultural and dialogical perspectives. It includes critical perspectives in community, national, and global contexts.

Semester(s) Traditionally Offered: Fall, Spring

TEAL 5760 - Foundations of Bilingual/ESL/Education and Dual Language Immersion for Teachers
3 credits

Explores social, cultural, and historical contexts of ESL/Bilingual Education in the U.S. Structures of ESL, bilingual and dual language immersion are examined.

Semester(s) Traditionally Offered: Fall, Spring

TEAL 5770 - ESL Instruction Across the Curriculum
3 credits

Examines principles and techniques for working effectively with English language learners in the content areas. Includes methods for integrating language learners into the school context.

Semester(s) Traditionally Offered: Fall, Spring

TEAL 5780 - Assessment of Language Learning for Teachers
3 credits

Examines principles and techniques for developing and interpreting assessment measures for language learners in k-12 classrooms. It includes oral, written, reading and content area assessments.

Semester(s) Traditionally Offered: Fall, Spring

TEAL 6010 - Critical Issues in Education
3 credits
Introduces graduate students to critical issues affecting K-12 curriculum, schools, students, and teachers. Course members will engage in inquiry to problematize contemporary issues in K-12 schools and investigate possible alternatives.

Cross-listed as: TEAL 7010.

Semester(s) Traditionally Offered: Summer

TEAL 6020 - Foundations and Change in Early Childhood Education
3 credits

Survey course designed to acquaint professionals with historical and philosophical foundations of early childhood education, leading to examination of contemporary trends and issues.

Cross-listed as: TEAL 7020.

Semester(s) Traditionally Offered: Spring

TEAL 6040 - Designing and Interpreting Measurements for Assessing Student Learning
3 credits

Teachers and instructional supervisors develop their talents for (a) designing and interpreting measurements for monitoring students’ learning and (b) interpreting scores from standardized and government-mandated tests.

Semester(s) Traditionally Offered: Fall

TEAL 6050 - Theories of Instructional Supervision
3 credits

Principles and theoretical base of supervision as they relate to improving instructional practices. Emphasizes research findings and recommended practices. Differentiated syllabi provided between master's and doctoral versions.

Cross-listed as: TEAL 7050

Semester(s) Traditionally Offered: Spring, Summer, Fall

TEAL 6060 - Instructional Leadership: Assessment for Curricular Accountability
3 credits

This course will introduce prospective school leaders to instructional leadership practices in a climate of accountability for curriculum results using various assessment tools and approaches.

Semester(s) Traditionally Offered: Spring, Summer

TEAL 6080 - Leadership and the School Principal
3 credits

Focuses on the school principalship. Provides an overview of the roles and responsibilities of the principal, with emphasis placed on understanding leadership and instructional leadership. Introduces students to knowledge, dispositions, and skills required of successful school principals.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6090 - Theories of Organizational Leadership in Education
3 credits

Introduces prospective school administrators to theories of organizational behavior and practices of managing and leading people within the context of the school organization. Differentiated syllabi provided between master’s and doctoral versions.

Cross-listed as: TEAL 7090.

Semester(s) Traditionally Offered: Summer, Fall

TEAL 6100 - Motivation and Management in Inclusive Settings
3 credits

Leads in-service teachers to develop classroom management strategies for gaining and maintaining students’ cooperation.

Semester(s) Traditionally Offered: Summer, Fall

TEAL 6150 - Foundations of Curriculum
3 credits

Examination of theories, principles, and foundations of curriculum, emphasizing program planning and current curriculum trends.

Semester(s) Traditionally Offered: Spring, Summer, Fall
TEAL 6190 - Theories of Learning and Models of Teaching
3 credits
Reviews the philosophical, psychological, and sociological genealogies behind historical and current theories of learning. Analyzes the approaches, metaphors, and models of teaching that these theories inform.
Semester(s) Traditionally Offered: Spring, Summer, Fall

TEAL 6200 - Curriculum and Issues in Early Childhood Education
2 credits
Examination of current issues and research topics in early childhood education important to the improvement of K-3 programs.
Semester(s) Traditionally Offered: Fall

TEAL 6210 - Graduate Student Teaching
3-10 credits
Thirteen-week culminating practicum in which students assume full-time teaching responsibilities under direction of cooperating teachers in a major field.
Prerequisite/Restriction: Teacher Ed registration block
Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $300.00

TEAL 6220 - Workshop in Early Childhood Education
1-6 credits
Exploration of current topics important in teaching young children.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Summer

TEAL 6230 - Standards and Evidence-Based Literacy Instruction in the Elementary School (K-6)
3 credits
A survey of current standards, theories, research and evidence-based practices for teaching literacy effectively in the elementary school (K-6).

TEAL 6235 - Instructional Implications of Literacy Development
3 credits
This course is designed to provide teachers with an instructional framework for understanding literacy acquisition for K-12 students. Teachers will increase their knowledge and skill in applying instructional practices that support students' literacy learning.
Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016

TEAL 6240 - Workshop in Science Education
1-6 credits
Exploration of current topics in science education.
Repeatable for credit.
Semester(s) Traditionally Offered: Summer

TEAL 6250 - Graduate Cooperative Work Experience
1-10 credits
Cooperative education work experience at a professional level.
Prerequisite/Restriction: Prior approval required
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6255 - Mathematics Curriculum and Instruction
2 credits
Examination of current curriculum standards, trends, and effective methods of instruction for mathematics in middle and secondary schools.
Semester(s) Traditionally Offered: Summer

TEAL 6260 - Supervised Practicum in Early Childhood Education
2 credits
Encompasses approximately 125 hours of supervised practicum in a kindergarten classroom and observations.
in prekindergarten settings. Participants demonstrate their ability to integrate and apply early childhood theory and research in kindergarten.

TEAL 6280 - Instructional Leadership: Instructional Practices for Diverse Learners
3 credits

This course will engage prospective school leaders to learn and evaluate evidence based academics and behavioral instructional methods to improve, diverse, user outcomes.

Semester(s)Traditionally Offered: Fall, Summer

TEAL 6300 - Workshop in Mathematics Education
1-6 credits

Exploration of current topics and methods in mathematics education. In the past, topics have included: Common Core mathematics content, relevant mathematics in rural settings, integration of mathematics and children’s literature.

Cross-listed as: TEPD 5300
Repeatable for credit.
Semester(s) Traditionally Offered: Spring

TEAL 6305 - Secondary English Curriculum and Instruction
2 credits

Examination of current curriculum standards, trends, and effective methods of instruction for English/language arts in middle and secondary schools.

Semester(s) Traditionally Offered: Summer

TEAL 6310 - Integrating Literacy Across the Curriculum
3 credits

This course focuses on evidence-based literacy strategies to facilitate the acquisition of content knowledge.

Semester(s) Traditionally Offered: Fall, Spring

TEAL 6320 - Theories and Models of Literacy
3 credits

This course introduces paradigms and models that shape theories of literacy, literacy research, and literacy instruction. Student will explore various perspectives on literacy and how they broaden the professional discussion to maximize reading and writing.

Semester(s) Traditionally Offered: Spring

TEAL 6350 - Reading Assessment and Intervention
3 credits

Investigates the correlates of reading assessment and intervention practices designed to facilitate effective classroom instruction.

Semester(s) Traditionally Offered: Spring

TEAL 6370 - Supervised Internship in Literacy
3 credits

The Reading Supervision Internship is designed as a field-based practicum comprised of three strands: 1) assessment and evaluation, 2) curriculum, and 3) professional development for educators who are completing the Utah Reading Endorsement Level II and plan to become Reading Specialists.

Prerequisite/Restriction: Level 1 Reading Endorsement, TEAL 7360 and TEAL 6590
Semester(s) Traditionally Offered: Fall, Spring

TEAL 6380 - Effective Writing Instruction
3 credits

Investigates the nature of writing and its theoretical and research base in relation to instruction. Primarily focuses on effective methods for teaching and assessing student writing.

Semester(s) Traditionally Offered: Summer

TEAL 6390 - Teaching with Literature and Informational Texts
3 credits

This course focuses on selecting literature and informational texts to support standards-based language arts and content area instruction. The course will focus on strategies for strengthening students’ comprehension of these texts, building academic language through reading these texts, and selecting from a wide range of texts including those that represent the wide range of cultures and ethnicities in U.S. schools.
Semester(s) Traditionally Offered: Summer

TEAL 6400 - Multiple Talent Approach to Teaching
2 credits

Explores one model for embedding the teaching of creative and critical thinking in regular curricula. Includes practical application requirements. 5000-level and 6000-level syllabi are differentiated.

Cross-listed as: TEAL 5400.

Semester(s) Traditionally Offered: As Needed

TEAL 6410 - Social Foundations of Education
3 credits

Examines current educational issues and trends within contexts of history, philosophy, and cultural foundations.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6420 - Education of Gifted and Talented Learners
2 credits

Multiple perspectives on giftedness. Characteristics and needs of gifted individuals. Overview of services for gifted learners. 5000-level and 6000-level syllabi are differentiated.

Corequisite: TEAL 6430/TEAL 5430.

Cross-listed as: TEAL 5420.

Semester(s) Traditionally Offered: Fall

TEAL 6425 - Cultural Issues in Gifted and Talented Education
3 credits

Explores the issue of under-representation in gifted and talented programs, due to factors of cultural diversity, including ethnicity, poverty, and language. Differentiated syllabi for 6000-level and 7000-level course.

Cross-listed as: TEAL 7425.

Semester(s) Traditionally Offered: Spring

TEAL 6430 - Practicum: Individual Case Study
1 credit

Supervised study of individual gifted child of student’s choice. 5000-level and 6000-level syllabi are differentiated.

Corequisite: TEAL 6420/TEAL 5420.

Cross-listed as: TEAL 5430.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

TEAL 6440 - Creativity in Education
2 credits

Exploration of theories, research, and strategies concerning creativity, and their application to personal creativity and to improvement of classroom practice. 5000/6000 level syllabi will be differentiated.

Cross-listed as: TEAL 5440

Semester(s) Traditionally Offered: Summer

TEAL 6450 - Social and Emotional Needs of Gifted and Talented Learners
2 credits

Explores social and emotional needs of gifted and talented learners (e.g., asynchrony, perfectionism, underachievement), as well as appropriate educational responses to those needs. Syllabi for 5000-level and 6000-level offerings are differentiated. Course taken at 5000 level may not be used toward a graduate degree in the School of TEAL.

Corequisite: TEAL 6455/TEAL 5455.

Cross-listed as: TEAL 5450.

Semester(s) Traditionally Offered: Spring

TEAL 6455 - Practicum: Gifted Social and Emotional Needs Application
1 credit

Application of appropriate educational responses to social/emotional needs of gifted learners. Syllabi for 5000-level and 6000-level offerings are differentiated. Course taken at 5000 level may not be used toward a graduate degree in the School of TEAL.
Corequisite: TEAL 6450/TEAL 5450.

Pass/Fail only.

Semester(s) Traditionally Offered: Spring

TEAL 6460 - Assessment in Gifted Education
2 credits

Introduction to gifted identification. Includes strategies for pre-, formative, and summative assessments with gifted learners. 5000-level and 6000-level syllabi are differentiated.

Corequisite: TEAL 6470/TEAL 5470.

Cross-listed as: TEAL 5460

Semester(s) Traditionally Offered: Spring

TEAL 6465 - Identification Issues in Gifted and Talented Education
3 credits

Explores issues in the identification of individuals as gifted and talented, particularly in relationship to the theory and practice of identification in public school settings. 6000/7000 level syllabus differentiated.

Corequisite: TEAL 6470/TEAL 5470.

Cross-listed as: TEAL 5460

Semester(s) Traditionally Offered: Spring

TEAL 6470 - Practicum: Gifted Assessment Applications
1 credit

Application of strategies for pre-, formative, and summative assessments with gifted learners. 5000-level and 6000-level syllabi are differentiated.

Corequisite: TEAL 6460/TEAL 5460

Cross-listed as: TEAL 5470

Pass/Fail only.

Semester(s) Traditionally Offered: Spring

TEAL 6480 - Methods and Materials in Gifted Education
2 credits

Explores instructional and management models in gifted education. Requires development of instructional materials for use with gifted students.

Corequisite: TEAL 6490

Semester(s) Traditionally Offered: Fall

TEAL 6485 - Program Development in Gifted and Talented Education
3 credits

Investigates principles and models for development and implementation of various service options in gifted and talented education, emphasizing leadership for program development. 6000/7000 level syllabi differentiated.

Cross-listed as: TEAL 7485.

Semester(s) Traditionally Offered: Spring

TEAL 6490 - Practicum: Gifted Strategies Applications
1 credit

Instructional models and materials used in gifted education are applied to the classroom setting.

Corequisite: TEAL 6480

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

TEAL 6495 - Special Topics in Gifted and Talented Education
3 credits

Seminar course in current issues and special topics in gifted and talented education. Differentiated syllabi for 6000-level and 7000-level course.

Prerequisite/Restriction: TEAL 6420/TEAL 5420

Cross-listed as: TEAL 7495.

Repeatable for credit

Semester(s) Traditionally Offered: Fall

TEAL 6500 - School Finance and Resource Management
3 credits

Focuses on generating, allocating, and managing revenues and resources for public schools. Emphasizes law and policy regarding Utah school finance.
Semester(s) Traditionally Offered: Spring, Summer

TEAL 6505 - Science Curriculum and Instruction
2 credits

Examination of current curriculum standards, trends, and effective methods of instruction for science in middle and secondary schools. Emphasizes science program improvement through investigative lab activities.

Semester(s) Traditionally Offered: Summer

TEAL 6521 - Mathematics for Teaching K-8: Numbers and Operations
3 credits

This course, for K-8 teachers, will cover the content of Number and Operations to develop comprehensive understanding of our number system and relate its structure to computation, arithmetic, algebra, and problem solving.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or Equivalent

Cross-listed as: EMTH 5030 and TEPD 5521

Semester(s) Traditionally Offered: Fall

TEAL 6522 - Mathematics for Teaching K-8: Rational Numbers and Proportional Reasoning
3 credits

To provide practicing teachers a deeper understanding of rational numbers, operations with rational numbers, and proportionality, and instructional strategies to facilitate the instruction of this content for elementary students.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or equivalent

Cross-listed as: EMTH 5040 and TEPD 5522

Semester(s) Traditionally Offered: Spring

TEAL 6523 - Mathematics for Teaching K-8: Algebraic Reasoning
3 credits

To provide practicing teachers a deeper understanding of algebraic expressions, equations, functions, real numbers, and instructional strategies to facilitate the instruction of this content for elementary students.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or equivalent

Cross-listed as: EMTH 5050 and TEPD 5523

Semester(s) Traditionally Offered: Fall

TEAL 6524 - Mathematics for Teaching K-8: Geometry and Measurement
3 credits

To provide practicing teachers a deeper understanding of the geometry and measurement context that exists in the state core and instructional strategies to facilitate the instruction of this content.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or equivalent

Cross-listed as: EMTH 5060 and TEPD 5524

Semester(s) Traditionally Offered: Spring

TEAL 6525 - Mathematics for Teaching K-8: Data Analysis and Problem Solving
3 credits

This course will provide practicing teachers a deeper understanding of probability and data representation and analysis.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or equivalent

Cross-listed as: EMTH 5070 and TEPD 5525

Semester(s) Traditionally Offered: Summer

TEAL 6540 - Data-Based Decision Making for School Leaders
3 credits

Prepares prospective school leaders to conduct research and to collect and analyze data for decision making and program evaluation in schools.

Semester(s) Traditionally Offered: Fall
TEAL 6545 - Research for Classroom Teachers  
3 credits

Assists teachers in applying measurement issues and research methods to classroom problems; in locating, interpreting, and using research reports; and in writing research-related papers on teaching.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6550 - Practicum in the Evaluation of Instruction  
1-4 credits

Field-based research study contributing toward graduate degrees. Supervisory licensure related to assessment of ongoing or newly proposed program of instruction.

Repeatable for credit. 
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6551 - Mathematics for Teaching K-8: Assessment and Intervention  
3 credits

To provide practicing teachers a deeper understanding of the various types of assessment and their appropriate use for guiding instruction, intervention and evaluation of student learning.

Prerequisite/Restriction: Bachelor's degree in Elementary Education or equivalent

Cross-listed as: TEPD 5551

Semester(s) Traditionally Offered: Summer

TEAL 6555 - Science Education and the Meaning of Science  
3 credits

Examines the theories and influences shaping the activity of science. Also explores how these theories have been challenged over time, as well as how they influence science education.

Semester(s) Traditionally Offered: Summer

TEAL 6560 - Special Topics  
0.5-4 credits

Field-based program focusing upon characteristics of effective teaching methodologies, teaching performance, curriculum decision making, value guidelines, and the characteristics of the learner. May be graded with a letter grade or graded as Pass/Fail, as determined by the instructor.

Cross-listed as: TEAL 5560 and EDUC 6560/EDUC 5560.  
Repeatable for credit. 
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6570 - Advanced Comprehension Instruction  
3 credits

This course reviews theory, research and practice related to teaching reading comprehension, including vocabulary development, strategy instruction, close reading of complex texts across genres, and fostering motivation for reading.

Semester(s) Traditionally Offered: Spring

TEAL 6580 - Character and Values Education  
2 credits

Overview of research, theory, and practical approaches to values education, emphasizing processes of moral development and socialization.

Semester(s) Traditionally Offered: Summer

TEAL 6590 - Supervising School Reading Program  
3 credits

This course is designed as a field-based practicum designed to increase understanding of administration and supervision of school literacy programs for educators who are completing the Utah Reading Endorsement, Level II and plan to become Reading Specialists.

Prerequisite/Restriction: Level 1 Reading Endorsement

Semester(s) Traditionally Offered: Fall, Spring

TEAL 6600 - Philosophy and Organization of the Middle Level School  
3 credits

Focuses on characteristics of young adolescents and how middle level schools can be organized to meet those characteristics through interdisciplinary teaming, advisory programs, and exploratory mini-courses.
Graduate students have additional course requirements for design and implementation of a project.

Cross-listed as: TEAL 4600.

Semester(s) Traditionally Offered: Fall

TEAL 6610 - Curriculum, Methods, and Assessment for the Middle Grades
3 credits

Integrates current approaches to curriculum design with instructional models and assessment of learning appropriate for grades 5-9. To receive credit for 6610, graduate students design and implement an action research project related to curricular or pedagogical interests, then share their findings in class. Project will include review of literature related to student’s interest.

Prerequisite/Restriction: TEAL 6600

Cross-listed as: TEAL 4610.

Semester(s) Traditionally Offered: Spring

TEAL 6620 - Service Learning Applications for the Middle Grades
3 credits

Examines literature related to service learning for the middle grades and application of service learning in curriculum.

Cross-listed as: TEAL 4620.

Semester(s) Traditionally Offered: Summer

TEAL 6630 - Methods for Teaching Middle Level Mathematics
3 credits

Teaching methods course for elementary teachers seeking a middle-level (Level II) mathematics endorsement.

Prerequisite/Restriction: Satisfactory completion of MATH 1210 and ELED 4060 or an equivalent elementary mathematics methods course

Cross-listed as: TEAL 4630.

Semester(s) Traditionally Offered: Fall

TEAL 6700 - Improvement of Science Instruction
3 credits

For practicing elementary and middle-school teachers or those seeking alternative licensure in science education. Survey of current research in science education and strategies for implementing best practice in classroom settings. Considers a Science/Technology/Society approach to teaching science, as well as the use of action research to improve practice.

Semester(s) Traditionally Offered: Spring

TEAL 6710 - Diversity in Education
3 credits

Analyzes the role of education in a culturally and linguistically diverse society. Examines the place multicultural education and inclusive pedagogies have in advancing educational equity and social justice. Explores multiple ways educators work with and for transnational communities.

Semester(s) Traditionally Offered: Spring, Summer, Fall

TEAL 6720 - Practicum in Science Instruction
1 credit

Optional practicum to be taken semester following enrollment in TEAL 6700.

Semester(s) Traditionally Offered: Spring

Course Fee: $50.00

TEAL 6735 - Systems of Language and Literacy for English Learners
3

This course examines major, concepts, theories and research in second language acquisition and literacy in the classroom. These explorations address how to create classrooms that foster linguistically rich environments that promote culturally responsive and effective teaching for English language learners.
Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2016
TEAL 6740 - School Law
3 credits
Acquaints students with legal issues relating to public education. Considers rights and responsibilities of students, teachers, and educational practitioners. Relates these rights to school programs and operations as determined by state and federal laws and court decisions.

Semester(s) Traditionally Offered: Fall, Summer
TEAL 6750 - Improvement of Mathematics Instruction
2 credits
Examines advanced concepts in curriculum theory and methods of teaching mathematics in the elementary and middle school.

Prerequisite/Restriction: ELED 4060 or teaching experience in elementary or middle school

Semester(s) Traditionally Offered: Spring
TEAL 6755 - Family and Community Involvement for ELs
3 credits
Students will understand the role and contribution of family and community in the cognitive, linguistic and social development of students. Candidates provide support and advocacy for ELs and their families and understand the history, laws, and policies of ESL teaching.

Semester(s) Traditionally Offered: Spring, Summer, Fall
TEAL 6770 - ESOL Instructional Strategies in the Content Areas
3 credits
Focuses on methods which help English language learners in content-area classrooms to increase academic learning and integration into the larger school community.

Prerequisite/Restriction: Admission into a teacher education program

Cross-listed as: TEAL 4770.

Semester(s) Traditionally Offered: Spring, Summer, Fall
TEAL 6780 - Assessment for Language Learners
3 credits
Explores principles and techniques for developing, analyzing, and interpreting assessment measures for English language learners, including oral, writing, reading, and content-area assessment, as well as assessments used in public schools.

Prerequisite/Restriction: Admission into a teacher education program

Cross-listed as: TEAL 4780.

Semester(s) Traditionally Offered: Spring, Summer, Fall
TEAL 6785 - Instructional Practices for English Learners
3 credits
This course focuses on culturally responsive teaching and instructional practices to support English learners' language development and scholastic achievement across subjects, grades, and levels of proficiencies.

Effective Term
Spring 2017
TEAL 6800 - Improvement of Social Studies Instruction
3 credits
Emphasizes contemporary research and practice related to K-12 social studies programs. Examines curriculum and methods of instruction surrounding topics such as the interrelationships between global education, multicultural education, and civic education.

Prerequisite/Restriction: ELED 4050 or teaching experience in elementary or middle school

Semester(s) Traditionally Offered: Summer
TEAL 6840 - Workshop: Intermountain Conference on Education of the Gifted and Talented
1-2 credits
Provides instruction by leading national authorities in gifted and talented education, as well as networking with
educators of the gifted from throughout the Intermountain West.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Summer

TEAL 6850 - Introduction to Leadership in Student Affairs/Higher Education
3 credits

This course provides an introduction to leadership roles in higher education and student affairs agencies and environments.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6860 - Legal and Policy Issues in Higher Education
3 credits

This course introduces students to legal and policy issues in higher education and student affairs.

Semester(s) Traditionally Offered: Fall

TEAL 6880 - Internship in Higher Education/Student Affairs
3 credits

This course provides an internship experience in higher education and student affairs agencies and environments.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6900 - Independent Study
0.5-3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6910 - Independent Research
0.5-3 credits

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6930 - Supervision and Administrative Internship Seminar
2 credits

Jointly (with TEAL 6940 ) provides experience (minimum 250 hours) in supervision and administration in elementary and secondary school settings as they relate to the performances of the six Interstate School Leaders Licensure Consortium (ISLLC) Standards for School Leaders. Registration includes weekly seminar.

Pass/Fail only.
Campus: Main campus and Regional Campuses
Semester(s) Traditionally Offered: Fall, Spring

TEAL 6940 - Supervision and Administrative Internship
1-4 credits

Jointly (with TEAL 6930 ) provides experience (minimum 200 hours) in supervision and administration in elementary and secondary school settings as they relate to the performances of the six Interstate School Leaders Licensure Consortium (ISLLC) Standards for School Leaders.

Repeatable for credit
Pass/Fail only.
Campus: Main campus and Regional Campuses
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6945 - Supervision and Administration Internship Internship
3 credits

Provides experience in supervision and administration in school systems.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 6960 - Master's Creative Project
3 credits

Individually directed creative project, with a focus closely related to coursework or to area of teaching specialization.

Prerequisite/Restriction: Instructor's approval. Only students pursuing the Plan B MEd option should enroll in this course.

Pass/Fail Only
Semester(s) Traditionally Offered: Fall, Spring

TEAL 6970 - Thesis
3-6 credits

Individually directed work in thesis writing, with guidance from committee chair. Designed for use on MA and MS degrees only.
Prerequisite/Restriction: Instructor’s approval
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
TEAL 6980 - Portfolio Project
1-3 credits
Individually directed portfolio for students in the MEd Program. Designed for students to integrate and apply concepts learned in the master's program.

Prerequisite/Restriction: Instructor’s approval
Semester(s) Traditionally Offered: Fall, Spring
TEAL 6990 - Continuing Graduate Advisement
1-9 credits
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
TEAL 7000 - Student Teaching Supervision
1-3 credits
Considers ways and means of providing desirable experiences for student teachers in the public schools. Analysis of roles of classroom teacher and college supervisor.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
TEAL 7010 - Critical Issues in Education
3 credits
Introduces graduate students to critical issues affecting K-12 curriculum, schools, students, and teachers. Course members will engage in inquiry to problematize contemporary issues in K-12 schools and investigate possible alternatives.

Cross-listed as: TEAL 6010
Semester(s) Traditionally Offered: Summer
TEAL 7015 - Orientation to Educational Research
1 credit
An introduction to department faculty and the expectations for consuming and evaluating educational research. Students meet and learn of the research activities of department faculty and review examples of educational research.

Semester(s) Traditionally Offered: Fall, Even Years
Effective Term
Fall 2015
TEAL 7020 - Foundations and Change in Early Childhood Education
3 credits
Survey course designed to acquaint professionals with historical and philosophical foundations of early childhood education, leading to examination of contemporary trends and issues.

Cross-listed as: TEAL 6020.
Semester(s) Traditionally Offered: Spring
TEAL 7050 - Theories of Instructional Supervision
3 credits
Provided between master's and doctoral versions.

Cross-listed as: TEAL 6050.
Semester(s) Traditionally Offered: Spring, Summer, Fall
TEAL 7055 - Internship in Program Evaluation
1-6 credits
Experience in practical aspects of program evaluation through planned, supervised evaluation project participation approved by student's supervisory committee.

Prerequisite/Restriction: Instructor’s approval
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
TEAL 7060 - Assessment and Data Issues for Instructional Leaders
3 credits
This course is a doctoral level class which extends and enriches some of the concepts of the TEAL 6540 course Data Based Decision Making. Students will also focus
more on quality research methods for data and
assessment analysis and study the impact it has for
instructional leaders.

Semester(s) Traditionally Offered: Spring
Effective Term
Fall 2015
TEAL 7065 - Internship in Research
1-6 credits

Experience in conducting research through planned,
supervised research project participation approved by
student's supervisory committee.

Prerequisite/Restriction: Instructor's approval
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
TEAL 7090 - Theories of Organizational Leadership in
Education
3 credits

Introduces prospective school administrators to theories
of organizational behavior and practices of managing and
leading people within the context of the school
organization. Differentiated syllabi provided between
master's and doctoral versions.

Cross-listed as: TEAL 6090.

Semester(s) Traditionally Offered: Summer, Fall
TEAL 7100 - Practices of Instructional Supervision
2 credits

Application of instructional supervisory theories and
practices of supervisory behaviors as they relate to
improvement of instruction.

Prerequisite/Restriction: TEAL 7050

Semester(s) Traditionally Offered: Summer
TEAL 7150 - Curriculum Theory
3 credits

Examines the origins and development of major
historical and contemporary curriculum theories.
Considers how these theories affect the organization of
the school, while also affecting the lives and work of
teachers, administrators, students, and the community.

Prerequisite/Restriction: TEAL 6150

Semester(s) Traditionally Offered: Summer, Odd
Numbered Years
TEAL 7300 - Historical, Social, and Cultural Foundations
of Education
3 credits

Examines relationship of modern school in terms of
historical, cultural, and social foundations of education.

Prerequisite/Restriction: TEAL 6410, TEAL 7020/TEAL
6020, or instructor permission

Semester(s) Traditionally Offered: Fall
TEAL 7310 - Teaching-Learning Foundations in
Education
3 credits

Seminar in which learning theories and teaching
models/skills are demonstrated, critically examined, and
integrated.

Prerequisite/Restriction: Graduate course in educational
psychology or equivalent

Semester(s) Traditionally Offered: Spring
TEAL 7320 - Theories and Models of Reading
3 credits

This course introduces macro-level theoretical
paradigms and mid-range theoretical models that shape
theories of literacy, literacy research, and literacy
instruction. By identifying these theories and models,
graduate students will develop a more informed
definition of literacy instruction and research.

Semester(s) Traditionally Offered: Spring
TEAL 7321 - Foundations of Language and Literacy
3 credits

Foundations of language and literacy provides
foundational knowledge and advanced readings in
linguistics, language acquisition, psycho-linguistics,
sociolinguistics, pragmatics, and semiotics as well as
reading on race, class, and culture to the language
content knowledge of those preparing to become researchers and university faculty in literacy education.

Semester(s) Traditionally Offered: Fall

TEAL 7322 - Research in Literacy
3 credits

Students will read, discuss, present, and analyze classical and current published research across a wide range of topics in literacy.

Semester(s) Traditionally Offered: Fall, Spring alternate years

TEAL 7323 - Literacy Education Teacher Training and Development
3 credits

This is an advanced course examining theories, principles, and foundations of literacy teacher training and teacher development. Students will develop expertise in designing and teaching literacy methods courses, apply principles of effective professional development, and create literacy experiences for teachers.

Semester(s) Traditionally Offered: Taught Alternate Years

TEAL 7324 - Advanced Studies in Literacy Assessment and Intervention
3 credits

Literacy assessment and intervention for school-age children and adolescents; provides advanced practice on methods of identifying, analyzing, and planning assessment and intervention to enhance literacy growth.

Semester(s) Traditionally Offered: Taught Alternate Years

TEAL 7325 - Instructional Leadership
3 credits

Emphasizes application of theory, research, and effective practice to instructional and curricular improvement. Examines educational change.

Semester(s) Traditionally Offered: Fall

TEAL 7326 - Designing and Conducting Literacy Research: A Capstone Experience
3 credits

This is an advanced course examining the design, methods, analytical tools and reporting of literacy research. Students will develop expertise in designing and critiquing literacy research as a part of their dissertation proposal development.

Semester(s) Traditionally Offered: Taught Alternate Years

TEAL 7330 - Internship in Supervision
1-3 credits

Directed experiences in supervision with selected public school personnel in approved settings. Experiences arranged by student's graduate committee.

Prerequisite/Restriction: Instructor's approval

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 7350 - Internship in Curriculum Development
1-3 credits

Directed experiences in curriculum development with selected public school personnel in approved settings. Experiences arranged by student's graduate committee.

Prerequisite/Restriction: Instructor's approval

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 7360 - Research in Literacy
3 credits

A comprehensive study of literacy research methodologies, research syntheses, and empirical research studies published in literacy.

Prerequisite/Restriction: Instructor permission

Semester(s) Traditionally Offered: Fall, Spring

TEAL 7425 - Cultural Issues in Gifted and Talented Education
3 credits

Explores the issue of under-representation in gifted and talented programs, due to factors of cultural diversity,
including ethnicity, poverty, and language. Differentiated syllabi for 6000-level and 7000-level course.

Cross-listed as: TEAL 6425.

Semester(s) Traditionally Offered: Spring

TEAL 7465 - Identification Issues in Gifted and Talented Education
3 credits

Explores issues in the identification of individuals as gifted and talented, particularly in relationship to the theory and practice of identification in public school settings. 6000/7000 level syllabus differentiated.

Cross-listed as: TEAL 6465.

Semester(s) Traditionally Offered: Spring

TEAL 7485 - Program Development in Gifted and Talented Education
3 credits

Investigates principles and models for development and implementation of various service options in gifted and talented education, emphasizing leadership for program development. 6000/7000 level syllabi differentiated.

Cross-listed as: TEAL 6485.

Semester(s) Traditionally Offered: Fall

TEAL 7495 - Special Topics in Gifted and Talented Education
3 credits

Seminar course in current issues and special topics in gifted and talented education. Differentiated syllabi for 6000-level and 7000-level course.

Prerequisite/Restriction: TEAL 6420/TEAL 5420

Cross-listed as: TEAL 6495.

Repeatable for credit

Semester(s) Traditionally Offered: Fall

TEAL 7500 - Interdisciplinary Workshop
1-2 credits

Repeatable for credit

Semester(s) Traditionally Offered: As Needed

TEAL 7540 - College Teaching Apprenticeship
1-3 credits

Provides guided experience in teaching university courses.

Prerequisite/Restriction: Admission to PhD or EdD program and approval of department head and major advisor

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 7550 - Evaluation of Supervisory Performance
1-4 credits

Program for graduate students to become acquainted with and demonstrate competency in supervision.

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 7551 - Mathematics Education Research Foundations
3 credits

Critical examination of research impacting mathematics education, including historical, social, political, and economic contexts and foundations of mathematics. Reviews various historical literature and theoretical perspectives, including topics on mathematics teaching, learning, culture, policy, trends, technology, and student outcomes.

Prerequisite/Restriction: Admission to the PhD or EdD Program in the School of Teacher Education and Leadership

Semester(s) Traditionally Offered: Spring

TEAL 7552 - Mathematics Education Learning Theory
3 credits

Critical examination of the historical development of cognitive theories of mathematical learning, including the influence of selected theorists on mathematical thinking, teaching, and assessment. Explores mathematical learning models, including research literature on numeracy, brain research, learning trajectories, differentiation, and equity.
Prerequisite/Restriction: Admission to the PhD or EdD Program in the School of Teacher Education and Leadership

Semester(s) Traditionally Offered: Summer

TEAL 7553 - Mathematics Education Curriculum Content and Evaluation
3 credits

Reviews and evaluates the content of the school mathematics curriculum at the state, national, and international levels, including research on specific mathematics curriculum topics. Emphasizes research findings and recommended practices on the development and evaluation of mathematics curriculum.

Prerequisite/Restriction: Admission to the PhD or EdD Program in the School of Teacher Education and Leadership

Semester(s) Traditionally Offered: Fall

TEAL 7554 - Mathematics Education Teacher Preparation and Pedagogy
3 credits

Emphasizes the application of theory, research, and pedagogical strategies to the preparation of mathematics teachers and teacher leaders. Applies principles of effective professional development, develops expertise in designing and teaching mathematics methods courses, and creates mathematics experiences for teachers.

Prerequisite/Restriction: Admission to the PhD or EdD Program in the School of Teacher Education and Leadership

Semester(s) Traditionally Offered: Spring

TEAL 7555 - Mathematics Education Current Issues and Policy
3 credits

Reviews and critiques current issues and policy documents in mathematics education nationally and internationally, including research trends, emerging theories, and political policies influencing mathematics education. Synthesizes cutting-edge research to develop a theoretical framework and original research questions and inquiries.

Prerequisite/Restriction: Admission to the PhD or EdD Program in the School of Teacher Education and Leadership

Semester(s) Traditionally Offered: Summer

TEAL 7556 - Mathematics Education Research Design and Assessment
3 credits

Examines a variety of research designs applicable to mathematics education, including teaching experiments, classroom research, clinical studies, and mathematical modeling. Evaluates mathematics assessments and instrumentation and considers the role of assessments nationally and internationally. Provides experience in conceptualizing a research project.

Prerequisite/Restriction: Admission to the PhD or EdD Program in the School of Teacher Education and Leadership

Semester(s) Traditionally Offered: Fall

TEAL 7557 - Advanced Research Design in Mathematics Education and Leadership
3 credits

This course prepares students for writing the dissertation proposal and present and defend their research proposals. Students will participate in groups/class discussions, will write extensively, and prepare/engage in a mock dissertation proposal defense.

Prerequisite/Restriction: Admission to the PhD Program in the School of Teacher Education and Leadership

Semester(s) Traditionally Offered: Taught alternate, odd numbered year, spring semesters

Effective Term
Spring

TEAL 7810 - Research Seminar
1-3 credits

Identification of research problems and critical issues, consideration of critical issues and research methods, and application of data analysis procedures under faculty direction.
Repeatable for credit. Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 7900 - Independent Study
0.5-3 credits

Repeatable for credit. Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 7910 - Independent Research
0.5-3 credits

Repeatable for credit. Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 7970 - Dissertation Research for Students in the Research and Evaluation Specialization
1-18 credits

Dissertation research for students in the Curriculum and Instruction specialization.

Repeatable for credit. Pass/Fail only. Semester(s) Traditionally Offered: Fall, Spring, Summer

TEAL 7990 - Continuing Graduate Advisement
1-12 credits

Provides multiple cultural and historical perspectives on giftedness and talent. Explores characteristics of gifted individuals, with emphasis on identifying needs. Intended for practicing teachers.

Corequisite: TEPD 5430

TEPD 5430 - Practicum: Individual Case Study for Practitioners
1 credit

Practicum experience in association with TEPD 5420. Requires intensive supervised study of gifts and talents of individual child of student's choice.

Corequisite: TEPD 5420

Pass/Fail only

TEPD 5435 - Curriculum Development in the Education of Gifted and Talented Learners for Professional Educators
2 credits

Explores curriculum models used in gifted education and the relationship between core curriculum and curriculum for gifted level learners. Requires development of curricular materials for use with gifted students.

Corequisite: TEPD 5445

Semester(s) Traditionally Offered: Fall, Spring, Summer

Teacher Education Professional Development

TEPD 5300 - Workshop in Mathematics Education
1-6 credits

Exploration of current topics and methods in mathematics education. In the past, topics have included: Common Core mathematics content, relevant mathematics in rural settings, integration of mathematics and children's literature.

Cross-listed as: TEAL 6300

Repeatable for credit. Pass/Fail only. Semester(s) Traditionally Offered: Fall, Spring, Summer

TEPD 5420 - Education of Gifted and Talented Learners of Professionals
2 credits

Explores theories, research, and strategies concerning creativity, and their application to personal creativity and to improvement of classroom practice. Intended for practicing teachers.

TEPD 5445 - Practicum: Curriculum Writing in the Education of Gifted and Talented Learners by Professional Educators
1 credit

Requires application of models used in curriculum for gifted and talented learners to the writing of curriculum materials for use in classrooms with gifted and talented students.
Corequisite: TEPD 5435

Pass/Fail Only
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEPD 5450 - Social and Emotional Needs of Gifted and Talented Learners for Professional Educators
2 credits

Explores social and emotional needs of gifted and talented learners (e.g., asynchrony, perfectionism, underachievement), as well as appropriate educational responses to those needs. Intended for practicing teachers.

Corequisite: TEPD 5455

TEPD 5455 - Practicum: Gifted Social and Emotional Needs Application for Professional Educators
1 credit

Requires application of appropriate educational responses to social and emotional needs of gifted learners.

Corequisite: TEPD 5450

Pass/Fail Only

TEPD 5460 - Assessment in Gifted Education for Professional Educators
2 credits

Provides introduction to identifying students as gifted, creative, and talented. Presents strategies of pre-assessment, formative assessment, and summative assessment with gifted level learners. Intended for practicing teachers.

Corequisite: TEPD 5470

TEPD 5470 - Practicum: Gifted Assessment Applications for Professional Educators
1 credit

Required applications of strategies for pre-assessment, formative assessment, and summative assessment with gifted level learners in classroom settings. Intended for practicing teachers.

Corequisite: TEPD 5460

Pass/Fail only

TEPD 5480 - Methods and Materials in Gifted Education for Professional Educators
2 credits

Explores instructional and management models in gifted education. Requires development of instructional materials for use with gifted students.

Corequisite: TEPD 5490

TEPD 5490 - Practicum: Gifted Strategies Applications for Professional Educators
1 credit

Instructional models and materials used in gifted education are applied to the classroom setting. Intended for practicing teachers.

Corequisite: TEPD 5480

TEPD 5521 - Mathematics for Teaching K-8: Numbers and Operations
3 credits

This course, for K-8 teachers, will cover the content of Number and Operations to develop comprehensive understanding of our number system and relate its structure to computation, arithmetic, algebra, and problem solving.

Prerequisite/Restriction: Bachelors Degree in Elementary Education or Equivalent

Cross-listed as: EMTH 5030 and TEAL 6521

Semester(s) Traditionally Offered: Fall

TEPD 5522 - Mathematics for Teaching K-8: Rational Numbers and Proportional Reasoning
3 credits

To provide practicing teachers a deeper understanding of rational numbers, operations with rational numbers, and proportionality, and instructional strategies to facilitate the instruction of this content for elementary students.

Prerequisite/Restriction: Bachelors Degree in
Elementary Education or equivalent

Cross-listed as: EMTH 5040 and TEAL 6522

Semester(s) Traditionally Offered: Spring

TEPD 5523 - Mathematics for Teaching K-8: Algebraic Reasoning
3 credits

To provide practicing teachers a deeper understanding of algebraic expressions, equations, functions, real numbers, and instructional strategies to facilitate the instruction of this content for elementary students.

Prerequisite/Restriction: Bachelor's degree in Elementary Education or equivalent

Cross-listed as: EMTH 5050 and TEAL 6523

Semester(s) Traditionally Offered: Fall

TEPD 5524 - Mathematics for Teaching K-8: Geometry and Measurement
3 credits

To provide practicing teachers a deeper understanding of the geometry and measurement context that exists in the state core and instructional strategies to facilitate the instruction of this content.

Prerequisite/Restriction: Bachelor's degree in Elementary Education or equivalent

Cross-listed as: EMTH 5060 and TEAL 6524

Semester(s) Traditionally Offered: Spring

TEPD 5525 - Mathematics for Teaching K-8: Data Analysis and Problem Solving
3 credits

This course will provide practicing teachers a deeper understanding of probability and data representation and analysis.

Prerequisite/Restriction: Bachelor's degree in Elementary Education or equivalent

Cross-listed as: EMTH 5070 and TEAL 6525

Semester(s) Traditionally Offered: Summer

TEPD 5551 - Mathematics for Teaching K-8: Assessment and Intervention
3 credits

To provide practicing teachers a deeper understanding of the various types of assessment and their appropriate use for guiding instruction, intervention and evaluation of student learning.

Prerequisite/Restriction: Bachelor's degree in Elementary Education or equivalent

Cross-listed as: TEAL 6551

Semester(s) Traditionally Offered: Summer

TEPD 5560 - Special Topics
.5-4 credits

Field-based program focusing upon characteristics of effective teaching methodologies, teaching performance curriculum decision making, value guidelines, and the characteristics of the learner. Intended for practicing professionals.

Repeatable for credit

TEPD 5710 - Linguistic and Cultural Diversity for Practicing Teachers
3 credits

Critically addresses sociocultural and political factors contributing to the education of ELLs, including whiteness, racism, and the common distances between schools and ESL students and their families. Teachers will examine the multicultural environments in their schools and make recommendations for improvement.

TEPD 5730 - Educational Linguistics for Practicing Teachers
3 credits

Investigates ways in which human languages are structured, how they change, how they reflect the cultures in which they are used, and how they are learned. Teachers will use this information to analyze student work for developing second language skills.

TEPD 5745 - Second Language Acquisition for Practicing Teachers
3 credits
Critically explores the processes of second/third language acquisition including influences from linguistic, cognitive, sociocultural and dialogical perspectives, emphasizing the roles language, culture, power and the educator play in the process. Teachers will learn pedagogy appropriate for ELLs.

TEPD 5760 - Foundations of ESL/Bilingual Education for Practicing Teachers
3 credits
Explores sociocultural and historical contexts in which ESL/Bilingual Education has developed in the US. Varied language assistance programs and diverse language learners are addressed. Teachers will examine state, district, and school programs for language learners and make recommendations for improvement.

TEPD 5770 - ESOL Instructional Strategies for Practicing Teachers
3 credits
Focuses on strategies which help English language learners in content area classrooms increase academic learning and literacy. Teachers will be able to practice strategies learned in this class with their ESL students.

TEPD 5780 - Assessment of ELLs for Practicing Teachers
3 credits
Principles and techniques for developing and interpreting assessment measures for language learners. Explores assessment requirements for public schools, intensive language programs, and higher education. Teachers will evaluate existing assessment tools and make improvement with the knowledge they gain in this class.

Technology and Engineering Education

TEE 1000 - Orientation to Technology and Engineering Education
3
This course will introduce students to teaching in the areas of Technology and Engineering Education (TEE) and Career and Technical Education (CTE). Students will explore professional teaching opportunities and learn what is needed to obtain a set of professional credentials.

Semester(s) Traditionally Offered: Fall

TEE 1010 - Communications Technology
3 credits
Introduction to tools, materials, equipment, and processes used to transmit and receive messages. Major emphasis on hardware, software, communications, and the digital age.

Semester(s) Traditionally Offered: Fall

TEE 1020 - Energy, Power, Transportation Systems
Control Technology
3 credits
Exploration of the concepts and processes relating to the control and automation (both hard and programmable) of technical systems in the areas of energy and power, transportation, and agricultural and related biotechnologies.

Semester(s) Traditionally Offered: Spring
Course Fee: $20.00

TEE 1030 - Material Processing Systems
3 credits
Introduction to properties of industrial materials (metallic, polymeric, ceramic, and composite), processes used to produce standard stock and finished products, and the use of precision measuring instruments in manufacturing.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $30.00

TEE 1040 - Construction and Estimating
3 credits
Overview of construction industry and its practices. Reviews four major parts of construction industry, including: (1) Inputs: materials; (2) Process: design and building of structures; (3) Outputs: sites, buildings, etc.; and (4) Feedback: effects of building systems. Provides prospective technology education teachers with opportunity to study and perform activities related to the field of construction and estimating. At completion of course, students should be able to demonstrate knowledge and skills required to implement a construction technology program.
Semester(s) Traditionally Offered: Spring

TEE 1200 - Computer-Aided Drafting and Design
3 credits

Provides students with ability to accurately produce basic engineering, 2-D, and pictorial drawings using traditional and computer-aided drafting techniques. Introduction to drafting fundamentals and equipment associated with the drafting industry, including drawings, reproductions, and computer-aided techniques.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $30.00

Page: 1 <- Back 10 ... 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64

Technology and Engineering Education

TEE 1640 - Introduction to Welding
3 credits

Theory of Oxy-Acetylene Welding, Shielded-Metal Arc Welding, and Gas Metal Arc Welding.

Semester(s) Traditionally Offered: Fall

TEE 2020 - Computer-Integrated Manufacturing Systems
3 credits

Introduction to principles, operations, and applications of automated manufacturing systems, including: data acquisition and controls, CNC, CAD/CAM, and robotics.

Prerequisite/Restriction: TEE 1030, TEE 1200

Semester(s) Traditionally Offered: Spring
Course Fee: $25.00

TEE 2220 - Civil Engineering and Architecture
3 credits

Introduction to fields of civil engineering and architecture. Software applications used to solve problems and communicate solutions. Topics include: project planning, site planning, building design, and project documentation and presentation.

Prerequisite/Restriction: TEE 1200; MATH 1050 or higher mathematics course or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Spring
Course Fee: $15.00

TEE 2230 - Advanced Materials and Processing Systems
3 credits

This course is designed to provide an overview of advanced materials such as composites, plastics, and 3d printed materials and provide instruction on proper procedures associated with manufacturing with these materials. It is an introductory course into the materials and processes associated with polymer composite structures, components and design. Emphasis will be placed on material properties, manufacturing process and safety. Hands on lab activities will supplement classroom content. This course provides students with the fundamentals of composite theory. Topics include the materials, equipment, processes, components and design of polymer composite structures.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

TEE 2240 - Analog Devices and Circuits
3 credits

Study of differential amplifiers; operational amplifiers; regulators; and generator instrumentation amplifier, multiplier, and active filters.

Prerequisite/Restriction: TEE 2310

Corequisite: TEE 2400.
**TEE 2300 - Electronic Fundamentals (QI)**

**QI Quantitative Intensive**

4 credits

Study and application of DC and AC concepts, semiconductors, digital electronics, and microcomputers.

Prerequisite/Restriction: MATH 1050 or higher mathematics course or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $27.00

**TEE 2310 - AC/DC Circuits**

2 credits

Study of AC/DC principles beyond those taught in TEE 2300. Includes network theorems, capacitance, inductance, impedance, reactance, resonance, and transformers.

Prerequisite/Restriction: TEE 2300

Semester(s) Traditionally Offered: Spring

**TEE 2320 - Electronic Drafting**

2 credits

Study of electronic drafting practices. Students exposed to various areas of electronic drafting and fabrication.

Prerequisite/Restriction: TEE 2300

Semester(s) Traditionally Offered: Fall

**TEE 2360 - Digital Circuits**

3 credits

Logic circuits, combinational and repeated circuits, counters, shifts registers, state tables, PLD’s, and digital computer simulations.

Prerequisite/Restriction: TEE 2300 or equivalent

Semester(s) Traditionally Offered: Fall

**TEE 2370 - Computer and Microprocessor Programming**

3 credits

Introduction to microprocessors and computers. Study of machine language programming, assemblies and cross assemblies, emulators, and input and output devices.

Prerequisite/Restriction: TEE 2300

Semester(s) Traditionally Offered: Spring

**TEE 2400 - Active Devices and Circuits**

3 credits

Study of diodes; transistor principles, including semiconductor theory, bipolar, and field effect device characteristics; and modern thyristor devices.

Prerequisite/Restriction: TEE 2310

Semester(s) Traditionally Offered: Fall

**TEE 2660 - Principles of Engineering Education**

3 credits

Prepares students to teach pre-engineering in the high school environment. Topics include the engineering design process and reliability, engineering systems, statics and dynamics, and materials.

Prerequisite/Restriction: MATH 1060 or AP Calculus AB score of 3 or higher; and TEE 1200 (or equivalent)

Semester(s) Traditionally Offered: Spring

Course Fee: $25.00

**TEE 2850 - Statics and Strength of Materials**

3 credits

Engineering technology course covering resultants and equilibrium of force systems; moments of inertia; method of work; stress, strain, and deflection due to tension, compression, and torsion; and Mohr's circle for stress and strain.

Prerequisite/Restriction: MATH 1050 and MATH 1060; or AP Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Spring

**TEE 3040 - Engineering Systems**

3 credits

Prepares students to teach engineering at the secondary
level. Includes basic overview of math concepts needed
to successfully teach engineering, problem solving,
teamwork, design, technical communication, and
engineering fundamentals. Through use of open-ended
problem solving methodologies, students receive hands-
on experience while teaching concepts of statics,
dynamics, thermodynamics, electrical circuits, and
engineering economics.

Semester(s) Traditionally Offered: Fall, Spring

TEE 3050 - Computer Systems and Networking
3 credits

Introduction to modern graphic and electronic
communication systems. Emphasizes design,
development, production, and dissemination of both
electronic and graphic messages. Covers major concepts,
including desktop publishing, and audio and video
production techniques.

Semester(s) Traditionally Offered: Fall
Course Fee: $20.00

TEE 3070 - K-8 Technology and Engineering Education
3

Introduction to the content area of technology and
engineering education and its relationship with science
and mathematics as an integrated STEM curricula in
grades K-8. Emphasis will be placed on developing,
teaching, and managing technology and engineering
design based activities.

Semester(s) Traditionally Offered: Fall
Course Fee: $20.00
Effective Term
Fall 2015

TEE 3200 - Methods of Teaching Engineering and
Technology Education I
3 credits

Classroom laboratory practicum for design, practice, and
performance of technology education demonstrations
and lab activities.

Prerequisite/Restriction: TEE 1000
Corequisite: TEE 3300.

Semester(s) Traditionally Offered: Spring

TEE 3230 - Machine and Production Drafting
3 credits

Teaches students to accurately produce both design
drawings and working drawings. Explores techniques,
symbols, and conventions used to represent gears, cams,
jigs, and fixtures. Also includes advanced techniques of
production drawing, emphasizing Geometric
Dimensioning and Tolerancing.

Prerequisite/Restriction: TEE 1200; MATH 1050 or AP
Calculus AB score of 3 or higher

Semester(s) Traditionally Offered: Fall

TEE 3240 - Technical Illustration
3 credits

In-depth study of technical illustration. Includes
preparation of pictorial drawings with rendering added.
Explores industrial and architectural environments.
Introduces rendering and animation software,
emphasizing three-dimensional modeling.

Prerequisite/Restriction: TEE 1200

Semester(s) Traditionally Offered: Spring

TEE 3270 - Advanced Computer-Aided Drafting
3 credits

Designed to enhance CADD productivity, encourage
customization, and introduce students to advanced CADD
techniques, including programming and introduction to
parametric design.

Prerequisite/Restriction: TEE 1200

Semester(s) Traditionally Offered: Spring

TEE 3300 - Clinical Experience I
1 credit

Field-based experiences in secondary schools. Students
complete 30 hours of tutoring students and assist
teachers with managerial, clerical, and other professional
tasks.

Prerequisite/Restriction: TEE 1000 and Admission into
Teacher Education
Corequisite: TEE 3200.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

TEE 3380 - Microprocessor and Computer Interfacing
3 credits

Microcomputer interface applications, including digital system interface, serial and parallel interfacing, and D/A and A/D converters. P.

Prerequisite/Restriction: TEE 2240, TEE 2370

TEE 3390 - Microcontrollers
3 credits

Study of microcontrollers and applications. Includes programming and building circuits.

Prerequisite/Restriction: TEE 3380

TEE 3400 - Communication Circuits
3 credits

Introduction to radio frequency communication circuits. Includes oscillators, modulation, transmitters, receivers, transmission lines, antennas, RF propagation, digital signal processing, GPS, and spread spectrum.

Prerequisite/Restriction: TEE 2300 and TEE 2400

TEE 3440 - Science, Technology, and Modern Society (DSC)
3 credits

Designed to challenge students from all academic majors to develop an understanding of the dynamic interaction between science, technology, and society. Explores responsibility of humans for directing the utilization of technology as a creative enterprise.

Cross-listed as: ASTE 3440.

TEE 3510 - Introduction to Networking
3 credits

Study of hardware and software required to build, install, maintain, and support a local area network. Emphasizes laboratory applications.

Semester(s) Traditionally Offered: Fall

TEE 3710 - Electronics/Computer Design I
1 credit

Students select and plan a senior project. Requires written proposal, including technical description of the project and management plans.

Prerequisite/Restriction: TEE 2320 (may be taken concurrently)

TEE 3740 - Facility and Equipment Maintenance
3 credits

Systems approach to facility, equipment, and tool maintenance, including principles of woodworking, machine construction, adjustment, and sharpening.

TEE 3900 - Principles and Objectives of Career and Technical Education
3 credits

Comprehensive study of philosophy and purposes of career and technical education programs and their place in the total program of modern education.

TEE 3930 - Evaluation of Career and Technical Education
2 credits

Factors for evaluation of attitudes, skills, work habits, technical information, and instrument construction.

TEE 4210 - Cognition and Evaluation of Student Learning in Career and Technical Education
3 credits

Overview of the various methods used to measure and evaluate student achievement, within the cognitive, affective, and psychomotor domains with emphasis on performance based and authentic assessment specific to the Career and Technical Education classroom.
Prerequisite/Restriction: Admission to Secondary Teacher Education Program

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

TEE 4300 - Clinical Experience II
1 credit

Field-based experience, in which students complete 30 hours of teaching-related experiences in the classroom.

Prerequisite/Restriction: TEE 3200, TEE 3300 and Admission to Teacher Education

Corequisite: TEE 4400.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

Course Fee: $50.00

TEE 4310 - Corrosion and Corrosion Control
2 credits

Analysis of corrosion mechanisms for ferrous metals, nonferrous metals, and nonmetallic materials, as well as the control of corrosion.

Prerequisite/Restriction: CHEM 1110 and MATH 1060 or AP Calculus AB score of 3 or higher

Cross-listed as: TEE 6310.

Semester(s) Traditionally Offered: Spring

TEE 4400 - Methods of Teaching Engineering and Technology Education II
3 credits

Techniques of teaching as applied to individual and group instruction. Students apply various methods in presenting lessons.

Prerequisite/Restriction: TEE 3200, TEE 3300

Corequisite: TEE 4300.

Semester(s) Traditionally Offered: Fall

TEE 4440 - Technology and Society: Linking CTE with STEM
3 credits

Challenges students to develop an understanding of the dynamic interaction of science and technology along with its application to career and technical education.

Cross-listed as: ASTE 6440 and TEE 6440

Semester(s) Traditionally Offered: Spring, Odd Years

TEE 4700 - Student Teaching in Postsecondary Schools
4 credits

Planning, presenting, and evaluating instruction for students in postsecondary industrial and technical programs under the supervision of an experienced teacher.

Prerequisite/Restriction: Enrollment by permission only

Semester(s) Traditionally Offered: Fall, Spring

TEE 4710 - Electronics/Computer Design II (CI)
CI Communications Intensive
3 credits

Execution and completion of a team or individual project. Requires design reviews and written reports.

Prerequisite/Restriction: TEE 3710

Semester(s) Traditionally Offered: Spring

TEE 4930 - Independent Study
1-4 credits

Upon application, students may propose and complete work above and beyond regular coursework to support or supplement their major.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Course Fee: $232.00

TEE 4940 - Related Industrial Experience
1-12 credits

Provision for enrollment in industry schools conducted on university level. Approved by department upon application for trade competency examination and work experience in industry.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 5040 - Manufacturing Enterprise
3 credits

Focuses on management technology used to establish a manufacturing enterprise, engineer a product and production system, finance the operation, and market the product.

Prerequisite/Restriction: TEE 1030

Course Fee: $15.00

TEE 5220 - Program and Course Development (CI)
CI Communications Intensive
3 credits

Review of basic principles and practices of curriculum and course development used in applied technology and technology education. Emphasizes components needed to develop a curriculum guide.

Prerequisite/Restriction: TEE 3200, TEE 3300

Semester(s) Traditionally Offered: Spring

TEE 5230 - Technical Training Innovative Program
1-4 credits

Prepares prospective and incumbent teachers to implement and conduct contemporary programs. Includes skill development and the philosophy needed for curriculum innovation.

Repeatable for credit.

TEE 5240 - Principles of Technology
2-3 credits

Introduction to applied technology principles forming the basis for today's society.

TEE 5500 - Student Teaching Seminar
2 credits

Focuses on observations and problems arising during student teaching. Includes review of teaching plans, procedures, adaptive classroom practices, and evaluation.

Corequisite: TEE 5630.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall

TEE 5630 - Student Teaching in Secondary Schools
10 credits

Candidates assigned to cooperating teachers in public secondary schools within their major and minor subjects. Students have professional responsibilities with teaching.

Corequisite: TEE 5500.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall
Course Fee: $300.00

TEE 5800 - Seminar - Technology Education
1-3 credits

Provides opportunity for students to participate in variety of enriching experiences, such as guest speakers, field trips, demonstrations, and conferences.

Repeatable for credit.

TEE 5900 - Workshop in Technology and Engineering Education
1-4 credits

Special workshops for education or industry. May be repeated providing content varies.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 5910 - Special Problems in Engineering and Technology Education
1-4 credits

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

TEE 5920 - Related Technical Training
1-12 credits

Repeatable for credit.

TEE 6090 - Program Design
3 credits

Study of contemporary program design and development
in technology and engineering education and career and technical education. Reviews complete curriculum developmental process.

Cross-listed as: ASTE 6090

Pass/Fail only
Semester(s) Traditionally Offered: Spring, Odd Years

TEE 6100 - Contemporary Issues
3 credits

Study of present and future foundational professional developments in technology and industrial education. Students identify and investigate contemporary trends and issues affecting and facing technology and industrial education.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6150 - Evaluation and Assessment
3 credits

This course will provide an overview of the various methods used to measure and evaluate student achievement, within the cognitive, affective, and psychomotor domains. This course will review the principles of teaching and learning.

Cross-listed as: ASTE 6150

Semester(s) Traditionally Offered: Fall, Odd Years

TEE 6200 - Composite Manufacturing Processes and Repair
3 credits

Composite manufacturing processes, composite materials survey, tooling design and fabrication, autoclave processes, vacuum bag techniques, filament winding processes, equipment requirements, materials cutting and storage, and composite materials testing.

Semester(s) Traditionally Offered: Spring
Course Fee: $60.00

TEE 6250 - Internship
1-6 credits

Advanced instruction through supervised work experience in teaching, supervising, or administering educational or industrial program.

TEE 6310 - Corrosion and Corrosion Control
2 credits

Analysis of corrosion mechanisms for ferrous metals, nonferrous metals, and nonmetallic materials, as well as the control of corrosion.

Prerequisite/Restriction: CHEM 1110 and MATH 1060 or AP Calculus AB score of 3 or higher

Cross-listed as: TEE 4310.

Semester(s) Traditionally Offered: Spring

TEE 6440 - Technology and Society: Linking CTE with STEM
3 credits

Challenges students to develop an understanding of the dynamic interaction of science and technology along with its application to career and technical education.

Cross-listed as: ASTE 6440 and TEE 4440

Semester(s) Traditionally Offered: Spring, Odd Years

TEE 6450 - Administration and Organization
3 credits

Administrative and supervisory techniques for successful operation of technology education and applied technology education programs.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6520 - Explorations of Industry
3 credits

Study of contemporary industry, business, and service through a series of site visits. Includes various management and finance methods and techniques.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6750 - Research Methods and Design
3 credits

Introduction to practical research planning and design. Guides students from proposal selection to completed
proposal to final research report.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6800 - Seminar
1-2 credits

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6900 - Readings and Conference
1-3 credits

Advanced individualized study on selected topics in technology and industrial education. Scheduled consultation with faculty member.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6910 - Experimental Laboratory
3 credits

Introduction to elements of a research report through selection and development of experimental study utilizing tools, equipment, materials, and processes for improving programs and teaching techniques.

Cross-listed as: ASTE 6910

Semester(s) Traditionally Offered: Fall, Even Years

TEE 6930 - Independent Study
1-6 credits

Advanced educational experience through individual investigation.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6960 - Master's Project
1-6

Development of creative project emphasizing a thoroughly developed plan of action. Includes proposal, project paper, and final presentation.

Repeatable for credit.

Effective Term
Summer 2016

TEE 6970 - Thesis Research
1-9 credits

Repeatable for credit
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6990 - Continuing Graduate Advisement
1-3 credits

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 7040 - Dynamic and Network Engineering Processes for Technology Education
3 credits

Examines dynamic and network processes in engineering through the use of simulation software. Students use these techniques to develop standards-based engineering curricular modules for use in grades 6 through 12.

Semester(s) Traditionally Offered: Spring

TEE 7400 - Occupational Analysis and Curriculum Development
3 credits

Students learn techniques for conducting an occupational analysis (both job and task analysis) and for developing performance-based or competency-based curriculum. Explores industrial and educational applications for this style of curriculum development.

Semester(s) Traditionally Offered: Fall, Spring

TEE 7600 - Academic Issues and Politics in Higher Education
3 credits

Study of higher education in Utah, the social political impacts, and the role of faculty members in higher education institutions.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 7810 - Research Seminar
1-3 credits

Discussions under faculty direction on timely and pertinent topics, issues, and trends impacting the field of study.

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 7900 - Independent Study
1-3 credits

Individually directed educational experience. Program chair approval required before registration.

Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 7970 - Dissertation Research
1-9 credits

Individual work on research problems for students enrolled in doctoral programs. Emphasizes writing and editorial techniques.

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 7990 - Continuing Graduate Advisement
1-9 credits

Designed for individual students to work on their graduate studies under the advisement of their graduate committee.

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

Theatre Arts

THEA 1000 - Acting I: Introduction to Acting (BCA)
3 credits

Fundamentals of acting. Identification of: objectives, actions, obstacles, and given circumstance in order to demonstrate text as the vehicle of dramatic action.

Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 1000 and THEA 1713 or permission of department

Semester(s) Traditionally Offered: Spring

THEA 1013 - Understanding Theatre (BCA)
BCA Breadth Creative Arts
3 credits

Survey of dramatic principles and structure, genre, and conventions for nonmajors. Functions and contributions of theatre artists and practices of the contemporary stage.

Semester(s) Traditionally Offered: Fall, Spring, Summer

THEA 1023 - Introduction to Film (BCA)
BCA Breadth Creative Arts
3 credits

Study of elements of film narrative in fictional and nonfictional movies to provide a deeper understanding of content and film form.

Semester(s) Traditionally Offered: Fall

THEA 1033 - Beginning Acting (BCA)
BCA Breadth Creative Arts
3 credits

Demonstration of skills in actor awareness (personal and group), organic acting techniques, scene study with partners, and monologue preparation. Provides understanding of theories and methodologies. Skills demonstrated in areas of body movement, diction, observation, concentration, imagination, and “action.”.

Semester(s) Traditionally Offered: Fall, Spring

THEA 1113 - Voice for Actors I
2 credits

Training in basic vocal principles (Rodenburg, Linklater). Covers breath placement and support, physical alignment, projection, and resonance. Students learn basic warm-up to prepare the voice for performance.

Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 1000 and THEA 1713 or department permission
Semester(s) Traditionally Offered: Spring
THEA 1210 - Movement for Actors
2 credits
Introductory, experiential course in movement with emphasis on somatic practices (body and mind) used in theatre. Improvisation will be emphasized to develop a creative and imaginative approach to character, emotion, and action through movement.
Prerequisite/Restriction: Admission into BFA Acting program, THEA 1000 and THEA 1713 or permission of department

Semester(s) Traditionally Offered: Spring
THEA 1223 - Stage Makeup
2 credits
Emphasizes one-dimensional and three-dimensional illusional work, focusing on knowledge and skills in “corrective” aging and period makeup, with introductions to related areas, such as hair, hands, and prosthetics.
Prerequisite/Restriction: Theatre majors and minors, or permission of department

Semester(s) Traditionally Offered: Fall, Spring
THEA 1310 - Theatre Education Seminar
.5 credit
This course reviews contemporary issues in theatre arts education and applied theatre, including evolving views on best practices, changes in educational policy at the university, local, state, and national levels, and engages students in artistic, educational, and/or service projects.
Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring
THEA 1513 - Stagecraft (BCA)
BCA Breadth Creative Arts
3 credits
Introduction to different physical theatre forms, standard stage equipment, and methods of staging plays. Basic practices in set construction, rigging, welding, props and stage crafts.
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 1113 and THEA 1713 or permission of department

Semester(s) Traditionally Offered: Fall, Spring
THEA 1713 - Playscript Analysis (BHU)
BHU Breadth Humanities
3 credits
Introductory course focusing on plot, character, language, and thematic analysis of varied historical and modern performance texts in the context of contemporary staging practice.
Prerequisite/Restriction: Theatre majors and minors, or permission of department

Semester(s) Traditionally Offered: Fall
THEA 2000 - Acting III: Scene Study-Text as Action
3 credits
Acting scene study using 20th century American theatrical literature, expanding principles studied in THEA 1000.
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 1010 or permission of department

Semester(s) Traditionally Offered: Fall
THEA 2010 - Acting IV: Shakespeare
3 credits
Acting monologue and scene study using the works of Shakespeare.
Prerequisite/Restriction: THEA 2000, or permission of department

Semester(s) Traditionally Offered: Spring
THEA 2100 - Voice for Actors II: Speech and IPA
2 credits
Speech and diction for actors, including the international Phonetic Alphabet (IPA)
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 1113 and THEA 1713 or permission of department
THEA 2110 - Voice for Actors III: Dialects
2 credits
IPA review, introduction to theatrical dialects of English, focusing on American regional, British regional, and other specific foreign dialects.
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 2100 or permission of department
Semester(s) Traditionally Offered: Fall

THEA 2200 - Ballet
2 credits
Fundamental principles of ballet, focusing on technique, choreography and terminology.
Prerequisite/Restriction: Admission to Acting Emphasis, THEA 1210 or permission of department
Semester(s) Traditionally Offered: Spring

THEA 2203 - Costume Construction and Technology
3 credits
Costume craft will introduce students to the many methods and skills needed to costume a production. Basic practices in sewing, pattern drafting, fabric makeup and costume crafts will be explored while developing skills in these areas.
Prerequisite/Restriction: Theatre majors and minors, or permission of department
Semester(s) Traditionally Offered: Fall

THEA 2210 - Jazz
2 credits
Fundamentals of jazz dance for musical theatre application, focusing on technique, choreography, and terminology.
Prerequisite/Restriction: Admission to BFA Acting program, THEA 2200 or permission of department
Semester(s) Traditionally Offered: Fall, Spring

THEA 2500 - Drafting for Theatre I
3 credits
This course provides an in-depth look at the equipment, materials, techniques and standards, necessary for communicating design and technical information in theatre production. The primary focus will be on manual drafting skills.
Prerequisite/Restriction: Theatre majors and minors, or permission of department
Semester(s) Traditionally Offered: Spring

THEA 2510 - Scene Painting
3 credits
Instruction in scene painting techniques. For theatrical technicians and designers. Demonstration and lab work included.
Prerequisite/Restriction: Theatre majors and minors, THEA 1513, or department permission
Semester(s) Traditionally Offered: Fall

THEA 2520 - Theatre and Studio Sound
3 credits
Sound recording, reinforcement, and control operation skills for theatrical production.
Semester(s) Traditionally Offered: Spring

THEA 2530 - Theatre and Studio Sound
3 credits
Sound recording, reinforcement, and control operation skills for theatrical production.
Semester(s) Traditionally Offered: Spring

THEA 2545 - Fundamentals of Stage Lighting
3 credits
An introduction to the fundamentals of stage lighting as it applies to both theatre and dance. Includes color theory, instrumentation, control, electricity and lighting aesthetics.
Campus: USU-Eastern Only
Semester(s) Traditionally Offered: Spring

THEA 2555 - Production Practicum
.5 credit
Specialized crew work in ongoing Theatre Arts Department productions. Assignments made upon meeting with technical director.
Prerequisite/Restriction: Theatre majors or minors, THEA 1513 or THEA 2203, or permission of department

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

THEA 2610 - Fundamentals of Directing for the Stage
3 credits

This course is designed to acquaint students with fundamental theories and practices of directing for the stage.

Prerequisite/Restriction: THEA 1033 and THEA 1713
Semester(s) Traditionally Offered: Spring

THEA 2666 - Theatre Apprenticeship for High School Students
2 credits

Performance work in ongoing Theatre Arts Department productions, upon casting by the director.

Prerequisite/Restriction: Acceptance into the apprentice program

Repeatable for credit
Semester(s) Traditionally Offered: Summer

THEA 2670 - Costume History
3 credits

Historical survey of the evolution of costumes from the Egyptian period to the present, emphasizing costume reproduction for the stage. Will examine the effect of period costume on movement and manners.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring

THEA 2710 - The Art of Storytelling
3 credits

This course explores the aesthetic, theoretical and practical application of storytelling to nearly any field and vocation. Artistic skills of storytelling will be learned and demonstrated as students also make personal and professional application of the art.

Semester(s) Traditionally Offered: Fall, Spring, Summer

THEA 2910 - Private Instruction in Theatre Arts
1-3 credits

Practical theatre experience through production. Student training is gained through hands-on practice and performance of actual production.

Prerequisite/Restriction: Instructor permission Student must have a participatory assignment in a theatre performance activity

Repeatable for credit not to exceed 8 hours.
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

THEA 2977 - Cooperative Education
1-3 credits

Provides supervised on-the-job training in theatre. Students meet with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit.

Prerequisite/Restriction: Instructor permission

Repeatable for credit
Campus: USU Eastern only

THEA 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

THEA 3000 - Acting V: Acting for the Musical Theatre
3 credits

Introduction to musical theatre performance singing and acting techniques including audition skills.

Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 2010, or permission of department
Semester(s) Traditionally Offered: Fall
THEA 3010 - Acting VI: Classical Comedy
3 credits
Acting scene study using classic French and Restoration English dramatic literature.
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 3000 or permission of department

Semester(s) Traditionally Offered: Spring
THEA 3030 - Acting VII: Contemporary Playwrights
3 credits
Acting scene study using dramatic literature from the past twenty years.
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 3000 or permission of department

Semester(s) Traditionally Offered: Spring
THEA 3100 - Voice for Actors IV: Extreme Vocal Choices/Voice Over
2 credits
Voice and speech for actors focusing on techniques to meet extraordinary vocal acting challenges and introduction to voice over techniques.
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 2110, or permission of department

Semester(s) Traditionally Offered: Fall
THEA 3200 - Stage Combat
2 credits
Techniques in stage combat.
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 1210, or permission of department

Semester(s) Traditionally Offered: Fall
THEA 3210 - Tap
2 credits
Techniques of tap dancing, emphasizing mastery of single and double tap sounds, ensuring a solid foundation for elementary and intermediate tap steps commonly used in theatrical choreography.
Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 2200, or permission of department

Semester(s) Traditionally Offered: Spring
THEA 3300 - Clinical Experience in Teaching I
1 credit
Clinical apprenticeship consisting of teaching theatre in local schools. Includes observation, tutorial work, small group discussions, whole class instruction, and lesson/unit planning.
Prerequisite/Restriction: Admission into Teacher Education
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00
THEA 3320 - Movement Exploration for Elementary Education Majors
3 credits
Designed to understand the elements of dance, the creative process and how to combine them with arts integration activities. Through classroom explorations and presentations, students will demonstrate the ability to integrate curriculum areas through movement.

Semester(s) Traditionally Offered: Fall
THEA 3330 - Drama for Classroom Teachers
3 credits
Theory and practice of drama pedagogy for pre-service educators, emphasizing methods for incorporating drama into their classroom teaching. Distance sites must meet minimum enrollment of three students per site.
Prerequisite/Restriction: Not open to Theatre Arts Majors or Minors

Semester(s) Traditionally Offered: Fall, Spring, Summer
THEA 3370 - Applied Theatre
3 credits
Theory and practice of applied theatre, including community-embedded arts, educational drama, service-learning in the performing arts, and theater for social change.

Prerequisite/Restriction: Theatre major or minor, sophomore level or above, or permission of department

Semester(s) Traditionally Offered: Fall

THEA 3380 - Drama Across the Curriculum, Grades K-12
3 credits

Theory and practice of drama integration across the curriculum. Use of drama pedagogy strategies to increase student learning in language arts, history, social studies, science, mathematics and the arts.

Prerequisite/Restriction: Admission to one of the Theatre Education concentrations, or admission to STEP or ELED program, sophomore level or above, or permission of department

Semester(s) Traditionally Offered: Spring

THEA 3500 - Drafting for Theatre II
3 credits

Student and application of traditional and digital drafting techniques for scenic design and technical production; employing traditional drafting techniques and AutoCAD to create technical and design drawing for theatre.

Prerequisite/Restriction: THEA 1513 and THEA 2500 or permission of the Theatre department
Must be Theatre Major or Minor

Semester(s) Traditionally Offered: Spring

THEA 3510 - Scene Design I
3 credits

Preparation for designing sets used in theatre. Development of skills in drafting, rendering, model-making, research, and portfolio development.

Prerequisite/Restriction: Theatre majors and minors, THEA 1513 and THEA 2500, or permission of department

Semester(s) Traditionally Offered: Spring

THEA 3520 - Costume Design I
3 credits

Theory and practice in design and selection of costumes for nonrealistic, historical, and modern plays. Study of relationship of costume to character and production.

Prerequisite/Restriction: Theatre majors and minors and THEA 2203, or permission of department

Semester(s) Traditionally Offered: Spring

THEA 3530 - Theatre Props and Crafts
2 credits

This course provides undergraduate theatre students practical experience constructing, modifying, repairing and procuring theatre properties. The primary method of instruction is laboratory practice and demonstration.

Prerequisite/Restriction: THEA 1513, theatre major or instructor permission

Semester(s) Traditionally Offered: Spring

THEA 3540 - Lighting Design I
3 credits

Introduction to basic elements of lighting design. Demonstration of techniques used to create and execute a lighting design. Provides basic understanding of light energy, angle, color, and technology available for designing with this medium.

Prerequisite/Restriction: Theatre majors and minors, THEA 1513 and THEA 2500, or permission of department

Semester(s) Traditionally Offered: Spring

THEA 3550 - Stage Management
3 credits

Provides problem-solving environment for students to acquire knowledge and skills necessary for becoming a competent stage manager. Discussion of organization, delegation, scheduling, and personnel management.

Prerequisite/Restriction: Theatre major, THEA 1513 or THEA 2203 and THEA 1713 or permission of department

Semester(s) Traditionally Offered: Spring
THEA 3555 - Production Projects  
1 credit  
Specialized practical experience in Theatre productions. Projects are dependent on course of study and needs of the department.

Prerequisite/Restriction: Theater majors and minors, or permission of department  
Repeatable for credit  
Semester(s) Traditionally Offered: Fall, Spring

THEA 3560 - Period Styles/Historic Interiors (DHA)  
DHA Depth Humanities and Creative Arts  
3 credits  
Intensive instruction in architecture, furniture, and interior design of major Western European periods from Egyptian to the present. Taught through lectures, slide presentations, and student-compiled source book with examples of major styles.

Prerequisite/Restriction: Theatre majors and minors, THEA 1513, THEA 1713 and THEA 2203, or permission of department  
Semester(s) Traditionally Offered: Spring

THEA 3570 - Historic Clothing (DHA)  
DHA Depth Humanities and Creative Arts  
3 credits  
Historic survey of development of clothing from ancient Egyptians to the present day.

Prerequisite/Restriction: Theatre majors and minors, THEA 1513, THEA 1713 and THEA 2203, or permission of department  
Semester(s) Traditionally Offered: Fall

THEA 3580 - Software for Theatre Production Design  
3 credits  
Computer-aided design applications for theatre. Drafting and rendering on computer for set, light, and costume design.

Prerequisite/Restriction: Theatre major, THEA 1513, THEA 1713, THEA 2203 and THEA 2500 or permission of department  
Semester(s) Traditionally Offered: Fall

THEA 3610 - Directing I  
3 credits  
Provides instruction and practice in play selection, script analysis, research, blocking, leadership, communication skills, conduct of rehearsals, self-awareness, production organization and operation, and personal organization for stage direction. Principles apply in professional, civic, and educational settings.

Prerequisite/Restriction: Theatre majors and minors, THEA 1033 or THEA 1000, THEA 1713, THEA 1513 and THEA 2203 or permission of department  
Semester(s) Traditionally Offered: Fall

THEA 3710 - Theatre History and Literature I (CI/DHA)  
CI/DHA Communications Intensive and Depth Humanities and Creative Arts  
3 credits  
History of global performance traditions and dramatic literature from theatrical origins through the nineteenth century.

Prerequisite/Restriction: Theatre majors or minors, fulfillment of Communications Literacy CL2 requirement through coursework or exam (ENGL 2010); sophomore level or above or permission of department  
Semester(s) Traditionally Offered: Spring

THEA 3720 - Theatre History and Literature II (CI/DHA)  
CI/DHA Communications Intensive and Depth Humanities and Creative Arts  
3 credits  
History of global performance traditions and dramatic literature from the turn of the twentieth century to the present.

Prerequisite/Restriction: Theatre majors or minors, fulfillment of the CL2 requirement through coursework or exam (ENGL 2010), sophomore level or above or permission of department  
Semester(s) Traditionally Offered: Fall
THEA 4000 - Acting VIII: Acting for the Camera
3 credits

Introduction to techniques for acting for the camera.

Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 3010 and THEA 3030 or permission of department

Semester(s) Traditionally Offered: Fall

THEA 4010 - Acting IX-Modern Masters: Chekhov/Ibsen/Shaw
3 credits

Acting scene study of Modern dramatic literature, using the works of Ibsen, Chekhov, and Shaw.

Prerequisite/Restriction: Enrollment limited to BFA Acting majors and THEA 4000

Semester(s) Traditionally Offered: Fall, Spring

THEA 4020 - Acting X-Modern American Masters: O’Neill, Williams, and Miller
3 credits

Acting study of Modern American dramatic literature, using the works of O’Neill, Williams, and Miller.

Prerequisite/Restriction: Enrollment limited to BFA Acting majors and THEA 4010

Effective Term: Spring 2017

THEA 4200 - Period and Social Dance
2 credits

Instruction in European court dance and ballroom dance techniques.

Prerequisite/Restriction: Admission to BFA Acting Emphasis, THEA 2200, or permission of department

Semester(s) Traditionally Offered: Fall

THEA 4300 - Clinical Experience in Teaching II
1 credit

Clinical apprenticeship of teaching theatre in local schools, including observation, tutorial work, small group discussions, whole class instruction, and lesson/unit planning.

Prerequisite/Restriction: THEA 3300

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

Course Fee: $50.00

THEA 4320 - Storytelling in Education (DHA)
DHA Depth Humanities and Creative Arts
3 credits

Theory and practice of storytelling in educational settings. Devising and performance of stories with and for young people, storytelling through puppetry, integration of storytelling across the curriculum. For graduate credit students must complete additional teaching, research, and/or service.

Prerequisite/Restriction: Sophomore-level or above

Cross-listed as: THEA 6320

Semester(s) Traditionally Offered: Summer

THEA 4330 - Methods of Teaching Drama, Grades K-6
3 credits

Theory and practice of teaching drama to young people grades K-6. Particular emphasis on storytelling, story drama, process drama, and contemporary trends in drama pedagogy. Graduate credit students must complete additional teaching, research and/or service.

Prerequisite/Restriction: Admission to one of the Theatre Education concentrations, or admission to Secondary Teacher Education Program (STEP)-School of Teacher Education and Leadership or ELED program, sophomore level or above, or permission of department

Cross-listed as: THEA 6330

Semester(s) Traditionally Offered: Fall

THEA 4340 - Methods of Teaching Theatre, Grades 7-12
3 credits

Theory and practice of teaching theatre to students in grades 7-12. Focus on designing holistic, integrated theatre curricula.
Prerequisite/Restriction: Admission to one of the Theatre Education concentrations, or admission to Secondary Teacher Education Program (STEP)—School of Teacher Education and Leadership, sophomore level or above, or permission of department.

Cross-listed as: THEA 6340

Semester(s) Traditionally Offered: Spring

THEA 4350 - Theatre for Young Audiences
3 credits

Theory and practice of theatre with and/or for children and adolescents. Review of literature and contemporary practices in both professional and educational settings.

Prerequisite/Restriction: BFA Theatre Education major, Theatre Teaching minor, THEA 1713, sophomore-level or above, or permission of department

Semester(s) Traditionally Offered: Fall, Spring

THEA 4360 - Play Production in Secondary Schools
2 credits

This course surveys the theory and practice of play production in secondary schools, including season planning, play selection, auditions/casting, budgeting, production calendaring, collaboration with creative teams, and assessment of student work.

Prerequisite/Restriction: THEA 3380 or THEA 4330

Corequisite: THEA 4340

Semester(s) Traditionally Offered: Fall

THEA 4510 - Scene Design II
3 credits

Preparation for graduate school or a career in design. Advanced instruction in drafting, rendering, model-making, technical skills, research, design principles, and portfolio development. For 6510 credit, graduate students must participate in microteaching sessions with additional rendering assignments.

Prerequisite/Restriction: Theatre major, THEA 3510, Junior level or above or permission of department

Semester(s) Traditionally Offered: Fall

THEA 4540 - Lighting Design II
3 credits

Advanced training in elements of lighting design. Exploration of advanced techniques used to create and execute a lighting design. For 6540 credit, graduate students must participate in microteaching sessions with additional research or practicum assignments.

Prerequisite/Restriction: Theatre major, THEA 3540, Junior level or above or permission of department

Semester(s) Traditionally Offered: Fall

THEA 4550 - Theatre Leadership and Management
3 credits

Explores legal and financial choices, market research and marketing plans, physical plant and season operations, consideration of union and management relationships, and various planning and budget control procedures.

Prerequisite/Restriction: Theatre majors, junior level or above or permission of department

Semester(s) Traditionally Offered: Fall

THEA 4555 - Production Assignments
2 credits

Specialized practical project for a Department of Theatre Arts season production. Assignments made in conjunction with the head of the design/tech faculty. Students apply for an assignment the previous academic year.
Prerequisite/Restriction: Theatre majors and minors, THEA 1513, THEA 1713 and THEA 2203, or permission of department

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

THEA 4710 - Contemporary Theatre (CI/DHA)
CI/DHA Communications Intensive and Depth
Humanities and Creative Arts
3 credits

History and theory of a theatre movement since the 1980s, primarily in the English-speaking world, leading to a study of the theatrical world and its practices today.

Prerequisite/Restriction: Theatre Arts major, THEA 3710 or THEA 3720, junior level or above or permission of department

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

THEA 4720 - Musical Theatre History and Literature:
Roots Through the Golden Age
3 credits

A survey of major musical theatre forms from their origins through the 1960s. Discussions will include the social and cultural events that influenced writers and composers and the developmental nature of the genre.

Prerequisite/Restriction: Theatre Arts major or minor, sophomore level or above; or permission of department

Semester(s) Traditionally Offered: Fall, Spring

THEA 4730 - Musical Theatre History and Literature II:
New Directions
3 credits

A survey of musical theatre history and literature from the late 1960s to the present, this course provides an understanding of the continuing development of the musical theatre including its exploration of new forms and directions.

Prerequisite/Restriction: THEA 4720 or instructor permission

Semester(s) Traditionally Offered: Spring, Even Years

THEA 4760 - Playwriting
3 credits

Study of dramatic theory and sample plays, combined with practice in writing short plays. Minimum of three plays required.

Prerequisite/Restriction: Theatre Arts major or minor, THEA 1713 and ENGL 2010 or permission of department

Cross-listed as: ENGL 4250

Semester(s) Traditionally Offered: Fall, Spring

THEA 4820 - Company Workshop
3 credits

Company workshop of theatrical productions emphasizing process and instruction. Supervised rehearsals, technical preparation, and public performances.

Prerequisite/Restriction: Theatre Arts major or minor, THEA 1000 or THEA 1033, and THEA 1713 or permission of department

Repeatable for credit
Semester(s) Traditionally Offered: Spring

THEA 4860 - Playwriting Workshop
3 credits

Advanced study in playwriting. Course culminates in the performance of original works. Enrollment is contingent on permission of instructor.

Prerequisite/Restriction: Theatre Arts majors, THEA 4760 OR ENGL 4250 or permission of department

Repeatable for credit
Semester(s) Traditionally Offered: Spring

THEA 5310 - Theatre Mentorship and Service
1-3 credits

Clinical mentorship of teaching skills, including observation, instruction, and evaluation in specific areas of expertise. Projects may include developing and using drama and theatre practices for service in classroom or community settings.

Prerequisite/Restriction: Instructor permission
 Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

THEA 5390 - Student Teaching Seminar
2 credits

Focuses on problems arising during student teaching. Includes plans, procedures, adaptive classroom strategies, and evaluation.

Semester(s) Traditionally Offered: Fall, Spring

THEA 5550 - Rendering and Painting for Theatre Design
3 credits

Provides students hands-on experience using a variety of drawing techniques commonly used in theatrical design.

Prerequisite/Restriction: Theatre Majors, THEA 3510 and THEA 3520, or permission of department

Semester(s) Traditionally Offered: Fall

THEA 5590 - Design Studies for Theatre
2 credits

Actualization of a design from conception through completion with faculty supervision. Creation of all drafting, renderings, and/or models for portfolio development.

Prerequisite/Restriction: Theatre major, THEA 4510 or THEA 4520 or THEA 4540, senior level or department permission

Cross-listed as: THEA 6590

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

THEA 5610 - Directing II
3 credits

Provides instruction and practice in advanced techniques of script analysis, research outside the discipline, review of literature, awareness of thinking styles and values, and preparation for studio directing assignments.

Prerequisite/Restriction: Theatre Arts major or minor, THEA 3610, THEA 3710, and THEA 3720 or permission of department

Semester(s) Traditionally Offered: Spring

THEA 5630 - Student Teaching in Secondary Schools
10

Thirteen-week minimum culminating teaching practicum in theatre arts and minor fields when applicable in which students assume full-time teaching responsibilities under direction of cooperating teachers and university faculty supervisors.

Prerequisite/Restriction: STEP level 1 and Level 2 completion, and student teaching placement

Semester(s) Traditionally Offered: Fall and Spring

Effective Term
Spring 2016

THEA 5720 - Special Topics in Theatre History and Literature
3 credits

Specialized topics in theatre history, performance, and dramatic literature. Sample topics include Classical Theatre of Greece and Rome, Golden Age Spanish Theatre, Elizabethan Theatre, Musical Theatre, Asian Theatre, and others.

Prerequisite/Restriction: Theatre Arts major, THEA 3710 or THEA 3720, junior level or above, or permission of department

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

THEA 5900 - Special Projects
2-3 credits

Directed individual research studies or creative projects in theatre.

Prerequisite/Restriction: Theater major or minor, THEA 1513, THEA 1713 and THEA 2203, or permission of department

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

THEA 5910 - Capstone Project
2 credits
Culminating project and/or recital in student's specified program.

Semester(s) Traditionally Offered: Spring

THEA 5940 - Fieldwork in Theatre Arts
1-13 credits

Fieldwork, professional internship, or other arranged study in theatre arts.

Prerequisite/Restriction: Instructor permission

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

THEA 5960 - Special Topics in Theatre Production
2-3 credits

Flexible course covering a range of production related topics based on student need and/or visiting instructors.

Prerequisite/Restriction: Department permission

Cross-listed as: THEA 6960

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring

THEA 5980 - Theatre Internship
2-8 credits

Advanced work experience with professional theatre companies in the individual's field of study.

Prerequisite/Restriction: Permission of department

Cross-listed as: THEA 6980

Repeatable for credit

Semester(s) Traditionally Offered: Summer

THEA 6010 - Introduction to Graduate Study in Theatre
1 credit

Bibliography, research methods, and writing.

Semester(s) Traditionally Offered: Fall

THEA 6250 - Playwriting
3 credits

Advanced study in playwriting. Course culminates in the performance of original works. Enrollment is contingent on permission of instructor.

Prerequisite/Restriction: Theatre Arts majors and students who have completed THEA 4760/ENGL 4250 will have priority

Semester(s) Traditionally Offered: Spring

THEA 6320 - Storytelling in Education
3 credits

Theory and practice of storytelling in educational settings. Devising and performance of stories with and for young people, storytelling through puppetry, integration of storytelling across the curriculum. For graduate credit students must complete additional teaching, research, and/or service.

Prerequisite/Restriction: Permission of department

Cross-listed as: THEA 4320

Semester(s) Traditionally Offered: Summer

THEA 6330 - Methods of Teaching Drama, Grades K-6
3 credits

Theory and practice of teaching drama to young people grades K-6. Particular emphasis on storytelling, story drama, process drama, and contemporary trends in drama pedagogy. Graduate credit students must complete additional teaching, research and/or service.

Prerequisite/Restriction: Permission of department

Cross-listed as: THEA 4330

Semester(s) Traditionally Offered: Fall

THEA 6340 - Methods of Teaching Theatre, Grades 7-12
3 credits

Theory and practice of teaching theatre to students in grades 7-12. Focus on designing holistic, integrated theatre curricula.

Prerequisite/Restriction: Permission of department

Cross-listed as: THEA 4340
Semester(s) Traditionally Offered: Fall

THEA 6380 - Drama Across the Curriculum, K-12
3 credits

The theory and practice of drama integration across the curriculum. Students will review the use of drama pedagogy strategies to increase student learning in language arts, history, social sciences, science, mathematics and the arts.

Semester(s) Traditionally Offered: Fall, Spring

THEA 6500 - Drafting for Theatre
2 credits

This course provides an in-depth look at the equipment, materials, techniques and standards, necessary for communicating design and technical information in theatre production. The primary focus will be on manual drafting skills.

Prerequisite/Restriction: Acceptance into Theatre Arts -MFA or permission of department

Semester(s) Traditionally Offered: Fall

THEA 6510 - Advanced Scene Design for Theatre
2 credits

Preparation for graduate school or a career in design. Advanced instruction in drafting, rendering, modeling, technical skills, research, design principles, and portfolio development. For 6510 credit, graduate students must participate in microteaching sessions with additional rendering assignments.

Prerequisite/Restriction: Acceptance into Theatre Arts -MFA or permission of department

Semester(s) Traditionally Offered: Fall

THEA 6520 - Advanced Costume Design for Theatre
2 credits

Advanced theory and practice in the design and selection of costumes for nonrealistic, historical, and modern plays. For 6520 credit, graduate students must participate in microteaching sessions with additional research or practicum assignments.

Prerequisite/Restriction: Acceptance into Theatre Arts -MFA or permission of department

Semester(s) Traditionally Offered: Spring

THEA 6530 - Specialized Theatre Props and Crafts
2 credits

Advanced techniques and methods used to create a variety of theatre crafts such as puppets, specialized props, set pieces, etc. Content differs each time taught.

Prerequisite/Restriction: Acceptance into Theatre Arts -MFA or permission of department

Repeatable for credit

Semester(s) Traditionally Offered: Spring

THEA 6540 - Advanced Lighting for Theatre Design
2 credits

Advanced training in elements of lighting design. Exploration of advanced techniques used to create and execute a lighting design. For 6540 credit, graduate students must participate in microteaching sessions with additional research or practicum assignments.

Prerequisite/Restriction: Acceptance into Theatre Arts -MFA or permission of department

Semester(s) Traditionally Offered: Fall

THEA 6550 - Rendering in Theatre Design
2 credits

Provides students hands-on experience using a variety of drawing techniques commonly used in theatrical design. For graduate credit, students do additional projects.

Prerequisite/Restriction: Acceptance into a Theatre Arts graduate program or permission of department

Semester(s) Traditionally Offered: Fall

THEA 6555 - Scene Painting
2 credits

This course provides students with hands-on experience in scene painting using a variety of commonly used techniques.

Prerequisite/Restriction: Acceptance into Theatre Arts -
THEA 6580 - Computer Aided Design for Theatre
2 credits

This course provides students with computer techniques, design programs, drafting programs and other advanced computer applications for use in theatre design.

Prerequisite/Restriction: Acceptance into Theatre Arts graduate program or permission of department

THEA 6590 - Design Studies for Theatre
2 credits

Actualization of a design from conception through completion with faculty supervision. Creation of all drafting, renderings, and/or models for portfolio development.

Prerequisite/Restriction: Acceptance into the Theatre Arts graduate program or permission of department

Cross-listed as: THEA 5590

Repeatable for credit

THEA 6710 - Contemporary Theatre Studies
2 credits

History and theory of a theatre movement since the 1980s, primarily in the English-speaking world, leading to a study of the theatrical world and its practices today. Graduate students must participate in microteaching sessions with additional reading or writing assignments.

Prerequisite/Restriction: Acceptance into a Theatre Arts graduate program or permission of department

Repeatable for credit

THEA 6720 - Specialized Theatre History and Literature Topics
2 credits

Specialized topics in theatre history, performance, and dramatic literature. Sample topics include Classical Theatre of Greece and Rome, Golden Age Spanish Theatre, Elizabethan Theatre, Musical Theatre, Asian Theatre, and others. Graduate students must participate in microteaching sessions with additional research or writing assignments.

Prerequisite/Restriction: Acceptance into a Theatre Arts graduate program or permission of department

Repeatable for credit

THEA 6790 - Seminar in Drama
1-4 credits

Flexible service topics course covering a range of topics according to individual student need and/or visiting instructors, independent study, etc.

Repeatable for credit

THEA 6900 - Research Studies
1-4 credits

Directed individual research studies or creative projects in theatre.

Repeatable for credit

THEA 6910 - Graduate Studies in Theatre
1-6 credits

Research and preparation for graduate practicum projects in theatre.

Prerequisite/Restriction: Acceptance into Theatre Arts MFA or permission of department

Repeatable for credit

THEA 6920 - Graduate Projects in Theatre
2-3 credits

Individual production related project work.

Repeatable for credit

THEA 6930 - Seminar in Theatre
1-4 credits

Flexible service topics course covering a range of topics according to individual student need and/or visiting instructors, independent study, etc.

Repeatable for credit
THEA 6930 - Theatre Production Portfolio
1 credit
Prepares graduate students for the workplace using portfolio presentation techniques, job applications, resumes, interview techniques, and the creation of a design portfolio.
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

THEA 6960 - Special Topics in Theatre Production
2 credits
Flexible course covering a range of production related topics based on student need and/or visiting instructors.
Prerequisite/Restriction: Acceptance into a Theatre Arts graduate program or permission of department
Cross-listed as: THEA 5960
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring

THEA 6970 - Thesis
1-3 credits
Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Spring

THEA 6980 - Theatre Internship
2-8 credits
Advanced work experience with professional theatre companies in the individual’s field of study.
Prerequisite/Restriction: Permission of department
Cross-listed as: THEA 5980
Repeatable for credit
Semester(s) Traditionally Offered: Summer

University Studies
USU 1000 - Introduction to Computers and Information Literacy
1 credit
Introduction to basic concepts of computers and information literacy. For students having some familiarity with computers, but needing additional instruction.
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring (First Seven Weeks)

USU 1010 - University Connections
1-3 credits
Provides an environment of challenge and support to help new students make a successful transition to USU. Class curriculum and activities provide an environment wherein students become familiar with the broad academic, social, and cultural opportunities offered by USU and the surrounding community.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

USU 1100 - First-Year Seminar
3 credits
Characterized by investigation of a topic that is most likely a research, scholarly, or artistic specialty of the faculty member. Topic presented in pedagogically interesting ways. May include fieldwork or trips to enhance study of the topic.

USU 1160 - Developing Self-Management Skills
1 credit
A practical course designed to provide basic self-management skills contributing to personal effectiveness.
Semester(s) Traditionally Offered: Fall, Spring

USU 1220 - Career and Life Planning
3 credits
Students assess and clarify their interests, values, skills, and temperaments. Emphasizes discovering relationships between these personal characteristics and the realities of educational and employment
opportunities. Explores setting goals, creating action plans, and coping with change.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $40.00
Effective Term
Spring

USU 1300 - U.S. Institutions (BAI)
BAI Breadth American Institutions
3 credits

Provides basic understanding of the history, principles, form of government, and economic system of the United States. Emphasis on ideas and critical thinking, rather than dates, names, and places.

Semester(s) Traditionally Offered: Fall, Spring, Summer

USU 1320 - Civilization: Humanities (BHU)
BHU Breadth Humanities
3 credits

Provides basic understanding of a broad range of themes, which cut across human history and continue to be important in contemporary society.

Semester(s) Traditionally Offered: Fall, Spring, Summer

USU 1330 - Civilization: Creative Arts (BCA)
BCA Breadth Creative Arts
3 credits

Students will explore questions such as: What is Art? How is it judged? How does artistic expression vary across cultures? Course will cover several forms of art, and students will attend concerts, visit galleries, and attend theatrical performances.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $35.00

USU 1340 - Social Systems and Issues (BSS)
BSS Breadth Social Sciences
3 credits

Examines debates in the social sciences about contexts which shape human experience. Compares experiences between life stages, individuals, groups, societies, and/or historical periods. Contrasts different social science disciplines.

Semester(s) Traditionally Offered: Fall, Spring, Summer

USU 1350 - Integrated Life Science (BLS)
BLS Breadth Life Sciences
3 credits

Interdisciplinary course focusing on basic concepts of life science. Demonstrates role of modeling, prediction, and observation in the process of scientific discovery, which occurs within an historical and social context.

Semester(s) Traditionally Offered: Fall, Spring, Summer

USU 1360 - Integrated Physical Sciences (BPS)
BPS Breadth Physical Sciences
3 credits

Interdisciplinary course focusing on basic concepts of physical science, including structure of matter and magnitude and character of the forces of nature. Demonstrates role of modeling, prediction, and observation in the process of scientific discovery, which occurs within an historical and social context.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10.00

USU 1730 - Strategies for Academic Success
1-3

Orients students to the systems, tools, and resources unique to higher education that are needed to maximize academic success (e.g., library, computer lab use, etc.). Also helps students develop critical thinking, study, and learning strategies necessary for college success.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $13.00
Effective Term
Spring

USU 1750 - Comprehension Strategies for College Reading
1-3

Practical course emphasizing application of strategies and development of critical thinking skills needed to comprehend and distill meaning from college-level texts. Courses over one credit require in-course practice time.

Semester(s) Traditionally Offered: Fall, Spring
University Studies

USU 2160 - Student Applied Leadership Training
1-3 credits

Available to students involved in structured leadership training provided as part of their role and responsibility at the University. For details, contact the Office of Exploratory Advising (TSC 304).

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

USU 3070 - Interdisciplinary Depth (DHA/DSC/DSS)
DHA, DSC, DSS Depth Humanities and Creative Arts, Depth Life and Physical Sciences, Depth Social Sciences 3-6 credits

Course may combine two or three depth categories (DHA, DSC, DSS) in a variable 3-6 credits course covering 1-2 semesters. Usually team-taught and may include service learning, fieldwork, or undergraduate research. Course fulfills one depth requirement per semester of student enrollment (up to two for a yearlong course).

Prerequisite/Restriction: Must meet breadth graduation requirements, QL, CL1, CL2

Cross-listed as: HONR 3070

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

USU 3071 - Interdisciplinary Depth, Part 1 (DHA/DSC/DSS)
DHA, DSC, DSS Depth Humanities and Creative Arts, Depth Life and Physical Sciences, Depth Social Sciences 3 credits

First half of a two-semester course sequence that combines two of the three depth categories (DHA, DSC, DSS). Students should check course description for specifics and must complete the second half of the course to achieve the depth designation.

Prerequisite/Restriction: Must meet breadth graduation requirements, QL, CL1, CL2

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

USU 3072 - Interdisciplinary Depth, Part 2 (DHA/DSC/DSS)
DHA, DSC, DSS Depth Humanities and Creative Arts, Depth Life and Physical Sciences, Depth Social Sciences 3 credits

Second half of a two-semester course sequence that combines two of the three depth categories (DHA, DSC, DSS). Students should check course description. This half of the course bears the depth designation. Students are expected to take both semesters.

Prerequisite/Restriction: Must meet breadth graduation requirements, QL, CL1, CL2

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

USU 4000 - Study Abroad Pre-Departure Orientation
0

Course Overview: This half-day course will address topics important for a successful study abroad experience. It is a prerequisite for all courses in USU summer study abroad programs. Topics include academic standards, health, safety and security, and culture. The course is offered the second block of every spring semester.

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

USU 4900 - Undergraduate Research
1-3 credits

Research experience pursued with a faculty mentor. Prior to registration, student must make arrangements with a faculty mentor within his or her department.

USU 6900 - Research Integrity
0 credit

Addresses ethical conduct of research. Designed for upper-level undergraduates and graduate students. Topics include those required for students supported on
NSF, USDA, and NIH grants.

Pass/Fail only
Semester(s) Traditionally Offered: Spring

USU 7777 - Completion Course for Final Thesis, Dissertation, Plan B Paper or Project Changes
3 credits

This is a non-repeatable, non-graded (SC only) course. Credits cannot be used for degree requirements. There will be no tuition or fees charged. It will not appear on a student's program of study. This course will not have any implication for the order of dissertation/thesis review by the School of Graduate Studies.

Prerequisite/Restriction: Successful Record of Examination Form turned into the School of Graduate Studies Special approval for registration is required

Semester(s) Traditionally Offered: Fall, Spring, Summer

USU 7920 - Teaching Assistant Workshop
0

This course will provide graduate students’ with training on FERPA, sexual harassment prevention, and working with students with disabilities as well as cover Utah State University policies and procedures relevant to teaching assistants. The course will also introduce students to university resources that may be helpful to teaching assistants.

Prerequisite/Restriction: Must be accepted into a USU graduate Program

Effective Term
Summer 2016

Veterinary Medicine

VM 7350 - Skeletal Preparation
1 credit

Students master techniques of skeletal preparation by undertaking and completing a project. The skeleton that is prepared becomes the property of the student.

Prerequisite/Restriction: VM 7511 and must be accepted into the veterinary medicine program

Repeatable for credit

Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $100.00

VM 7500 - Animals, Society and the Veterinarian
1 credit

This course will provide students with an opportunity to learn and practice skill sets considered integral for success in the veterinary profession. Students will be trained to portray the “Gentle Doctor”, who exhibits characteristics of compassion, expertise, humaneness, judgment, care, compassion and understanding.

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7501 - International Veterinary Medicine
1 credit

This is an elective course for veterinary medical students and is a joint offering with Washington State University, College of Veterinary Medicine (WSU-CVM). The course covers important issues and constraints facing the global health community. This course is taught using distance education technology with lectures by faculty both from WSU-CVM and USU-SVM.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7502 - Clinical Communication Skills
1 credit

Students will participate in exercises designed to enhance communication and relational skills.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7504 - Global Field Studies
1-6 credits

Preceptorship in the US or overseas, under the direct supervision of a veterinarian, agriculture or public health professional. The experience must be related to
international veterinary medicine.

Prerequisite/Restriction: VM 7501 and must be accepted into the veterinary medicine program

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

VM 7508 - Research Orientation
1 credit

This is an elective course for veterinary medical students and is a joint offering with Washington State University, College of Veterinary Medicine (WSU-CVM). The course introduces students to resources and important issues for identifying and developing focused areas in biomedical research. This course is taught using distance education technology with lectures by faculty from the WSU-CVM and USU-SVM.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7509 - Research Issues, Ethics and Literacy
1 credit

This is an elective course for veterinary students and is a joint offering with Washington State University, College of Veterinary Medicine (WSU-CVM). Philosophy and history of methodological, ethical and political issues relevant to biomedical research using selected monographs and essays. This course is taught using distance education technology with lectures by faculty from WSU-CVM and USU-SVM.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7510 - Veterinary Microscopic Anatomy
4 credits

Students will learn essential information about the microscopic structure of cells, tissues and organs of domestic animals.

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7511 - Veterinary Anatomy I
5 credits

Students will learn to recognize and identify anatomical structures using correct medical nomenclature, be able to describe normal function of structures, palpate structures to locate them in a live animal, identify structures on radiographic images, and to predict and explain structural dysfunction.

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7512 - Veterinary Anatomy II
4 credits

Students will develop a strong base of information in functional anatomy and be able to visualize the three-dimensional structural organization of any region of the animal’s body. Based upon this knowledge, a student will become self-confident in physical diagnosis, interpretation of radiographs, surgery, postmortem examination, etc.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7519 - Veterinary Physiology I
4 credits

This is the first semester of a two-semester medical physiology sequence. The first part of the course will focus on basic mechanisms of cell physiology with an emphasis on control of gene expression and signaling. Students will also learn about: cellular transport; generation of ion gradients and membrane potentials; electrical signaling by neurons; the role of proteins as enzymes, receptors and structural components; and how cells communicate.

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7520 - Veterinary Physiology II
5 credits
Students will study the functions of selected tissues and organs, how these functions arise from underlying cellular mechanisms, how individual organs are controlled to serve basal and changing body needs and how multiple organs interact in complementary ways to bring about systemic function and homeostasis.

Pass/Fail only
Semester(s) Traditionally Offered: Spring
VM 7521 - Foundations of Veterinary Neurology
3 credits

Students will gain a solid understanding of how the nervous system is arranged and works, to prepare them for clinical experiences in neurology and neurological diagnosis.

Pass/Fail only
Semester(s) Traditionally Offered: Spring
VM 7522 - Fundamentals of Pharmacology
3 credits

Students will learn the fundamentals of pharmacology, including pharmacokinetics (absorption, distribution, metabolism, excretion), receptor theory and general mechanisms of drug action.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Fall
VM 7523 - Veterinary Toxicology
3 credits

Students will learn about pharmacology and toxicology of the systems of domestic animals.

Prerequisite/Restriction: VM 7522 and must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring
VM 7534 - Veterinary Immunology
3 credits

Students will learn the basic mechanisms of immunology with an emphasis on protective immunity against infectious diseases and the role of aberrant immune responses in disease. The goal of the course is for students to acquire a functional basis for medical immunology.

Pass/Fail only
Semester(s) Traditionally Offered: Spring
VM 7535 - Veterinary Virology
3 credits

Students will learn about viruses that produce diseases in animals.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Fall
VM 7536 - Veterinary Bacteriology
4 credits

Students will learn about bacteria that produce diseases in animals.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Fall
VM 7537 - Veterinary Parasitology
4 credits

Students will learn about arthropods, protozoa, and helminths of veterinary importance; their host-parasite relationship and control.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring
VM 7543 - Veterinary Medicine and Human Health
2 credits

Students will learn about public health and food hygiene.

Prerequisite/Restriction: Must be accepted into the
veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7545 - General Pathology
3 credits

Students will learn to recognize and distinguish normal tissue findings from abnormal ones at the gross and microscopic levels, describe abnormalities using accurate oral and written descriptions, develop a working vocabulary of pathology-related terms and interpret abnormal findings on the basis of pathogenic mechanisms.

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7546 - Systemic Pathology
6 credits

Students will learn the principles of system and organ response to injury, and the effects of injury/disease on the animal host.

Prerequisite/Restriction: VM 7545 and must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7562 - Complementary and Alternative Veterinary Medicine
1 credit

The objective of this course is to increase knowledge and understanding of complementary and alternative veterinary Medical therapies.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7567 - Applied Large Animal Theriogenology
1 credit

Integration of basic reproductive physiology with clinical aspects of reproductive management of large animals.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7568 - Animal Handling and Agricultural Animal Orientation
2 credits

Students will be trained in safe animal handling in the clinical environment. Basic handling and clinical skills training will include physical exams. Students will acquire a basic understanding of farm operation, livestock production cycles and breed characteristics to have a better understanding of common diseases that affect animals.

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7571 - Large Animal Theriogenology Laboratory
1 credit

Clinical training in diagnostic and therapeutic procedures in large animal reproduction.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7576 - Emerging and Exotic Diseases of Animals
1 credit

The objective of this course is to increase awareness of emerging and exotic diseases of animals and the appropriate response to them.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7580 - Basic Nutrition
1 credit

Students will learn the fundamentals of nutrition, the importance of a balanced diet and how diet contributes to health and disease.
Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7581 - Agricultural Animal Problem Seminar
1 credits

This is an elective course for veterinary medical students and is a joint offering with Washington State University, College of Veterinary Medicine (WSU-CVM). The course covers issues in agricultural animal medicine and surgery. This course is taught using distance education technology with lectures by clinical faculty from the WSU-CVM.

Prerequisite/Restriction: Veterinary medical students only

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Fall 2015

VM 7585 - Epidemiology
2 credits

Students will be expected to a minimally quantitative survey in which health is framed as a population phenomena.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7586 - Principles of Surgery
1 credit

Students will learn surgical skills and knowledge that will allow them to contribute positively to a veterinary practice as a year one DVM student. By gradually increasing their exposure to surgical skills over the next two years, they will be prepared to perform their first live animal surgery in year 3 of their veterinary training.

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7587 - Clinical Anesthesiology
2 credits

Students will learn about clinical anesthesiology used in veterinary practice.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7588 - Radiology
3 credits

Students will be introduced to radiography and diagnostic radiology.

Prerequisite/Restriction: Must be accepted in the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

VM 7589 - Clinical Pathology
3 credits

Students will learn about laboratory diagnostic procedures and interpretation.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Fall

VM 7594 - Core Topics in Global Health
1 Credit

This is an elective course offered by the School of Veterinary Medicine for veterinary medical students and is a joint offering with Washington State University, College of Veterinary Medicine (WSU-CVM). The course covers important issues affecting global health. This course is taught using distance education technology with 10 lectures by faculty from the University of Washington and 10 local discussions. Registration is restricted to veterinary medical students.

Effective Term
Fall 2016

VM 7596 - Veterinary Practicum
1-4 credits
Students will be involved in various human-animal bond or professional interaction-centered practica, completing all work by the end of the third year. Each practicum combines some hours spent in lecture and/or discussion, reading assignments, and a service learning component.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

VM 7597 - Special Topics in Veterinary Medicine
1-4 credits

Students will learn about special topics in veterinary medicine.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

VM 7598 - Introduction to Clinics
1 credit

This course will introduce students to different types of clinical practice and begin their integration into the clinical setting. The course will minimize the awkwardness students face as they abruptly change from classroom to clinical courses. Credit will be received for this course in year 3 of the program of study.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall

VM 7599 - Equine Neonatal Medicine
1 credit

In this course, students will learn the pathophysiology, clinical signs, diagnosis, treatment and prognosis of common diseases of foals.

Prerequisite/Restriction: Must be accepted into the veterinary medicine program

Pass/Fail only
Semester(s) Traditionally Offered: Spring

Watershed Sciences

WATS 1200 - Biodiversity and Sustainability (BLS)
BLS Breadth Life Sciences
3 credits

Provides students with an understanding of the biodiversity dilemma and the impact our species is having on natural ecosystems. Today, species extinctions occur at an alarming rate. These losses of biodiversity occur because of changes humans have made to the habitats and biogeochemical cycles of our planet. The last third of the course focuses on ways to mitigate these impacts.

Semester(s) Traditionally Offered: Spring

WATS 2000 - Natural Resources Professional Orientation
1 credit

Through a combination of in-and out-of-classroom activities, students develop an understanding of curriculum requirements and career opportunities associated with the Natural Resources majors. Students will also be introduced to natural resource management issues and research involving multiple disciplines.

Cross-listed as: ENVS 2000 and WILD 2000

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring 2017

WATS 2220 - General Ecology
3 credits

Study of the interrelationships among organisms, humans, and their environments, addressing where and how organisms live. Adaptation, population growth, species interactions, biodiversity, and ecosystem function are explored for a wide variety of organisms and ecosystems.

Prerequisite/Restriction: BIOL 1610 and BIOL 1620, (BIOL 1620 can be taken concurrently)

Cross-listed as: BIOL 2220

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring 2017
WATS 2250 - Introductory Internship/Co-op  
1-3 credits

Introductory-level educational experience in internship/cooperative education position approved by department.

Prerequisite/Restriction: Permission of department

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

WATS 3000 - Oceanography (DSC)  
DSC Depth Life and Physical Sciences  
3

Examines fundamental interrelationships between physical environment of the oceans and the life forms they support. Suitable for nonbiologists.

Semester(s) Traditionally Offered: Spring  
Course Fee: $17.00  
Effective Term  
Spring 2016

WATS 3100 - Fish Diversity and Conservation (DSC/CI)  
DSC/CI Depth Life and Physical Sciences and Communications Intensive  
3 credits

Systematics, physiology, ecology, evolution, and conservation of major groups of marine and freshwater fishes. Stresses functional morphology, physiological ecology, and community interactions explaining fish abundance and distribution.

Prerequisite/Restriction: BIOL 1010 or BIOL 1610 or BIOL 1620

Semester(s) Traditionally Offered: Fall  
Course Fee: $7.00

WATS 3110 - Fish Diversity Laboratory  
1 credit

Focuses on field collection, identification, and habitat relationships of freshwater fishes in North America.

Prerequisite/Restriction: WATS 3100 (may be taken concurrently)

WATS 3450 - Introduction to Coral Reefs-Field Course  
3 credits

This course is a 13-day field course on the biology and ecology of coral reefs and their many inhabitants. This course is taught at the Heron Island Research Station located in Australia’s Great Barrier Reef.

Semester(s) Traditionally Offered: Fall  
Course Fee: $75.00

WATS 3600 - Geomorphology  
4 credits

Geomorphic processes, origin of landforms and surficial deposits. Emphasizes fluvial and hillslope landscape elements, and surficial geologic mapping. Three one-hour lectures and one three-hour lab per week. PHYS 2210 recommended.

Prerequisite/Restriction: GEO 3200 and MATH 1060 or AP Calculus AB score of 3 or higher or instructor permission

Cross-listed as: GEO 3600

Semester(s) Traditionally Offered: Fall  
Course Fee: $90.00

WATS 3700 - Fundamentals of Watershed Science (CI)  
CI Communications Intensive  
3 credits

Study of water movement, hillslope processes, and nutrient movement in catchments, and its relevance to the properties, land use, and management of watersheds as natural resource units.

Semester(s) Traditionally Offered: Spring

WATS 3820 - Climate and Climate Change (DSC/QI)  
DSC/QI  
3 credits

Emphasizes physical basis of climate (climate dynamics), as well as the mechanisms and processes for its fluctuations on sub-seasonal to interannual time scales (climate variations) and on regional to
hemispheric/global time scales.

Prerequisite/Restriction: GEO 1110 or GEOG 1000

Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

WATS 4000 - Natural Resources Teaching Experiences
1 credit

Students will learn principles of outdoor education and will be trained in delivering hands-on environmental education lessons. Mentored by educators and agency professionals, students will deliver environmental education lessons to 4th grade students. Fall section - September. Spring section - Feb-April.

Cross-listed as: WATS 6000

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

WATS 4250 - Advanced Internship/Co-op
1-9 credits

Internship/cooperative education work experience; increased complexity to help student gain a more professional level of experience.

Prerequisite/Restriction: Permission of department

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WATS 4310 - Wetland Ecology and Management
3 credits

Explores the physical, chemical, and biological structure of wetlands. Focuses on the major types of wetlands found in North America, as well as their ecology and management; U.S. wetland policy and mitigation; and regional, national, and global impacts on restoration of wetlands.

Prerequisite/Restriction: WATS 3700

Cross-listed as: WATS 6310

Semester(s) Traditionally Offered: Spring
Course Fee: $40.00

WATS 4490 - Small Watershed Hydrology (QI)
QI Quantitative Intensive
4

Detailed exploration of concepts of hydrologic processes in small, wildland watersheds. Concentrates on recent research findings concerning key hydrological processes. Particular attention paid to study of partitioning of water in the hydrologic cycle, sources for runoff generation, snow and snowmelt, and erosion. Features process modeling and parameter estimation techniques as related to wildland systems.

Prerequisite/Restriction: MATH 1100 or MATH 1210; and WATS 3700

Cross-listed as: WATS 6490

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00
Effective Term
Spring 2016

WATS 4500 - Limnology: Ecology of Inland Waters
3 credits

Ecosystem analysis of physical, chemical, and biological interactions in lakes and streams. Application of these concepts for managing aquatic system. Graduate students write an additional research paper and present a lecture.

Prerequisite/Restriction: CHEM 1210

Cross-listed as: WATS 6500.

Semester(s) Traditionally Offered: Spring
Course Fee: $15.00

WATS 4510 - Aquatic Ecology Practicum
3 credits

Integration of limnological theory and methods of conducting field and laboratory analyses of physical, chemical, and biological parameters. Students will design and conduct their own research project within the framework of a general water quality or fishery issue addressed by the class. Development of analytical, statistical, and writing skills. Field trips required.

Prerequisite/Restriction: WATS 4500; STAT 3000, WATS 3000 (may be taken concurrently)
WATS 4530 - Water Quality and Pollution
3 credits
Reviews biological and social problems caused by point and nonpoint source water pollution; toxicology; abiotic and biotic water quality parameters; and use criteria of the Clean Water Act. Graduate-level class will require additional readings of the peer-reviewed literature and an additional class meeting to have in-depth discussions of those readings. Each graduate student will be responsible for making a presentation at the beginning of class, and leading the discussion.

Cross-listed as: WATS 6530.

WATS 4650 - Principles in Fishery Management
3 credits
Emphasizes management of fish populations within context of community and ecosystem dynamics. Stresses use of simulation models to assess effects of growth, recruitment, and mortality on age-structured populations.

Cross-listed as: WATS 6650

WATS 4930 - Advanced GIS and Spatial Analysis
3 credits
Builds proficiency in geoprocessing in GIS to solve spatial problems. Topics include: data acquisition, web GIS, georeferencing, vector and raster analyses, surface interpolation, DEM construction, morphometric analysis, modeling, geoprocessing, and error assessment. Course will be taught the first ten weeks of the semester. Enrollment in a lab section is mandatory.

Prerequisite/Restriction: GEOG 1800

Cross-listed as: WATS 6920

WATS 4931 - GIS Research Projects
2 credits
Students will undertake an independent research project that requires use of advanced GIS, geoprocessing and spatial analytical techniques. Students will present their research at a peer-reviewed poster session and synthesize findings in a mock manuscript for submission to a peer-reviewed journal of their choice. Course will be taught in the last five weeks of the semester. Students should take WATS 4930/WATS 6920 taught the first 10 weeks of the semester.

Cross-listed as: WATS 6921

WATS 4950 - Special Topics
1-3 credits
Individual study and research upon selected watershed sciences problems.

Repeatable for credit.

WATS 4960 - Directed Readings
1-3 credits
Provides one-on-one interaction between student and instructor.

Prerequisite/Restriction: Permission of department

Repeatable for credit.

WATS 4970 - Undergraduate Research
1-3 credits
Individual or team research.

Prerequisite/Restriction: Permission of department

Repeatable for credit.

WATS 4980 - Watershed Sciences Departmental Seminar
1 credit
Exposes students to new developments in research and management in the fields of watershed sciences. Features
participation by students, faculty, and guest lecturers. Graduate students should register for only one semester each year, but attend all year. Undergraduate students are only required to register once. Graduate students will participate in an additional reading and discussion group for the seminars.

Cross-listed as: WATS 6800/WATS 7800.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

WATS 5003 - Remote Sensing of Land Surfaces
4 credits

Basic principles of radiation and remote sensing. Techniques for ground-based measurements of reflected and emitted radiation, as well as ancillary data collection to support airborne and satellite remote sensing studies in agriculture, geography, and hydrology.

Prerequisite/Restriction: MATH 1100 or MATH 1210; and PHYS 2110 or PHYS 2210

Cross-listed as: WATS 6003

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

WATS 5150 - Fluvial Geomorphology
3 credits

Focuses on physical processes in streams that control their shape, plan form, slope, bed material, and distribution of channel bars. Emphasizes field analysis of these topics, and application of geomorphology to aquatic ecology and environmental restoration.

Cross-listed as: WATS 6150 and GEO 5150/GEO 6150.

Semester(s) Traditionally Offered: Fall

WATS 5170 - Fluvial Geomorphology Lab
2 credits

Field analysis focuses on physical processes in streams which control their shape, plan form, slope, bed material, and distribution of channel bars. Application of geomorphology to aquatic ecology and environmental restoration.

Cross-listed as: WATS 6170 and GEO 5170/GEO 6170.

Semester(s) Traditionally Offered: Fall
Course Fee: $150.00

WATS 5200 - Fish Habitats
2 credits

Examines biological and social factors influencing aquatic ecosystems and fish habitats within the context of forest management. Analyzes ecological relationships of fish habitats within forest ecosystem, and how these are influenced by forest management practices. Provides examples of forest habitat issues in major regions of North America, illustrating that both biological and social factors must be considered in developing management strategies and programs.

Semester(s) Traditionally Offered: Fall

WATS 5300 - Principles of Aquatic Ecosystem Restoration
3 Credit

This course introduces students to the motivations for and approaches to aquatic ecosystem restoration. We will focus on the principles of restoration – engaging stakeholders, goal setting, establishing references, techniques for implementation from physical and biological perspectives, and assessing success.

Prerequisite/Restriction: WATS 2220/BIOL 2220

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

WATS 5310 - Ecology and Restoration of Wetland and Riparian Plants
3 credits

This course explores the ecology of wetland and riparian plants in the context of ecosystem restoration. We will focus on the needs of plant propagules (e.g., seeds, rhizomes, cuttings) to inform effective revegetation to meet habitat and other restoration goals.

Prerequisite/Restriction: BIOL 2220/WATS 2220

Semester(s) Traditionally Offered: Spring - odd years
Effective Term
Spring
WATS 5330 - Large River Management
3 credits
Focuses on constituencies participating in modern management of large river basins, including water developers, irrigators, municipalities, power consumers, recreationists, environmentalists, and scientists. Primary examples drawn from Colorado, Columbia, Rio Grande, and Missouri river basins.

Cross-listed as: WATS 6330.

Semester(s) Traditionally Offered: Spring

WATS 5550 - Freshwater Invertebrates
3 credits
Ecology, collection, and systematics of freshwater aquatic invertebrates. Focuses on insects, but also covers crustaceans, molluscs, and annelids. Several weekend field trips and a collection are required.

Prerequisite/Restriction: One year of general biology or zoology, or instructor permission

Cross-listed as: BIOL 5550.

Semester(s) Traditionally Offered: Spring

Course Fee: $50.00

WATS 5640 - Riparian Ecology and Management
3 credits
Explores structure and function of riparian ecosystems and management options for maintaining sustainable ecological function.

Prerequisite/Restriction: WATS 2220/BIOL 2220, WATS 3700

Cross-listed as: WATS 7640.

Semester(s) Traditionally Offered: Spring

Effective Term
Spring 2017

WATS 5650 - Analysis of Fisheries Data with R
2 credits
Designed for individuals planning to work for agencies and for individuals who cannot afford expensive statistical programs, such as SAS. Advantages of using R include greater number of statistical options than are included in Excel (or other spreadsheet software programs), ability to produce presentation-quality figures, and availability as an open-source (free) software program.

Semester(s) Traditionally Offered: Spring

WATS 5660 - Watershed and Stream Restoration
2 credits
Overview of the current theory and practice of watersheds and streams. Emphasizes field visits with restoration projects and specialists.

Campus: Regional Campuses and Distance Education as a summer short course.

Semester(s) Traditionally Offered: Summer

WATS 5670 - Watersheds and Stream Restoration Practicum
2 credits
Capstone experience. Development of a restoration plan for a site, involving site planning and design.

Campus: Regional Campuses and Distance Education as a summer short course.

Semester(s) Traditionally Offered: Summer

WATS 5680 - Paleoclimatology
3 credits
Covers climate through the past four billion years of geologic time. Explores driving forces behind climate changes. Examines data and methods used in paleoclimate research. Includes discussion of literature and stresses local paleoclimate records. Three lectures per week, along with field trips.

Prerequisite/Restriction: GEO 3600/WATS 3600 or instructor permission

Cross-listed as: WATS 6680 and GEO 5680/GEO 6680 and PSC 5680/PSC 6680.

Semester(s) Traditionally Offered: Spring

Course Fee: $75.00

WATS 6000 - Natural Resources Teaching Experiences
1 credit
Students will learn principles of outdoor education and will be trained in delivering hands-on environmental education lessons. Mentored by educators and agency professionals, students will deliver environmental education lessons to 4th grade students. Fall section - September. Spring section - Feb-April.

Cross-listed as: WATS 4000

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

WATS 6003 - Remote Sensing of Land Surfaces
4 credits

Basic principles of radiation and remote sensing. Techniques for ground-based measurements of reflected and emitted radiation, as well as ancillary data collection to support airborne and satellite remote sensing studies in agriculture, geography, and hydrology.

Prerequisite/Restriction: MATH 1100 or MATH 1210; and PHYS 2110 or PHYS 2210

Cross-listed as: WATS 5003

Semester(s) Traditionally Offered: Spring
Course Fee: $50.00

WATS 6050 - Aquatic Ecosystems and Water Resources Systems Modeling
2-4 credits

Students will learn and develop water resources systems models (simulation and optimization) of rivers and watersheds that incorporate both aquatic ecosystems and economic water uses (water supply, hydropower...). -2 units: basic course; 4 units: basic course and an additional student-led systems modeling project.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

WATS 6120 - Aquatic Production Biology
2 credits

Review of current literature on bacterial, algal, invertebrate, and fish production in lakes, rivers, and the sea. Particular emphasis is placed on whole-ecosystem productivity studies.

Cross-listed as: WATS 7120.

Semester(s) Traditionally Offered: Spring

WATS 6150 - Fluvial Geomorphology
3 credits

Focuses on physical processes in streams that control their shape, plan form, slope, bed material, and distribution of channel bars. Emphasizes field analysis of these topics, and application of geomorphology to aquatic ecology and environmental restoration. A.

Cross-listed as: WATS 5150 and GEO 6150/GEO 5150.

Semester(s) Traditionally Offered: Fall

WATS 6170 - Fluvial Geomorphology Lab
2 credits

Field analysis focuses on physical processes in streams which control their shape, plan form, slope, bed material, and distribution of channel bars. Application of geomorphology to aquatic ecology and environmental restoration.

Cross-listed as: WATS 5170 and GEO 6170/GEO 5170.

Semester(s) Traditionally Offered: Spring
Course Fee: $150.00

WATS 6200 - Watershed Analysis
2 credits

Explores watershed analysis, which is a procedure used to characterize the human, aquatic, riparian, and upland features, conditions, processes, and interactions within a watershed. Watershed analysis includes ecosystem analysis at the watershed level, providing a systematic way to understand and organize system information for the purpose of understanding the consequences of management actions prior to implementation.

Semester(s) Traditionally Offered: Spring

WATS 6230 - Fish Ecology
2 credits

Reviews current literature on physiological, behavioral, population, and the community ecology of fishes.
Particular emphasis placed on current literature relevant to management of sport and endangered freshwater species.

Cross-listed as: WATS 7230.

Semester(s) Traditionally Offered: Fall

WATS 6240 - Graduate Internship/Co-op
1-9 credits

Graduate-level educational experience in internship/cooperative education position approved by department.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

WATS 6260 - Watershed Sciences Graduate Student Induction Course
1 credit

Introduces students to the big questions in Watershed Sciences and the Department community. Students learn about nearby watersheds and the rich diversity of approaches and technologies available to address research questions. 1 credit; 5 day field course.

Semester(s) Traditionally Offered: Fall

WATS 6310 - Wetland Ecology and Management
3 credits

Explores the physical, chemical, and biological structure of wetlands. Focuses on the major types of wetlands found in North America, as well as their ecology and management; U.S. wetland policy and mitigation; and regional, national, and global impacts on restoration of wetlands.

Cross-listed as: WATS 4310

Semester(s) Traditionally Offered: Spring

Course Fee: $40.00

WATS 6330 - Large River Management
3 credits

Focuses on the scientific basis of river management and the constituencies participating in modern management of large rivers, including water developers, irrigators, municipalities, power consumers, recreationists, environmentalists, and scientists. Primary examples drawn from Colorado, Columbia, Rio Grande, and Missouri river basins.

Cross-listed as: WATS 5330.

Semester(s) Traditionally Offered: Spring

WATS 6400 - Communicating Science: A Short Course for Graduate Students
1 credit

This course will help improve student's abilities to communicate scientific ideas and results to peers and the public. The course is designed for new graduate students who have not yet prepared their theses proposals or presented their pre-project seminars.

Pass/Fail only

Semester(s) Traditionally Offered: Spring

WATS 6490 - Small Watershed Hydrology
4 credits

Detailed exploration of concepts of hydrologic processes in small, wildland watersheds. Concentrates on recent research findings concerning examining key hydrological processes. Particular attention paid to study of partitioning of water in the hydrologic cycle, sources for runoff generation, snow and snowmelt, and erosion. Features process modeling and parameter estimation techniques as related to wildland systems. Additional oral and written assignments required for graduate students.

Cross-listed as: WATS 4490

Semester(s) Traditionally Offered: Spring

Course Fee: $50.00

WATS 6491 - Streamflow Analysis
1 credit

This course will provide theory and applications for analyzing streamflow data, focusing on the scale of small wildland watershed. We will use conceptual and
mathematical models to understand hydrologic processes and quantitatively predict stocks and fluxes of water.

Semester(s) Traditionally Offered: Spring

WATS 6500 - Limnology: Ecology of Inland Waters
3 credits

Ecosystem analysis of physical, chemical, and biological interactions in lakes and streams. Application of these concepts for managing aquatic system. Graduate students write an additional research paper and present a lecture.

Prerequisite/Restriction: CHEM 1210

Cross-listed as: WATS 4500.

Semester(s) Traditionally Offered: Spring

WATS 6520 - Applied Hydraulics
3 credits

Basic fluid mechanics applied to wildland watershed systems and directed at nonengineering students. Explores nature of fluid state, fluid motion, and steady uniform and varied flow in open channels, under both subcritical and supercritical conditions. Surveys concepts of boundary layers, turbulence, convection, dispersal, and wave formation in unsteady flows. Emphasizes problem formulation and solving.

Prerequisite/Restriction: WATS 6490/WATS 4490; MATH 2280 (recommended)

Cross-listed as: CEE 6520.

Semester(s) Traditionally Offered: Spring

WATS 6530 - Water Quality and Pollution
3 credits

Reviews biological and social problems caused by point and nonpoint source water pollution; toxicology; abiotic and biotic water quality parameters; and use criteria of the Clean Water Act. Graduate-level class will require additional readings of the peer-reviewed literature and an additional class meeting to have in-depth discussions of those readings. Each graduate student will be responsible for making a presentation at the beginning of class, and leading the discussion.

Semester(s) Traditionally Offered: Spring

WATS 6550 - Assessment of Abundance and Related Parameters for Biological Populations
3 credits

Students learn to estimate population abundance and associated error bounds using mark-recapture, area-swept, declining catch, line-transect, and other techniques. Emphasizes sampling design considerations to match objectives of an assessment to appropriate/feasible level of accuracy and precision.

Semester(s) Traditionally Offered: Spring

WATS 6650 - Principles in Fishery Management
3 credits

Emphasizes management of fish populations within context of community and ecosystem dynamics. Stresses use of simulation models to assess effects of growth, recruitment, and mortality on age-structured populations.

Cross-listed as: WATS 4650

Semester(s) Traditionally Offered: Spring

WATS 6680 - Paleoclimatology
3 credits

Covers climate through the past four billion years of geologic time. Explores driving forces behind climate changes. Examines data and methods used in paleoclimate research. Includes discussion of literature and stresses local paleoclimate records. Three lectures per week, along with field trips.

Prerequisite/Restriction: GEO 3600/WATS 3600 or instructor permission

Cross-listed as: WATS 5680 and GEO 6680/GEO 5680 and PSC 6680/PSC 5680.

Semester(s) Traditionally Offered: Spring

WATS 6690 - Multivariate Statistics
3 credits

Introduces modern and classical multivariate analysis topics. Focuses on practical applications in aquatic science. Incorporates R programming. Requires calculus and linear algebra background.

Semester(s) Traditionally Offered: Spring

WATS 6700 - Hydrodynamic Modeling
3 credits

Focuses on development and application of hydrodynamic models. Covers finite difference and finite element methods, and 2D and 3D models of environmental systems. Includes applications to channel flow, lake and estuarine flow, and groundwater flow. Requires familiarity with numerical methods and programming in R or equivalent.

Semester(s) Traditionally Offered: Spring

WATS 6710 - Hydrodynamics and Water Quality Modeling
3 credits

Focuses on development and application of hydrodynamic models coupled with contaminant transport models. Covers finite difference and finite element methods, and 2D and 3D models of environmental systems. Includes applications to river flows, lake and estuarine flows, and groundwater flow. Requires familiarity with numerical methods and programming in R or equivalent.

Semester(s) Traditionally Offered: Spring

Course Fee: $75.00
WATS 6700 - Restoration Ecology
4 credits

Provides an understanding of ecological restoration, how to determine restoration goals, how to establish targets, and how to determine what are good measures of success. Teaches restoration implementation, best practices for restoration monitoring, and how to develop and sustain community support for restoration.

Cross-listed as: WILD 6700

Semester(s) Traditionally Offered: Spring
Course Fee: $38.00

WATS 6800 - Watershed Sciences Departmental Seminar
1 credit

Exposes students to new developments in research and management in the fields of watershed sciences. Features participation by students, faculty, and guest lecturers. Graduate students should register for only one semester each year, but attend all year. Undergraduate students are only required to register once. Graduate students will participate in an additional reading and discussion group for the seminars.

Cross-listed as: WATS 4980/WATS 7800.

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

WATS 6820 - Stream Ecology
3 credits

Explores structure, function, and dynamics of flowing water ecosystems.

Cross-listed as: WATS 7820.

Semester(s) Traditionally Offered: Fall
Course Fee: $70.00

WATS 6840 - Fluvial Hydraulics and Ecohydraulics
1 credit

Theory and application of fluid mechanics and open channel flow to natural rivers and streams. Topics include steady and unsteady uniform flow, gradually varied flow and rapidly varied flow in 1D and 2D as well as ecohydraulics. Students will build proficiency in 1D, 2D and ecohydraulic models.

Semester(s) Traditionally Offered: Spring

WATS 6850 - Geomorphic Change Detection: Restoration Monitoring
1 credit

Instills background theory of geomorphic change detection and sediment budgeting in rivers and surveying with repeat topographic surveying. Builds proficiency in applying principles to real datasets using GCD software. 1 credit; 3 day workshop. ArcGIS experience recommended.

Semester(s) Traditionally Offered: Spring

WATS 6860 - Partnering with Beaver in Restoration Design
1 credit

Covers stream/river restoration and conservation methods that partner with beaver as ecosystem engineers. Builds appreciation of beaver ecology and complex feedbacks between beaver activity, hydrogeomorphic responses, riparian vegetation and fish ecology. 1 credit; 3 day workshop.

Semester(s) Traditionally Offered: Fall

WATS 6870 - Ecology Seminar
1 credit

The Ecology Center schedules regular seminars throughout the school year with ecological scientists from other institutions participating. Ecology majors are required to attend a minimum of 10 such lectures. Students should register for fall semester, but attend through spring semester.

Cross-listed as: BIOL 6870 and ENVS 6870 and PSC 6870 and WILD 6870.

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

WATS 6900 - Graduate Special Topics
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WATS 6910 - Directed Study
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WATS 6915 - GIS Fundamentals
1 credit

This intensive four week crash course is GIS and is intended for graduate students who are new to GIS or to serve as a refresher for those who have not used GIS for awhile. Students will build proficiency in producing maps in ArcGIS and disseminating interactive maps via Google Earth/Google Maps.

Campus: Main campus and online through Distance Education
Semester(s) Traditionally Offered: Spring

WATS 6920 - Advanced GIS and Spatial Analysis
3 credits

Builds proficiency in geoprocessing in GIS to solve spatial problems. Topics include: data acquisition, web GIS, georeferencing, vector and raster analyses, surface interpolation, DEM construction, morphometric analysis, modeling, geoprocessing, and error assessment. Course will be taught the first ten weeks of the semester. Enrollment in a lab section is mandatory.

Cross-listed as: WATS 4930

WATS 6921 - GIS Research Projects
2 credits

Students will undertake an independent research project that requires use of advanced GIS, geoprocessing and spatial analytical techniques. Students will present their research at a peer-reviewed poster session and synthesize findings in a mock manuscript for submission to a peer-reviewed journal of their choice. Course will be taught in the last five weeks of the semester. Students should take WATS 4930/WATS 6920 taught the first 10 weeks of the semester.

Cross-listed as: WATS 4931

Semester(s) Traditionally Offered: Spring

WATS 6940 - Snow Hydrology
3 credits

Focuses on snow science, including atmospheric formation, precipitation, distribution on the landscape, metamorphosis prior to melt, and snow pack melt dynamics. Also covers related issues, such as snow melt modeling, remote sensing, water supply, and biogeochemical cycling.

Prerequisite/Restriction: WATS 3700 or CEE 3430, or instructor permission

Cross-listed as: CEE 6940.

Semester(s) Traditionally Offered: Spring
Course Fee: $35.00

WATS 6960 - Graduate General Ecology
4 credits

General concepts, history, and issues in all major areas of the science of ecology including: environmental biophysics; and physiological, behavioral, evolutionary, community, ecosystem, and applied ecology in both terrestrial and aquatic environments.

Cross-listed as: BIOL 6960 and ENVS 6960 and PSC 6960 and WILD 6960.

Semester(s) Traditionally Offered: Fall

WATS 6970 - Thesis Research
1-12 credits

Offers credit for field or laboratory research at master’s level.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
WATS 6990 - Continuing Graduate Advisement
1-9 credits

Offers credit for students currently enrolled in a master’s program, who are not currently taking classes. Students may be conducting research or waiting for final approval from School of Graduate Studies.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WATS 7120 - Aquatic Production Biology
2 credits

Review of current literature on bacterial, algal, invertebrate, and fish production in lakes, rivers, and the sea. Particular emphasis is placed on whole-ecosystem productivity studies.

Cross-listed as: WATS 6120.

Semester(s) Traditionally Offered: Spring

WATS 7230 - Fish Ecology
2 credits

Reviews current literature on physiological, behavioral, population, and the community ecology of fishes. Particular emphasis placed on current literature relevant to management of sport and endangered freshwater species.

Cross-listed as: WATS 6230.

Semester(s) Traditionally Offered: Fall

WATS 7640 - Riparian Ecology and Management
3 credits

Explores structure and function of riparian ecosystems and management options for maintaining sustainable ecological function.

Prerequisite/Restriction: WATS 2220/BIOL 2220, WATS 3700

Cross-listed as: WATS 5640.

Semester(s) Traditionally Offered: Spring

WATS 7800 - Watershed Sciences Departmental Seminar
1 credit

Exposes students to new developments in research and management in the fields of watershed sciences. Features participation by students, faculty, and guest lecturers. Graduate students should register for only one semester each year, but attend all year. Undergraduate students are only required to register once. Graduate students will participate in an additional reading and discussion group for the seminars.

Cross-listed as: WATS 4980/WATS 6800.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

WATS 7820 - Stream Ecology
3 credits

Explores structure, function, and dynamics of flowing water ecosystems.

Cross-listed as: WATS 6820.

Semester(s) Traditionally Offered: Fall
Course Fee: $70.00

WATS 7900 - Graduate Special Topics
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WATS 7910 - Directed Study
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WATS 7970 - Dissertation Research
1-12 credits

Offers credit for field or laboratory research at doctoral level.
WATS 7990 - Continuing Graduate Advisement
1-9 credits

Offers credit for students currently enrolled in a doctoral program, who are not currently taking classes. Students may be conducting research or waiting for final approval from School of Graduate Studies.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WELD 0010 - Welder Certification
6 contact hours

Welding certifications are designed to ensure the welders skills are up to the code they will be working under. Welding certifications are also documented to prove that the welder is qualified under that code. Welding codes vary a lot depending on the type of work being done.

Campus: USU Eastern only

WELD 0301 - Intro to Welding Technology
1-180 contact hours

This course is designed for the beginner. Includes shop safety and introduction to welding methods.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

WELD 0302 - Intro to Welding Technology II
1-180 contact hours

Intermediate level including student projects and industrial applications.

Pass/Fail only
Campus: USU Eastern only
Effective Term
Spring

WELD 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

WELD 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

WELD 1010 - Beginning Shielded Metal Arc Welding (SMAW)
3 credits

Designed for the general public and for related trades such as auto mechanics, carpentry, diesel mechanics and mining. Beginning course which covers the basics of SMAW and oxy-fuel cutting theory. Course permits 4 lab hours per week for practical hands-on experience. Emphasis is on safety, joint types, base material and electrode identification, welding positions, and proper care and use of equipment.

Campus: USU Eastern only

WELD 1100 - Shielded Metal Arc Welding (SMAW)
7 credits

Designed for welding technology majors who plan on choosing a career in the welding industry. This is also a beginning course but covers more theory and hands-on practice to help develop the necessary skills to become a proficient welder. Covers safety aspects associated with welding and fabrication, SMAW, carbon arc cutting and oxy-fuel cutting, fundamentals of electricity as it relates to the SMAW process, joint design and base metal preparation, preheat/interpass temperatures, heat input/cooling rates, AWS electrode classifications, ASTM base metal identification, and welding procedures and quality of the welds associated with the SMAW process. Proper use of oxy-fuel with portable and line burning applications will also be taught. (5 joint designs)

Campus: USU Eastern only
WELD 1110 - Advanced Shielded Metal Arc Welding (SMAW)  
3 credits

Designed for welding technology majors and for people who are already in the industry working as welders. 
Designed to help prepare certify welders to any of the following welding codes: AWS D1.1, API 1104, and ASME Section IX to meet current industry qualification standards for employment. Emphasis is on welding open root structural and pipe joints with E6010, and fill with E7018 electrodes. Training will be performed in all appropriate welding positions. At the end of the course, welding technology students will be required to take certification test in accordance with AWS D1.1 Structural Welding Code book. Mostly butt welds on groove joints.

Prerequisite/Restriction: WELD 1100

Campus: USU Eastern only

WELD 1120 - Beginning Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW)  
7 credits

Designed for welding technology majors to cover theory and practical hands-on experience with semiautomatic wire fed machines. Emphasis is on safety and maintenance of equipment, basic fundamentals of each process, mode of transfers associated with GMAW process, and electrode selection, gas selection, proper regulator and flowmeter calibration. Joint design and equipment troubleshooting will also be discussed.

Campus: USU Eastern only

WELD 1130 - Advanced Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW)  
3 credits

Designed for welding technology majors and for people who are already in the industry working as welders. 
Designed to certify welders to any of the following welding codes: AWS D1.1, API, 1104, and ASME Section IX to meet current industry qualification standards for employment. Emphasis is on welding structural steel with the five basic joint designs. Training will be performed in all appropriate welding positions. At the end of the course, welding technology students will be required to take an all-position certification test in accordance with AWS D1.1 Structural Welding Code book.

Prerequisite/Restriction: WELD 1120

WELD 1140 - Related Welding Processes  
7 credits

Designed for welding technology majors to expand their knowledge of other related welding processes such as: 

Campus: USU Eastern only

WELD 1150 - Beginning Gas Tungsten Arc Welding (GTAW)  
7 credits

Designed for welding majors to cover theory and practical hands on experience with the manual GTAW process. Emphasis is on safety, equipment maintenance, material selection, gas selection, and proper regulator and flowmeter use. Joint design and equipment troubleshooting will also be discussed.

Campus: USU Eastern only

WELD 1160 - Advanced Gas Tungsten Arc Welding (GTAW)  
3 credits

Designed for welding technology majors and for people who are already in the industry working as welders. 
Designed to prepare welders to certify to various industry qualification standards for employment. Emphasis is on welding structural steel with the five basic joint designs. Training will be performed in all appropriate welding positions.

Prerequisite/Restriction: WELD 1150

WELD 1500 - Professional Vocational Leadership  
1 credit

Supports and facilitates the goals and objectives of
Vocational Industrial Clubs of America (Skills USA).

Students will gain skills in the following areas: personal development, service, team building and leadership, workplace skills, and interview skills. Students may participate in regional, state and national competitions.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

WELD 2400 - Print Reading for Welders
3 credits

Designed for the person who has had no previous experience with reading blueprints or mechanical drawings. Includes learning how to determine arrangement of views, shape analysis, pictorial sketching, types of lines used in prints, dimensions/tolerances, finish marks, bill of materials, and threads; with special emphasis on welding symbols in accordance with the American Welding Society.

Campus: USU Eastern only

WELD 2410 - Practical Fabrication and Layout
3 credits

Designed for students to simulate on-the-job work experience. Students will work with plans, determine size and selection of building materials, perform cost estimation, and build projects. Intended to use current fabrication techniques on personal and industry related projects.

Campus: USU Eastern only

WELD 2500 - Weld Inspection
3 credits

Designed for students who plan on taking the Certified Welding Inspector's Test. Will outline the general duties and responsibilities of welding inspectors. Each welding code book will be briefly discussed in order to familiarize students with procedure qualifications and welder qualifications that are currently used in industry. Destructive and non-destructive methods of inspection will be covered.

Campus: USU Eastern only

WELD 2600 - Metallurgy
3 credits

Designed for welding technology majors. Beginning course which covers the study of metal characteristics and how those characteristics are affected by common welding techniques. Common heat treating processes such as quenching, annealing, normalizing, tempering, and crystallization will be discussed. Students will learn to recognize the internal structures of various metals and metal identification techniques used in industry. Mechanical properties, failure and deformation, isothermal transformation diagrams and iron carbon diagrams will be discussed.

Campus: USU Eastern only

WELD 2988 - Special Problems
1-3 credits

Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit
Campus: USU Eastern only

Women and Gender Studies

WGS 1010 - Introduction to Women and Gender Studies (BSS)
BSS Breadth Social Sciences
3 credits

Survey course covering fundamentals of women and gender studies. Explores women's and men's diverse experiences, perspectives, and contributions to society and its institutions. Examines cultural beliefs and stereotypes concerning women's and men's roles in society. Reviews feminist theory, socialization, ideology, and history of women's movement.

Semester(s) Traditionally Offered: Spring

WGS 3010 - Women and Leadership (CI)
CI Communications Intensive
3 credits

This class will cover the components of feminist leadership and the issues and challenges of intersectionality, self-silencing, and self-efficacy relative to feminist leadership.

Semester(s) Traditionally Offered: Fall, Spring
WGS 4410 - Gender and the Mass Media
3 credits

Examines the nature of gender-based images in a variety of mass media, from advertising to magazines, television, and film. Analysis of gender stereotypes and portrayals in news and entertainment media, along with resulting social impacts.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement; junior standing or instructor permission

Cross-listed as: WGS 6410 and JCOM 6410/JCOM 4410.

Semester(s) Traditionally Offered: Fall

WGS 4550 - Women and Gender in America (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 credits

Writing intensive course drawing on film, primary documents, and readings to trace the history of women, emphasizing race, class, and gender influences of each era.

Cross-listed as: HIST 4550.

Semester(s) Traditionally Offered: Fall

WGS 4900 - Directed Study: Women and Gender Studies
1-3 credits

Directed research, writing, and reading in relation to gender studies. Provides students with an in-depth opportunity to work individually with a faculty member. Contract for work to be completed must be signed by the Women and Gender Studies director, the faculty member, and the student, then filed with the Women and Gender Studies Program. Additional or more advanced readings and assignments will be required for a WGS 6900 contract.

Prerequisite/Restriction: Permission of program chair

Cross-listed as: WGS 6900

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

WGS 4910 - Feminist Theories
3 credits

This course is designed to explore the topic of feminist theory, primarily as it has developed in the Western world and particularly the United States. The class will explore what feminist theory is, as well as the various sub-types of feminist theory. The class will then explore the development of Western/U.S. feminist thought from a historical standpoint. Additional or more advanced readings and assignments will be required for WGS 6910.

Cross-listed as: WGS 6910

Semester(s) Traditionally Offered: Fall

WGS 4920 - Feminist Research Methods
3 credits

This course explores feminist epistemologies and research methods. It explores disciplinary constructions of research and methodology, how research can be feminist, how feminist scholars challenge dominant theories of knowledge, and what elements must be present in order for research to be feminist. Additional or more advanced readings and assignments will be required for WGS 6920.

Cross-listed as: WGS 6920

Semester(s) Traditionally Offered: Spring

WGS 4930 - Culture and Politics of Motherhood
3 credits

This course will survey the current literature and debates within motherhood and mothering studies, with a focus on deconstructing the disclosures that have led to hegemonic social constructions of motherhood and its impact upon the lived experience of mothers. Additional or more advanced readings and assignments will be required for WGS 6930.

Cross-listed as: WGS 6930

Semester(s) Traditionally Offered: Fall

WGS 4940 - Girls’ Studies
3 credits

This course explores historical and contemporary concepts within the field of Girls’ Studies. There is a focus...
on deconstructing discourses that have led to hegemonic social constructions of girlhood, and what that means for girls’ everyday lives. Additional or more advanced readings and assignments will be required for WGS 6940.

Cross-listed as: WGS 6940

Semester(s) Traditionally Offered: Spring

WGS 6410 - Gender and the Mass Media
3 credits

Examines the nature of gender-based images in a variety of mass media, from advertising to magazines, television, and film. Analysis of gender stereotypes and portrayals in news and entertainment media, along with resulting social impacts.

Prerequisite/Restriction: Enrollment in WGS 6410 limited to graduate students only

Cross-listed as: WGS 4410 and JCOM 6410 and JCOM 4410

Semester(s) Traditionally Offered: Fall

WGS 6900 - Directed Study: Women and Gender Studies
1-3 credits

Directed research, writing, and reading in relation to gender studies. Provides students with an in-depth opportunity to work individually with a faculty member. Contract for work to be completed must be signed by the Women and Gender Studies director, the faculty member, and the student, then filed with the Women and Gender Studies Program. Additional or more advanced readings and assignments will be required for a WGS 6900 contract.

Prerequisite/Restriction: Permission of program chair

Cross-listed as: WGS 4900

Repeatable for credit

Semester(s) Traditionally Offered: Fall, Spring, Summer

WGS 6910 - Feminist Theories
3 credits

This course is designed to explore the topic of feminist theory, primarily as it has developed in the Western world and particularly the United States. The class will explore what feminist theory is, as well as the various sub-types of feminist theory. The class will then explore the development of Western/U.S. feminist thought from a historical standpoint. Additional or more advanced readings and assignments will be required for this course.

Cross-listed as: WGS 4910

Semester(s) Traditionally Offered: Spring

WGS 6920 - Feminist Research Methods
3 credits

This course explores feminist epistemologies and research methods. It explores disciplinary constructions of research and methodology, how research can be feminist, how feminist scholars challenge dominant theories of knowledge, and what elements must be present in order for research to be feminist. Additional or more advanced readings and assignments will be required for this course.

Cross-listed as: WGS 4920

Semester(s) Traditionally Offered: Fall

WGS 6930 - Culture and Politics of Motherhood
3 credits

This course will survey the current literature and debates within motherhood and mothering studies, with a focus on deconstructing the disclosures that have led to hegemonic social constructions of motherhood and its impact upon the lived experience of mothers. Additional or more advanced readings and assignments will be required for this course.

Cross-listed as: WGS 4930

Semester(s) Traditionally Offered: Spring

WGS 6940 - Girls’ Studies
3 credits

This course explores historical and contemporary concepts within the field of Girls’ Studies. There is a focus on deconstructing discourses that have led to hegemonic social constructions of girlhood, and what that means for girls’ everyday lives. Additional or more advanced readings and assignments will be required for this course.
Cross-listed as: WGS 4940

Semester(s) Traditionally Offered: Spring

Wildland Resources

WILD 1800 - Introduction to Geographic Information Sciences
3 credits

Introduces students to background and theory behind geographic information systems and spatial analysis. Students learn to integrate and analyze spatial information from different geographic sources. Includes a weekly laboratory section.

Cross-listed as: GEOG 1800

Semester(s) Traditionally Offered: Fall, Spring

WILD 2000 - Natural Resources Professional Orientation
1 credit

Through a combination of in- and out-of-classroom activities, students develop an understanding of curriculum requirements and career opportunities associated with the Natural Resources majors. Students will also be introduced to natural resource management issues and research involving multiple disciplines.

Cross-listed as: ENVS 2000 and WATS 2000

Semester(s) Traditionally Offered: Fall, Spring

Effective Term
Spring 2017

WILD 2200 - Ecology of Our Changing World (BLS)
BLS Breadth Life Sciences
3 credits

Foundations of ecological and evolutionary relationships of organisms with other organisms and with the physical environment, emphasizing populations, communities, and ecosystems. Integration of basic science with applications of science to understanding human interactions with the environment.

Semester(s) Traditionally Offered: Fall, Spring

WILD 2250 - Introductory Internship/Co-op
1-3 credits

Introductory-level educational experience in internship/cooperative education position approved by department.

Prerequisite/Restriction: Departmental signature

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 2400 - Wildland Resource Techniques
3 credits

Introduction to research and management techniques for wildlife, range, and forest resources. Emphasizes field and laboratory skills for studying and managing wild plants and animals.

Prerequisite/Restriction: MATH 1050 or higher (C- or better); BIOL 1610 and BIOL 1620 Enrollment is limited to QCNR majors Department authorization is required for all non-majors

Semester(s) Traditionally Offered: Fall

Course Fee: $28.00

Effective Term
Spring

WILD 3300 - Management Aspects of Wildlife Behavior
3 credit

Principles, concepts, and mechanisms of animal behavior, emphasizing behavioral ecology, development, and comparative aspects of special relevance to management of fish and wildlife.

Prerequisite/Restriction: BIOL 1610, BIOL 1620, and BIOL 2220/WATS 2220

Semester(s) Traditionally Offered: Spring

Effective Term
Spring 2016

WILD 3800 - Wildland Plants and Ecosystems
4 credits

Autecology and identification of dominant plants in important terrestrial ecosystems of the Intermountain West, and the structure, function, and dynamics of those ecosystems as related to the environment. Enrollment limited to WILD Department majors.
Prerequisite/Restriction: BIOL 1620 and WATS 2220 or BIOL 2220  Department authorization required for all nonmajors

Semester(s) Traditionally Offered: Fall
Course Fee: $30.00
Effective Term
Spring 2017

WILD 3810 - Plant and Animal Populations
3 credits
Basics of plant and animal population ecology, including population regulation, life histories, single and multi-species interactions, and metapopulations. Case studies will cover topics of both management and conservation concern.

Prerequisite/Restriction: WATS 2220 or BIOL 2220; MATH 1100 or higher (C- grade or better); STAT 2000 or STAT 3000 (C- grade or better)

Semester(s) Traditionally Offered: Spring
Effective Term
Spring

WILD 3820 - Forest Plants: Identification, Biology, and Function
3 credits
This course explores the identification, biology, and function of forest plants of western North America with an emphasis on the woody plants of Utah’s forest ecosystems. Introduction to woody plant anatomy, forest communities, and indicator species.

Prerequisite/Restriction: MATH 1050 or higher (C- grade or better)

Semester(s) Traditionally Offered: Fall
Course Fee: $28.00
Effective Term
Spring

WILD 3830 - Range Plant Taxonomy and Function
3 credits
This is a field and laboratory-based course. Students will learn how to identify dominant grass, forb, and woody plants of the Intermountain West using taxonomic keys.

Prerequisite/Restriction: Enrollment limited to WILD Department majors or permission of department

Semester(s) Traditionally Offered: Fall

WILD 3850 - Vegetation and Habitat Management
3 credits
Applying ecological principles and concepts to manipulate the composition, structure, and productivity of wildland vegetation for a range of objectives, including the creation and maintenance of wildlife habitat, using biological, chemical, and mechanical methods, as well as fire.

Prerequisite/Restriction: WILD 3800

Semester(s) Traditionally Offered: Spring

WILD 4000 - Principles of Rangeland Management
3 credits
Modern principles of rangeland management, including history of the profession, ecology, plant physiology, impacts of grazing on individual plants and plant communities, grazing management, range animal nutrition, rangeland watersheds, and the economics and planning of rangeland practices. Also introduces range-wildlife relations and vegetation manipulation.

Semester(s) Traditionally Offered: Spring

WILD 4250 - Advanced Internship/Co-op
1-9 credits
Advanced-level educational experience in internship/cooperative education position approved by department.

Prerequisite/Restriction: Departmental signature

Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 4340 - Range Ruminant Nutrition and Management
3 credits
The purpose of this course is to explore the nutrition of ruminants grazing on rangelands under the framework of environmental variability and animal adaptations.

Cross-listed as: WILD 6340
WILD 4500 - Principles of Wildlife Management
3 credits

Provides students with a working knowledge of the application of basic concepts in ecology and animal behavior to the management of wildlife resources to achieve diverse objectives of conservation, control, or cropping.

Prerequisite/Restriction: WILD 3810

WILD 4520 - Wildland Fire Behavior
3 credits

Comprehensive examination of fuels, weather, and topography and how they interact to determine wildland fire behavior, including rate of spread, energy release, and intensity.

Repeatable for credit.
Campus: WebCT.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 4550 - Wildlife Law Enforcement
3 credits

Explores essential topics relating to enforcement of wildlife and other natural resource laws, including applicable state and federal laws, policy formulation, rights of the individual, search and seizure, field forensic procedures, and the judicial process.

WILD 4570 - Forest Ecology of the Sierra Nevada and White Mountains
3 credits

This field experience uses an ongoing research project at the Yosemite Forest Dynamics Plot as a vehicle for learning field methods, natural history, and ecological theory. Students learn the ecology of mixed-conifer forests of the Sierra Nevada and bristlecone pine.

Cross-listed as: WILD 6570

WILD 4600 - Conservation Biology
3 credits

Patterns and processes creating biological diversity. Causes and consequences of diversity losses from genes to ecosystems, including habitat fragmentation and exotic invasion. Conservation laws and organizations. Approaches to conserving diversity loss, including reserve design, corridors, and species reintroductions.

Prerequisite/Restriction: WATS 2220/BIOL 2220

WILD 4700 - Ecological Foundations of Restoration
3 credits

An advanced plant ecology course emphasizing topics especially relevant to successful establishment of plants in disturbed environments and restoration of functioning dynamic ecosystems. It covers basic ecological processes from the population the ecosystem level and applications to ecological restoration.

Prerequisite/Restriction: BIOL 1610, BIOL 1620 and WATS 2220 or BIOL 2220

WILD 4750 - Monitoring and Assessment in Natural Resource and Environmental Management
4 credit contact hours CEU

Lectures, laboratory exercise, and field-based projects introduce students to the concepts, strategies, and analytical methods of natural resource and environmental monitoring and assessment.

Prerequisite/Restriction: BIOL 2220 or WATS 2220, MATH 1100 or higher (C- grade or better), STAT 2000 or STAT 3000 (C- grade or better), WILD 2400, and WILD 3810 (may be taken concurrently)
Course Fee: $40.00

Effective Term

Spring

WILD 4880 - Genetics in Conservation and Management
3 credits

Introduces principles of modern genetics, with applications, examples, and assignments related to ecology and management issues. Emphasizes genetic marker systems, gene flow, genetic drift, and adaptation.

Prerequisite/Restriction: CHEM 1110 or CHEM 1210; and BIOL 1610

Semester(s) Traditionally Offered: Spring

WILD 4910 - Assessment and Synthesis in Natural Resource Science (CI)
CI Communications Intensive
3 credits

Science-based assessments of natural resources conducted through implementation of analytical methods and synthesis. Case studies used to develop concepts, strategies, and problem-solving skills. Basic GIS and remote sensing skills developed.

Prerequisite/Restriction: WILD 2400, WILD 3800, WILD 3810, and WILD 4750

Semester(s) Traditionally Offered: Spring

WILD 4950 - Special Topics
1-3 credits

Individual study and research upon selected problems.

Prerequisite/Restriction: Departmental permission

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 4970 - Undergraduate Research
1-3 credits

Individual or team research.

Prerequisite/Restriction: Departmental permission

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 4980 - Undergraduate Seminar
1 credit

Review of current research by graduate students and faculty. Exposes students to new developments in research and management in the fields of wildland resources. Features participation by students, faculty, and guest lecturers.

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

WILD 5220 - Community-based Conservation Partnerships
3 credits

Seeks to infuse ecology with applied conservation and management approaches. Conservation and management of natural resources requires an understanding of ecological relationships and strategies for working with diverse stakeholders. PhD-level students present their research.

Cross-listed as: WILD 7220.

Semester(s) Traditionally Offered: Spring

WILD 5300 - Wildlife Damage Management Principles
3 credits

Explains current legal, ethical, and biological principles for the control and/or management of problem vertebrate species.

Prerequisite/Restriction: Departmental authorization required for all non QCNR majors
Cross-listed as: WILD 7300.

Semester(s) Traditionally Offered: Spring
Effective Term
Summer 2016

WILD 5350 - Wildland Soils
3 credits

Application of basic principles of soil science to wildland ecosystems. Effects of disturbance and land use on wildland soil properties. Role of soils in natural resource management.

Prerequisite/Restriction: CHEM 1110; PSC 3000, and one additional upper-division Soils course, or instructor permission

Cross-listed as: WILD 6350 and PSC 5350/PSC 6350.

Semester(s) Traditionally Offered: Spring

WILD 5560 - Applied Avian Ecology
3 credits

Application of ecological principles to avian population, community and habitat management. Includes applied aspects of physiology, anatomy, and taxonomy of N.A. bird groups, and review of state and federal management plans and practices.

Prerequisite/Restriction: BIOL 1620 and WATS 2220 or BIOL 2220

Cross-listed as: WILD 6560

Semester(s) Traditionally Offered: Spring
Course Fee: $60.00

WILD 5700 - Forest Assessment and Management (CI)
CI Communications Intensive
3 credits

Detailed analysis of forest stand structure and growth. Development of silvicultural prescriptions to meet specific objectives. Analysis of costs and benefits of alternative forest management strategies. Emphasizes forest management to achieve a broad range of objectives.

Prerequisite/Restriction: WILD majors or students with instructor permission

Semester(s) Traditionally Offered: Spring

WILD 5710 - Forest Vegetation Disturbance Ecology and Management
3 credits

Examines causes, effects, and management options for selected biotic and abiotic agents of disturbance in wildland ecosystems.

Semester(s) Traditionally Offered: Fall

WILD 5750 - Applied Remote Sensing
3 credits

Covers the application of remote sensing to landcover mapping and resource monitoring at a quantitative level. Students instructed on the effects of atmosphere and surface interaction on the reflectance collected by electro-optical sensors, as well as on the proper use and interpretation of various calibration and classification algorithms.

Cross-listed as: WILD 6750.

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

Page: 1 <- Back 10 ... 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64

Wildland Resources

WILD 5860 - Poisonous Range Plants Affecting Livestock
3 credits

Poisonous plants of rangelands and their effects on grazing animals, especially livestock. Management practices to reduce or prevent poisoning.

Cross-listed as: ADVS 5860.

Semester(s) Traditionally Offered: Spring
Course Fee: $15.00

WILD 6200 - Biogeochemistry of Terrestrial Ecosystems
3 credits

Inputs, outputs, and cycling patterns of major nutrients.
Emphasis on mechanisms for transformations, factors influencing process rates, and the impacts of management and global change on nutrient cycles and air and water quality.

Prerequisite/Restriction: BIOL 1620, PSC 3000, CHEM 2300 or CHEM 2310, or instructor permission

Cross-listed as: BIOL 6200 and PSC 6200.

Semester(s) Traditionally Offered: Fall

WILD 6240 - Graduate Internship/Co-op
1-9 credits

Graduate-level educational experience in internship/cooperative education position approved by department.

Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 6340 - Range Ruminant Nutrition and Management
3 credits

The purpose of this course is to explore the nutrition of ruminants grazing on rangelands under the framework of environmental variability and animal adaptations.

Cross-listed as: WILD 4340

Semester(s) Traditionally Offered: Taught Alternate Odd Years

Effective Term
Spring 2016

WILD 6350 - Wildland Soils
3 credits

Application of basic principles of soil science to wildland ecosystems. Effects of disturbance and land use on wildland soil properties. Role of soils in natural resource management.

Prerequisite/Restriction: CHEM 1110; PSC 3000, and one additional upper-division Soils course, or instructor permission

Cross-listed as: WILD 5350 and PSC 6350/PSC 5350.

Semester(s) Traditionally Offered: Spring

WILD 6400 - Ecology of Animal Populations
3 credits

Growth, fluctuation, balance, and control of animal populations.

Semester(s) Traditionally Offered: Fall

WILD 6401 - Population State Variables
2 credits

You will learn how to estimate and monitor population abundance using capture-mark-recapture and distance sampling methods. You will also learn how to use Occupancy models to examine metapopulation dynamics, habitat use, species occurrence, and species interactions when detection is not perfect.

Prerequisite/Restriction: STAT 5100 or WILD 6500

Semester(s) Traditionally Offered: Spring

WILD 6402 - Demographic Vital Rates
1 credit

Reproduction, survival and dispersal are the underlying vital rates that cause change in population abundance. The importance of variation in life history strategies will be discussed, and you will learn how to estimate vital rates using generalized linear models, capture-mark-recapture and multi-state models.

Prerequisite/Restriction: STAT 5100 or WILD 6401 or WILD 6500

Semester(s) Traditionally Offered: Spring

WILD 6403 - Dynamics of Structured Populations
2 credits

You will learn how to develop and analyze structured population models, including the implications of density-dependence and stochasticity on the dynamics of structured populations. You will also learn how to conduct perturbation analyses and use demographic models to study life history evolution.

Semester(s) Traditionally Offered: Spring

WILD 6500 - Biometry: Design and Analysis of Ecology Research
4 credits
Examines research design from statistical perspective, showing how data analysis is largely determined by research design and its implementation. Reviews statistical tools for analysis of ecological data in the context of design.

Prerequisite/Restriction: Graduate standing

Semester(s) Traditionally Offered: Fall

WILD 6560 - Applied Avian Ecology
3 credits

Application of ecological principles to avian population, community and habitat management. Includes applied aspects of physiology, anatomy, and taxonomy of N.A. bird groups, and review of state and federal management plans and practices.

Prerequisite/Restriction: BIOL 1620 and WATS 2220 or BIOL 2220

Cross-listed as: WILD 5560

Semester(s) Traditionally Offered: Spring

Course Fee: $60.00

WILD 6570 - Forest Ecology of the Sierra Nevada and White Mountains
3 credits

This field experience uses an ongoing research project at the Yosemite Forest Dynamics Plot as a vehicle for learning field methods, natural history, and ecological theory. Students learn the ecology and management issues relating to the mixed-conifer forests of the Sierra Nevada and the bristlecone pine ecosystems of the White Mountains.

Cross-listed as: WILD 4570

Semester(s) Traditionally Offered: Summer

WILD 6700 - Restoration Ecology
4 credits

Provides an understanding of ecological restoration, how to determine restoration goals, how to establish targets, and how to determine what are good measures of success. Teaches restoration implementation, best practices for restoration monitoring, and how to develop and sustain community support for restoration.

Cross-listed as: WATS 6700

Semester(s) Traditionally Offered: Spring

Course Fee: $38.00

WILD 6710 - Landscape Ecology
3 credits

Focuses on landscape-scale patterns and processes, and ways of understanding ecological complexity. Explores conceptual underpinnings of larger-scale ecology. Emphasizes understanding of current peer-reviewed literature.

Cross-listed as: WILD 7710.

Semester(s) Traditionally Offered: Spring

WILD 6720 - Advanced Conservation Biology
3 credits

Examines cases and consequences of population and species declines, including activities such as habitat fragmentation and introduction of exotic species, as well as natural causes due to genetics and demography.

Cross-listed as: WILD 7720.

Semester(s) Traditionally Offered: Spring

WILD 6730 - Forest Community Ecology
4 credits

Community ecology of forest ecosystems. Quantitative methods of community description. Analytic treatment of scientific literature and an emphasis on critical scientific writing. Role of limiting factors, competition, and disturbance in determining community composition, structure, and dynamics.

Semester(s) Traditionally Offered: Fall

WILD 6740 - Physical Processes in Remote Sensing
3 credits

Assures that students are well-versed in the science and technology of remote sensing. Covers various algorithms and their ability to extract biophysical information from remotely sensed images. Helps students gain firm knowledge of the capabilities and limitations of these
algorithms and their use in understanding landscape level biophysical interactions.

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

WILD 6750 - Applied Remote Sensing
3 credits

Covers the application of remote sensing to landcover mapping and resource monitoring at a quantitative level. Students instructed on the effects of atmosphere and surface interaction on the reflectance collected by electro-optical sensors, as well as on the proper use and interpretation of various calibration and classification algorithms.

Cross-listed as: WILD 5750.

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00

WILD 6770 - Community Ecology
3 credits


Semester(s) Traditionally Offered: Fall
Effective Term
Fall

WILD 6800 - Wildland Resources Departmental Seminar
1 credit

Review of current research by graduate students and faculty. Exposes students to new developments in research and management in the fields of wildland resources. Features participation by students, faculty, and guest lecturers. Graduate students are required to register for one semester of seminar credit but are encouraged to attend as many seminars as possible throughout their academic experience.

Cross-listed as: WILD 7800

Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring

WILD 6870 - Ecology Seminar
1 credit

The Ecology Center schedules regular seminars throughout the school year with ecological scientists from other institutions participating. Ecology majors are required to attend a minimum of 10 such lectures. Students should register for fall semester, but attend through spring semester.

Cross-listed as: BIOL 6870 and ENVS 6870 and PSC 6870 and WATS 6870.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

WILD 6900 - Graduate Special Topics
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 6910 - Directed Study
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 6960 - Graduate General Ecology
4 credits

General concepts, history, and issues in all major areas of the science of ecology including: environmental biophysics; and physiological, behavioral, evolutionary, community, ecosystem, and applied ecology in both terrestrial and aquatic environments.

Cross-listed as: BIOL 6960 and ENVS 6960 and PSC 6960 and WATS 6960.

Semester(s) Traditionally Offered: Fall

WILD 6970 - Thesis Research
1-12 credits
WILD 6990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 7000 - Theory and Applications of Wildland Ecosystem Management
3 credits

Application of range management principles, new theory, and public policy to on the-ground decision-making in public and private lands. Field trips required.

Semester(s) Traditionally Offered: Spring
Course Fee: $65.00

WILD 7030 - Plant-Herbivore Interactions
3 credits

Emphasizes principles of self-organization as applied to plant (tolerance and avoidance of herbivory) and herbivore (food and habitat selection) behavior. Stresses importance of history and ongoing interactions with the environment in understanding the dynamics of plant-herbivore interactions.

Semester(s) Traditionally Offered: Spring

WILD 7220 - Community-based Conservation Partnerships
3 credits

Seeks to infuse ecology with applied conservation and management approaches. Conservation and management of natural resources requires an understanding of ecological relationships and strategies for working with diverse stakeholders. PhD-level students present their research.

Cross-listed as: WILD 5220.

Semester(s) Traditionally Offered: Spring

WILD 7300 - Wildlife Damage Management Principles
3 credits

Explains current legal, ethical, and biological principles for the control and/or management of problem vertebrate species.

Prerequisite/Restriction: Department authorization required for all non QCNR majors

Cross-listed as: WILD 5300.

WILD 7400 - Plant Population Ecology
3 credits

Dynamics of plant populations as influenced by interactions with their abiotic and, especially, biotic environments. Topics include dormancy and germination strategies, intra- and interspecific competition, facilitation, disturbance, herbivory, pathogenic and mutualistic fungi, pollination, seed dispersal, and vegetative reproduction.

Semester(s) Traditionally Offered: Fall

WILD 7710 - Landscape Ecology
3 credits

Focuses on landscape-scale patterns and processes, and ways of understanding ecological complexity. Explores conceptual underpinnings of larger-scale ecology. Emphasizes understanding of current peer-reviewed literature.

Cross-listed as: WILD 6710.

Semester(s) Traditionally Offered: Spring

WILD 7720 - Advanced Conservation Biology
3 credits

Examines cases and consequences of population and species declines, including activities such as habitat fragmentation and introduction of exotic species, as well as natural causes due to genetics and demography.

Cross-listed as: WILD 6720.
Semester(s) Traditionally Offered: Spring

WILD 7800 - Wildland Resources Departmental Seminar
1 credit

Review of current research by graduate students and faculty. Exposes students to new developments in research and management in the fields of wildland resources. Features participation by students, faculty, and guest lecturers. Graduate students are required to register for one semester of seminar credit but are encouraged to attend as many seminars as possible throughout their academic experience.

Cross-listed as: WILD 6800

Repeatable for credit
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

WILD 7900 - Graduate Special Topics
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 7910 - Directed Study
1-6 credits

Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 7970 - Dissertation Research
1-12 credits

Original research and study for PhD degree.

Repeatable for credit.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring, Summer

WILD 7990 - Continuing Graduate Advisement
1-9 credits

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer

Workforce Development (USU Eastern)

WDEV 0001 - Skills Lab
1-180 contact hours

Student can obtain additional help and study on their Open Entry/Open Exit Courses.

Campus: USU Eastern only

WDEV 0002 - Test Preparation
1-30 contact hours

Student can prepare for a variety of tests such as Accuplacer, GED, MOS Certification and other tests.

Campus: USU Eastern only

WDEV 0011 - A+ Writing I-A
1-60 contact hours

This course covers writing complete sentences, recognizing simple sentences, sentence types, writing about a main idea, looking for errors, writing about personal surroundings, telling a story from a character's point of view, using descriptive words, and writing ideas and opinions. This course also covers writing complete subjects, complete predicates, complete sentences, fragments, run-on sentences, the writing process, writing paragraphs, writing letters, journals, titles, story endings, details, sensory words, and figurative language.

Campus: USU Eastern only

WDEV 0012 - A+ Writing I-B
1-60 contact hours

This course reviews subjects, predicates, fragments, run-on sentences, recognizing sentence types, the writing process from pre-writing to publishing, letters, journals, descriptions, newspaper stories, titles, story endings, details, book reports, sensory words, expository writing, comparison and contrast, literary conventions, and figurative writing. This course also reviews and guides students through the writing process, writing sentences, writing paragraphs, specialized writing assignments including narratives, journals, letters, descriptions, titles, story endings, and book reports. This title also covers sensory words, expository writing, imagery, and
This course reviews the writing process, writing using a variety of writing strategies, sequencing ideas, writing complete sentences, identifying run-on sentences and sentence fragments, formal and informal language in writing, writing analogies, using the library to access information, summarizing, writing sketches, ideas and opinions, essays, poetry, drama, and folk literature. Course also covers writing sentences and paragraphs, narrative, expository, descriptive, and persuasive paragraphs, analogies, newspaper stories, book reports, summarizing, writing story endings, using formal and informal language, and sketches.

This course includes the following topic areas: identifying the audience, writing of introductory and concluding sentences using a variety of techniques, organization skills, identifying sentence types and their punctuation, writing narrative and expository stories, summarizing skills, writing biographical sketches, essays, and creative writing. Course also reviews the writing process from brainstorming to publishing, specialized writing assignments including journal writing, writing paragraphs, writing using formal and informal language, letter writing, analogies, summaries, and book reports. This course also provides hints on how to use a library to access information.

This course is designed to cover the basic skills needed by students who are enrolled in auto mechanics, diesel mechanics, electronics, machine tool technology, and welding. Review of the basic arithmetic, learn problem solving skills, gain skills in metric measurement systems and conversions, gain skills in ratio and proportions and operations with formulas.

This course covers the following topics: addition and subtraction with regrouping, counting bills and coins, using a number line, using mental math, measuring length with standard and nonstandard measurements, using bar graphs, using a calculator, finding mean, median, mode and range, estimating and measuring capacity, time, and weight, reading temperatures in
Celsius and Fahrenheit, multiplying three numbers, measuring area, dividing by tens and hundreds, adding and subtracting fractions, solving problems using pictographs, decimals, probability, plane figures, ordered pairs, identifying faces, edges, and corners, and using logical reasoning. This course also contains lessons covering the five-step process for problem solving, grouping addends, addition and subtraction, odd and even numbers, multiplication and division problems using money, using a calendar, temperature, writing decimals to the tenths and hundredths positions, line segments and angles, comparing maps and grids, comparing graph types, and formulating information into a story problem.

Campus: USU Eastern only

WDEV 0023 - A+ Math I-C
1-60 contact hours

This course covers exponents, standard, expanded, and word forms of numbers, writing decimals, adding and subtracting decimals, the properties of addition, the five-step thinking plan, multiplying two- and three-digit numbers, surveys, uses of line and circle graphs, Venn diagrams, least common multiples, units of length, elapsed time, lines and angles, circles, perimeter, circumference, pyramids, and probability. This course also strengthens mathematical knowledge and ability in the areas of rounding numbers, estimation, place value, properties of numbers, multiplying decimals, dividing by one- or two-digit numbers, prime numbers, equivalent fractions, tallies, identifying variables, solving equations, length, capacity and weight units, temperature, lines and rays, parts of a circle, perimeter, positive and negative integers, and ordered pairs.

Campus: USU Eastern only

WDEV 0024 - A+ Math II
1-90 contact hours

This course introduces the student to advanced math; the student will learn distributive properties, inverse operation, factors, number theory, mixed numbers, ratios, percent concepts, commissions, measurements of length, mass/weight, metric units, points, angles, calculating perimeter, area, volume, using a number line, graphing ordered pairs, randomly occurring events, counting principle factorials, introduction to algebra, rays, quadrilaterals, Pythagorean Theorem, slope, binomials, determinants, Cramer’s Rule, number notation, multiplicative property of zero, inverse operations of multiplication and division, factors, exponents, statistics, scatter plots basic geometric terms, circles, area, volume, size, and cosine ratios.

Campus: USU Eastern only

WDEV 0031 - A+ Reading I-A
1-60 contact hours

This course introduces students to the identification of upper and lower case letters, vowels, consonants, patterns in consonants and vowels, classifying, word families, antonyms, homophones, compound words, synonyms, phonograms, prefixes and suffixes, introduction to nouns and verbs, predicting outcomes, interpreting feelings, drawing conclusions, story details, similarity and difference, cause and effect, spatial-position clues, charts, and graphs. Course also covers consonants and vowels, verbs, nouns, plurals, pronunciation, root words, prefixes and suffixes, context clues, abbreviations, core subject words, analogies, sequencing, main ideas and details, fact and opinion, classifying, characterization, common expressions, story elements, purpose in writing, fiction, and nonfiction.

Campus: USU Eastern only

WDEV 0032 - A+ Reading I-B
1-60 contact hours

This course continues with a review of consonants, vowels, verbs, plurals, syllables, prefixes and suffixes, context clues, core subject words, abbreviations, alphabetizing, sequencing, classifying, recognizing main ideas, story details, tables, diagrams, graphs, fact and opinion, comparison and contrast, predicting outcomes, fiction and nonfiction, folktales and fables, reality and fantasy, literary forms, and figurative language. This course also focuses on consonants, vowels, verbs, plurals, pronunciation, syllables, root words, prefixes and suffixes, homonyms, words with multiple meanings, recognizing main ideas, cause and effect, characterization and other story elements, summarizing and paraphrasing, point of view, purpose in writing, common expressions, fiction and nonfiction, tall tales, folktales, fantasy, literary forms, and figurative language. Selected authors include White, Henry, Irving, and Emerson.

Campus: USU Eastern only
WDEV 0033 - A+ Reading I-C
1-60 contact hours

This course covers sound-letter correspondences, blends, digraphs, diphthongs, review of vowels, verbs, contractions, plurals, word analysis skills including suffixes, prefixes, analogies, connotation and denotation, pronunciation and syllabification, comprehension skills including sequencing and classifying, recognizing main ideas, story elements, prior knowledge, reading selections to demonstrate setting, reality and fantasy, poetry, short stories, propaganda and bias, narrative and expository materials, and high frequency words. Selected authors include Irving, Burnett, Tennyson, Emerson, Twain, and Wordsworth. This course also instructs students in pronunciation skills and symbols, review of consonants, vowels, verbs, word analysis skills, sight words, core subject words, words with multiple meanings, sequencing, alphabetization, comprehension skills including conflict and climax, fiction, nonfiction, fables, poetry, figurative language including alliteration, assonance, onomatopoeia, irony, personification, flashback, and foreshadowing. Selected authors include Burnett, Longfellow, Irving, Defoe, Crane, Burns, and Poe.

Campus: USU Eastern only

WDEV 0041 - A+ Vocabulary I-A
1-60 contact hours

This course is an introduction to sounds, long and short vowel sounds, special sounds formed by various letter combinations, using the letter as a vowel, silent vowels, the schwa sound, various diphthongs, initial and final consonants, like and unlike letters, blends and digraphs, basic sight words, word families, root words, and compound words. Also includes recognizing long and short vowel sounds in example words, review of long and short vowels, initial and final consonants, like and unlike letters and words, blends and digraphs, sight words, syllabification skills, dictionary skills, and special vocabularies.

Campus: USU Eastern only

WDEV 0034 - A+ Reading II
1-90 contact hours

This course teaches and reviews verbs, consonants, vowels, word analysis skills including Greek and Latin words, connotation and denotation, word similarities, abbreviations, comprehension skills including classifying, comparing and contrasting, recognizing cause and effect, point of view, literary terms, elements of fiction, examples of newspaper writing, poetry, drama, and figurative language. Selected authors include Dickens, Twain, Washington, Crane, Stevenson, Hardy, London, Shelley, Dryden, and Sidney. This course also focuses on consonants, vowels, verbs, word analysis skills including Greek and Latin words, compound words, antonyms, homonyms, core subject words, comprehension skills including recognizing outcomes and conclusions, cause and effect, predicting outcomes, common expressions, biography and autobiography, poetry, literary devices, and figurative language. Selected authors include Tolstoy, Longfellow, Emerson, Henry, Franklin, Thoreau, Irving, Bierce, Bradstreet, Henry, Shakespeare, and Lawrence.

Campus: USU Eastern only

WDEV 0042 - A+ Vocabulary I-B
1-60 contact hours

This course builds on the skills of recognizing long and short vowel sounds in example words, review of long and short vowels, initial and final consonants, like and unlike letters and words, blends and digraphs, sight words, syllabification skills, dictionary skills, special vocabulary words, base words, compound words, synonyms, and antonyms. Also provides dictionary and thesaurus skills and usage, review of sight words, parts of speech, words in context, analogies, Latin and Greek roots, word recognition, words borrowed from names and places, core word vocabulary, words used in testing, grade-level review of long and short vowels, silent consonants, sounds, and combinations.

Campus: USU Eastern only

WDEV 0043 - A+ Vocabulary I-C
1-60 contact hours

This course covers parts of the dictionary, open and accented syllables, review of the eight parts of speech, synonyms, antonyms, homonyms, homographs, prefixes, suffixes, Latin and Greek roots, core vocabulary words, short and long vowel sounds, words that have the /ur/ sound, words ending in the letter “y,” consonants, digraphs, and the /or/ sound. Also covers how to use a thesaurus, multiple meanings of words, strategies for solving types of word relationships, improving vocabulary through synonyms and antonyms, using context, prefixes, suffixes, and roots, foreign terms, short
vowel sounds, diphthongs, initial consonants, and the /oo/ sound.

Campus: USU Eastern only

WDEV 0044 - A+ Vocabulary II
1-90 contact hours

This course includes identification and use of closed, open, and accented syllables, using a pronunciation key, synonyms, antonyms, words in context, words borrowed from names and places, foreign phrases, test taking strategies, identifying the /y/ sound in words, vowel clusters, separate sounds for the consonants “c,” “g,” and “s,” and the sound of /ph/. Also reviews how to use a dictionary, the origin of words, parts of speech, analogies, homonyms, homographs, strategies for critical recognition of small words in larger words, foreign terms, sounds made by /au/ and /aw/, initial and final consonants, and introduces words that use silent letters.

Campus: USU Eastern only

WDEV 0050 - A+ Personal Finance
1-90 contact hours

An important aspect of every student’s future is the ability to plan and implement sound and responsible financial goals. The Personal Finance course will educate students in a variety of financial and monetary subjects, including the foundations of economics, preparing a budget, understanding paychecks and tax deductions, banking, and the importance of researching the quality of goods to make consumer choices.

Campus: USU Eastern only

WDEV 0100 - Motorcycle Safety
15 contact hours

Riding a motorcycle can be a challenge. To meet the challenge of motorcycling, a rider needs skill and knowledge. That’s what the Motorcycle Safety Foundation: Basic Rider Course will give you, physical skills to make your motorcycle perform like an extension of yourself.

Campus: USU Eastern only

WDEV 0200 - OSHA Construction
30 contact hours

The OSHA 30-Hour Training for the Construction Industry course includes several topics valuable to construction related work such as Fall Protection, Excavations, Scaffolding, Concrete and Masonry, OSHA Inspection Procedures and more.

Campus: USU Eastern only

WDEV 0210 - OSHA Hydrogen Sulfide H2S
4 contact hours

Hydrogen sulfide (H2S) gas is a common hazard in the oil and gas industry. Upon completion of this H2S training, student will demonstrate knowledge of the sources of hydrogen sulfide, its physical and chemical properties and effects on the body, hydrogen sulfide exposure controls and exposure response. This H2S training course is intended to assist the student in meeting the requirements of OSHA Standard 1910.1000 Table Z-2 and the General Duty Clause Section 5(a)(1).

Campus: USU Eastern only

WDEV 0220 - OSHA Workplace Hazard Assessment
10 contact hours

For hazard assessment in the workplace, the strongest weapon in controlling and removing workplace hazards is for all associates to recognize them. Course will review types of hazards (physical, chemical, biological, and ergonomic), hazard recognition, associate training concepts and control strategies relating to general industry and construction.

Campus: USU Eastern only

WDEV 0230 - OSHA Welding & Hot Works
8 contact hours

Welding and Hot Work, such as brazing or grinding present a significant opportunity for fire and injury. All precautions of this program must be applied prior to commencing any welding or hot work by company employees or contractors. Reference: OSHA 29 CFR 1910.252

Campus: USU Eastern only

WDEV 0240 - OSHA General Industry Training/30 Hour
30 contact hours

The OSHA 30-Hour Training for the General Industry
course includes several topics related to general industry work such as Personal Protective Equipment, Fire Detection and Prevention, Flammable and Combustible Liquids, Machine Guarding, Industrial Hygiene.

Campus: USU Eastern only

WDEV 0250 - OSHA General Industry Training/10 Hour 10 contact hours

The 10 - Hour General Industry Outreach Training Program is intended to provide entry-level general industry workers broad awareness on recognizing and preventing hazards on a general industry site. Students will be introduced to OSHA policies, procedures and standards as well as general industry safety and health principles covered in OSHA Act part 1910. Special emphasis will be placed on areas most hazardous using OSHA standards as a guide.

Campus: USU Eastern only

WDEV 0300 - Flagger Certification 6 contact hours

Individuals who successfully complete this training will receive a Utah Department of Transportation (UDOT) “Flagger” certification. Training is three hours and concludes with a final examination. The job of being a Flagger is an important one. The lives of workers and the traveling public rest with a flagger’s ability to competently perform the job. Certification is good for three years.

Campus: USU Eastern only

WDEV 0401 - Energy Essentials 60 contact hours

This course will explore both current and potential energy sources that may be used to meet our future energy needs. Industry guest speakers will provide additional information on energy resources and give students an understanding of career prospects in the energy field.

Campus: USU Eastern only

WDEV 0500 - College Readiness - Elementary Algebra 1-90 contact hours

Preparation is the key to success. Many students initiate their postsecondary education only to find they are underprepared to begin college-level coursework. This course can be used in preparation for college-level placement tests or as an intervention for skill level development. Elementary Algebra encompasses some of the basic concepts of algebra, one of the main branches of mathematics. It is typically used by students who are wanting to build their understanding of arithmetic. Course is aligned to Accuplacer.

Campus: USU Eastern only

WDEV 0505 - College Readiness - College Arithmetic 1-90 contact hours

This course is a review of basic mathematical concepts. The student will review and learn: addition and subtraction, multiplication, division, number sense, fractions, decimal number operations, statistics, fraction concepts, percent concepts, basic operations, positive and negative rational numbers, equivalent fractions, cross products, absolute value, order of operations, graphs and tables, solving equations, square roots and triangles and problem-solving.

Pass/Fail only

Effective Term

Spring

WDEV 0510 - College Readiness - College Algebra 1-90 contact hours

Preparation is the key to success. Many students initiate their postsecondary education only to find they are underprepared to begin college-level coursework. This course can be used in preparation for college-level placement tests or as an intervention for skill level development. Prepares students for 4-year college and university mathematics by developing thorough mastery of the intermediate algebra topics necessary for students to progress into College Algebra. Course is aligned to Accuplacer.

Campus: USU Eastern only

WDEV 0520 - College Readiness - Sentence Skills 1-90 contact hours

Preparation is the key to success. Many students initiate their postsecondary learning experience. Skill-level assessments for Sentence Skills and automatic and
individualized prescriptions that ensure proper coursework assignments to most efficiently address each student's learning needs.

Campus: USU Eastern only

WDEV 0530 - College Readiness - Reading Comprehension
1-90 contact hours

This course will help prepare the student to begin their postsecondary learning experience. Skill-level assessments for Reading Comprehension and automatic and individualized prescriptions that ensure proper coursework assignments to most efficiently address each student's learning needs.

Campus: USU Eastern only

WDEV 0798 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

WDEV 0799 - Special Problems
1-360 contact hours

Individual work approved by the department instructor. Time and membership hours to be arranged.

Campus: USU Eastern only

Continuing Education

CEAD 5700 - Continuing Education Unit: Special Topics in Animal, Dairy and Veterinary Sciences
.5 - 20 CEU

Topics of special interest in Animal, Dairy and Veterinary Sciences. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring

CEBI 5700 - Continuing Education Unit: Special Topics in Biology
.5 - 20 CEU

Topics of special interest in Biology. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring

CECA 5700 - Continuing Education Unit: Special Topics in the Arts
.5 - 20 CEU

Topics of special interest in the Arts. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.

Repeatable
Semester(s) Traditionally Offered: Spring, Summer, Fall
Effective Term
Spring

CECD 5700 - Continuing Education Unit: Special Topics in Communicative Disorders & Deaf Education
.5 - 20 CEU

Topics of special interest in Communicative Disorders & Deaf Education. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.

New Option
Semester(s) Traditionally Offered: Summer, Spring, Fall
Effective Term
Spring

CEEN 5700 - Continuing Education Unit: Special Topics in Environment and Society
.5 - 20 CEU
Topics of special interest in Environment and Society. Offered as Continuing Education Units Only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring 2017

CEHI 5700 - Continuing Education Unit: Special Topics in History
.5 - 20 CEU

Topics of special interest in History. Offered as Continuing Education Units only. This class is not offered for USU credit.

Repeatable
Effective Term
Spring

CEIT 5700 - Continuing Education Unit: Special Topics in Instructional Technology and Learning Sciences
.5 - 20 CEU

Topics of special interest in Instructional Technology and Learning Sciences. Offered as Continuing Education Units Only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring

CEPO 5700 - Continuing Education Unit: Special Topics in Political Science
.5 - 20 CEU

Topics of special interest in Political Science. Offered as Continuing Education Units Only. This class is not offered for USU credit.

Repeatable
Effective Term
Spring

CEPS 5700 - Continuing Education Unit: Special Topics in Psychology
.5 - 20 CEU

Topics of special interest in Psychology. Offered as Continuing Education Units Only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring

CEPS 5700 - CEU Special Topics in SPER
.5 - 20 CEU

Topics of special interest in SPER. Offered as Continuing Education Units. This class is not offered for USU credit.

Repeatable
Effective Term
Spring

CETE 5700 - Continuing Education Unit: Special Topics in Teacher Education and Leadership
.5 - 20 CEU

Topics of special interest in Teacher Education and Leadership. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring

CEMU 5700 - Continuing Education Unit: Special Topics in Music
.5 - 20 CEU

Topics of special interest in Music. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.
CETH 5700 - Continuing Education Unit: Special Topics in Theatre
.5 - 20 CEU

Topics of special interest in Theatre. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring

CEWA 5700 - Continuing Education Unit: Special Topics in Watershed Sciences
.5 - 20 CEU

Topics of special interest in Watershed sciences. Offered as Continuing Education Units only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring

CEWI 5700 - Continuing Education Unit: Special Topics in Wildland Resources
.5 - 20 CEU

Topics of special interest in Wildland Resources. Offered as Continuing Education Units Only. This class is not offered for Utah State University credit.

Repeatable
Effective Term
Spring