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 4250 - Accounting Internship
3 Credits:

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

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

Semester(s) Traditionally Offered: Fall, Spring, Summer
Pass/Fail only
ACCT 4500 - Accounting Information Systems
3 Credits:
Theoretical concepts underlying the accounting system's computerized support of business processes. Topics include accounting systems development, controls, security, and audit.

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
Course Fee: $10.00

ACCT 4510 - Auditing Principles and Techniques
3 Credits:
Fundamental principles and techniques of auditing and reporting of audits presented in the context of the audit logic sequence. Integrative applications emphasizing audits of organizational resources, processes, and systems. Also addresses ethics, legal environment, auditing standards, and fraud.

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 4700 - Seminar in Accounting
3 Credits:
Special topics in accounting, including workshops, readings, and pilot course offerings.

Semester(s) Traditionally Offered: Summer

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 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.
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: Fall, 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.
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

ACTG 0010 - Introduction to QuickBooks  
30 Credits:

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 Credits:

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 Credits:

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 Credits:

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

Campus: USU Eastern only

ACTG 0799 - Special Problems  
1-360 Credits:

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

Campus: USU Eastern 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

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

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 recommended.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

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.

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

AS 1010 - Leadership Laboratory I
1 Credits:

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

Corequisite: AS 1010.

Pass/Fail only.

AS 1100 - Leadership Laboratory I
1 Credits:

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 1020 - Leadership Laboratory I
1 Credits:

AS 2010 - The Evolution of US Aerospace Power
1 Credits:

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 Credits:

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 Credits:

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

Pass/Fail only.

AS 2120 - Leadership Laboratory II
1 Credits:

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 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 Credits:

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 Credits:

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 4010 - National Security Affairs/Preparation for Active Duty
3 Credits:
Designed to give college seniors the foundation to understand military officer's role in American society. Overviews complex social and political issues facing the military profession. Leadership Laboratory is mandatory for cadets.

AS 4020 - National Security Affairs/Preparation for Active Duty
3 Credits:

Designed to give college seniors the foundation to understand military officer's role in American society. Overviews complex social and political issues facing the military profession. Leadership Laboratory is mandatory for cadets.

Semester(s) Traditionally Offered: Fall, Spring

AS 4110 - Leadership Laboratory IV
1 Credits:

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 Credits:

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.
Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

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 Leadership in Agriculture
3 Credits:

Study of personal leadership strengths, leadership and fellowship in small groups and teams. Emphasis is placed on the application of acquired knowledge to practical problems and personal development as a leader in Agriculture.

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

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

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 Credits:

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 STAT 1040.

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; fulfillment of Communications Literacy CL1 requirement or permission of instructor.

Semester(s) Traditionally Offered: Fall

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 permission of instructor.

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 permission of instructor

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

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 and a junior in standing.
Semester(s) Traditionally Offered: Spring
Course Fee: $35.00

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 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 Credits:

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 Credits:

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

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

Repeatable for credit.

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; STAT 3000 or permission of instructor

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.
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: Fall, 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

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 Evaluation
3 Credits:
Investigate, plan, and apply practical guidelines for conducting program evaluations in formal and informal education settings. Content explores evaluation theory, paradigms, stakeholder influences, evaluation designs, and reporting.

Semester(s) Traditionally Offered: Summer, Odd Years

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.

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 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.

Semester(s) Traditionally Offered: Summer, Odd Years

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.

Semester(s) Traditionally Offered: Summer

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.

Semester(s) Traditionally Offered: Fall, Odd Years

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.

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

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

Semester(s) Traditionally Offered: Spring, Odd Years

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.
Semester(s) Traditionally Offered: Summer

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.

Semester(s) Traditionally Offered: Spring, Odd Years

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

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

Semester(s) Traditionally Offered: Fall, Even Years
ASTE 6960 - Graduate Seminar
1 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: 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.

Semester(s) Traditionally Offered: Summer

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

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 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 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.
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.

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.

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.

AG 4900 - Special Problems - Ag Ambassadors
1 Credits:

A semester long leadership course for Ag Ambassadors. Prerequisite/Restriction: Approval from the Dean's Office. Repeatable for credit
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.  
Semester(s) Traditionally Offered: Spring, Even Years

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

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 permission of instructor.  
Semester(s) Traditionally Offered: Fall, Spring  
Course Fee: $220.00

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 permission of instructor  
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 permission of instructor.  
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 permission of instructor.  
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 permission of instructor.

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 upkeep, 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 or permission of instructor.

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

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.

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

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 permission of instructor.

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 permission of instructor.

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: Fall

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 - Animal Nutrition
4 Credits:

Introduces principles of nutrition and applied feeding of domestic animals, including beef, dairy, horses, poultry, sheep, and swine. Covers nutrition and metabolism of carbohydrates, proteins, lipids, minerals, and vitamins; diet formulation; and nutritional maladies.

Prerequisite/Restriction: ADVS 2200; CHEM 1120 or CHEM 1220.

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

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.

Prerequisite/Restriction: ADVS 3500.

Semester(s) Traditionally Offered: Spring

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 permission of instructor.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $220.00
ADVS 3650 - Live Animal and Carcass Evaluation
3 Credits:
Juggling, 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 permission of instructor.
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: Permission of instructor.

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: Permission of instructor.

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

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 permission of instructor.

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: Permission of instructor.

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

ADVS 4810 - Thesis/Project Seminar  
1 Credits:
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).

Cross-listed as: ADVS 6130

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

Course Fee: $40.00

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.

Semester(s) Traditionally Offered: Spring

Course Fee: $60.00

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 permission of instructor.

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

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 permission of instructor.

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

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

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.

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.

Cross-listed as: ADVS 6400 and BIOL 5400/BIOL 6400 and PUBH 5400/PUBH 6400.
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: Spring 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: Spring
Course Fee: $80.00
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
Course Fee: $80.00
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 permission of instructor.

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 permission of instructor.

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 permission of
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.

Semester(s) Traditionally Offered: Spring

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

ADVS 6520 - 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 5520.

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 6800 - Graduate Student Seminar
1 Credits:

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

Semester(s) Traditionally Offered: Fall, Spring

ADVS 6810 - Seminar in Toxicology
1 Credits:

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 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.  
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 permission of instructor.  
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  
4Credits:  
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 inAnthropology at USU
1 Credits:
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 permission of instructor.

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: Permission of instructor

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: Permission of instructor

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)
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: Spring, 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 and 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 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: Permission of instructor.
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 and 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)
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
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.

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 and ANTH 4980 (recommended).

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

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.

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: Permission of instructor.
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: Permission of instructor.

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 ANTH 3250 or permission of instructor.

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

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 permission of instructor.

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
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 6650 and GEOG 5650/GEOG 6650 and SOC 5650/SOC 6650.

Semester(s) Traditionally Offered: Spring

ANTH 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: ENGL 5700 and HIST 5700.

Semester(s) Traditionally Offered: Spring

ANTH 5800 - Museum Development
1-3 Credits:

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

Prerequisite/Restriction: Permission of instructor.

Cross-listed as: ANTH 6800

Repeatable for credit

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

ANTH 5900 - Independent Studies
1-3 Credits:

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

Prerequisite/Restriction: Approval, prior to registration, of proposal written by student in consultation with instructor.

Repeatable for credit.

ANTH 5980 - Senior Project
1 Credits:

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.

Semester(s) Traditionally Offered: Spring

ANTH 6115 - 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 5115

Repeatable for credit

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

ANTH 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: ANTH 5130 and SOC 6130/SOC 5130.

Semester(s) Traditionally Offered: Summer

Course Fee: $42.00

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

Semester(s) Traditionally Offered: Spring, Odd Years

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

Semester(s) Traditionally Offered: Fall, alternate years

Course Fee: $47.00

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: Permission of instructor.

Cross-listed as: ANTH 5190.

Repeatable for credit.

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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5250.

Repeatable for credit.

ANTH 6320 - 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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5320.

Repeatable for credit.

ANTH 6325 - Bioarchaeology Seminar
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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5325.

Repeatable for credit.

ANTH 6350 - Bioarchaeology 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: Permission of instructor.

Cross-listed as: ANTH 5350.

Repeatable for credit.

ANTH 6400 - Seminar in Social Anthropology
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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5400.

Repeatable for credit.

ANTH 6450 - Seminar in Social 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: Permission of instructor.

Cross-listed as: ANTH 5450.

Repeatable for credit.

ANTH 6500 - Seminar in Cultural Anthropology
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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5500.

Repeatable for credit.

ANTH 6550 - Seminar in Cultural 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: Permission of instructor.

Cross-listed as: ANTH 5550.

Repeatable for credit.

ANTH 6600 - Seminar in Physical Anthropology
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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5600.

Repeatable for credit.

ANTH 6650 - Seminar in Physical 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: Permission of instructor.

Cross-listed as: ANTH 5650.

Repeatable for credit.

ANTH 6700 - Seminar in Linguistic Anthropology
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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5700.

Repeatable for credit.

ANTH 6750 - Seminar in Linguistic 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: Permission of instructor.

Cross-listed as: ANTH 5750.

Repeatable for credit.

ANTH 6800 - Seminar in Archaeology
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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5800.

Repeatable for credit.

ANTH 6850 - Seminar in Archaeology 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: Permission of instructor.

Cross-listed as: ANTH 5850.

Repeatable for credit.

ANTH 6900 - Seminar in Cultural Resource Management
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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5900.

Repeatable for credit.

ANTH 6950 - Seminar in Cultural Resource Management 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: Permission of instructor.

Cross-listed as: ANTH 5950.

Repeatable for credit.

ANTH 6990 - Seminar in Advanced Topics in Anthropology
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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5990.

Repeatable for credit.

ANTH 6999 - Seminar in Independent Study
1-5 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 ANTH 3250 or permission of instructor.

Cross-listed as: ANTH 5999.

Repeatable for credit.
ANTH 6300 - Archaeology Field School
3-5 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 permission of instructor.

Cross-listed as: ANTH 5300.

Repeatable
Semester(s) Traditionally Offered: Summer
Course Fee: $1,000.00
Effective Term
Spring 2016

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 permission of instructor.

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.

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 permission of instructor

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: Permission of instructor.

Cross-listed as: ANTH 5800

Repeatable for credit.

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

ANTH 6900 - Independent Studies
1-3 Credits:
Customized study or readings for graduate students on topics not covered in regular courses.

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

Repeatable for credit.

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 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

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, and STAT 2300.

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 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, APEC 2010

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

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

Students learn strategies for product and commodity marketing. Explores risk management, including futures and options, as well as price analysis and forecasting techniques.

Prerequisite/Restriction: APEC 3010

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

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 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 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 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: APEC 4010/ECN 4010 and ECN 5000.

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

Semester(s) Traditionally Offered: Fall

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

Semester(s) Traditionally Offered: Spring

APEC 7310 - Econometrics I
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.

Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Fall
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

Semester(s) Traditionally Offered: Spring

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 Credits:

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, trouble-shooting, 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 2410 - Electrical Apprentice 4-A
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 2420 - Electrical Apprentice 4-B
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

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.

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

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

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:

This is a 4-week program of Arabic language and culture for students having a beginner level of 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

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
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: 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.
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 assignments.

Campus: USU Eastern only

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.

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

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.

Campus: USU Eastern only

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 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.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

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 Credits:

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 3220 - 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 3230 - 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

Course Fee: $50.00

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

Course Fee: $50.00

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

Course Fee: $50.00

ART 3260 - Introduction to Book Arts
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.

Semester(s) Traditionally Offered: Spring

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 Credits:

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

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
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.

ART 3710 - Fine Art Seminar
1 Credits:
Lecture seminars given by professionals as part of the Art Department visiting artist program.

Prerequisite/Restriction: ART BS, ART BA, or ART BFA only.
Repeatable for credit.

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.

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 2200. ART BS, ART BA, or ART BFA only.
Repeatable for credit.

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.

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.
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 Credits:

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 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 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.

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

ART 4470 - Special Topics in Graphic Design and Illustration
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: Permission of instructor. BFA Graphic Design only. Repeatable for additional credit (e.g., seminars, practicums, etc.)

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

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: Permission of instructor. ART BS or ART BA or ART BFA only. Repeatable for additional credit (e.g., 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
Course Fee: $50.00

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 (e.g., 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
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 4835 - Theory of Photography
3 Credits:

Study of comprehensive and critical readings, screenings and exhibiton 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 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

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 3810. BFA Photography only. Permission of instructor.

Semester(s) Traditionally Offered: Fall
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

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

ART 4910 - Senior BFA Exhibition
2 Credits:

Professional presentation and exhibition procedures. Required for all BFA candidates.

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

Semester(s) Traditionally Offered: 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. Permission of instructor.

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

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 6250 - Graduate Printmaking Studio
1-9 Credits:

Intensive individual production in advanced printmaking techniques.

Prerequisite/Restriction: Graduate status. Permission of instructor.

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

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 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: Permission of instructor

Cross-listed as: ART 4480

Semester(s) Traditionally Offered: Spring

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
ART 2600 - 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: 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: Graduate status.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $90.00
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
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, Spring
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: Permission of instructor and graduate status.
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

CCA 3060 - Quantitative Methods for the Arts (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: MATH 1030 or STAT 1040 or STAT 1045 or equivalent

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

ART 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 permission of instructor.

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 permission of instructor.

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 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 permission of instructor

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: Fall, Spring

ARTH 3340 - African Art
Communications Intensive
3 Credits:

Through geographically and thematically oriented Power Point 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 permission of instructor

Semester(s) Traditionally Offered: Spring

Effective Term
Spring 2016

ARTH 3510 - Islamic Visual Cultures (CI/DHA)
CI/DHA Communications Intensive/Depth Humanities and Creative Arts
3 Credits:

Explores the emergence and development of Islamic visual cultures in Asia and around the Mediterranean between 622 and 1250.

Prerequisite/Restriction: ARTH 2710, ART Majors, ARTH Majors, ARTH Minors or permission of instructor

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

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 permission of instructor

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 permission of instructor

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 permission of instructor.

Semester(s) Traditionally Offered: Fall, Alternate Years

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 permission of instructor.

Semester(s) Traditionally Offered: Spring, Alternate Years

ARTH 3740 - Modern Art (CI)
CI Communications Intensive
3 Credits:
This course examines the history of modern art from the nineteenth century to World War II. Painting and sculpture from Neoclassicism to Symbolism.
Prerequisite/Restriction: ARTH 2720, ART Majors, ARTH Majors, ARTH Minors or permission of instructor.

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

ARTH 3750 - Contemporary Art (CI)
CI Communications Intensive
3 Credits:
This course examines the history of contemporary art from the 1940s to the present.
Prerequisite/Restriction: ARTH 2720, ART Majors, ARTH Majors, ARTH Minors or permission of instructor.

Semester(s) Traditionally Offered: Fall

ARTH 3760 - American Art (CI)
CI Communications Intensive
3 Credits:
History of painting, sculpture, and architecture in America from colonial times to the present.
Prerequisite/Restriction: ARTH 2720, ART Majors, ARTH Majors, ARTH Minors or permission of instructor.

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

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 permission of instructor.

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 permission of instructor.

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 permission of instructor.

Semester(s) Traditionally Offered: Fall, Even Years

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.

Cross-listed as: HIST 4210.

Semester(s) Traditionally Offered: Fall

ARTH 4310 - Common Threads: History of Fiber Arts (CI)
CI
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

Effective Term

Semester(s) Traditionally Offered: Fall

ARTH 4410 - Art of Small Scale Cultures (CI)
CI
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 - Discourses of Empire and Nation (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 permission

Semester(s) Traditionally Offered: Spring, Even Years
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 permission of instructor

Semester(s) Traditionally Offered: Alternate Years
ARTH 4725 - Land Art: Site-Specific Art in the Landscape (CI)
CI Communications Intensive
3 Credits:
This course examines the history of contemporary Land Art from Earthworks in the 1960’s and 1970’s to today’s Ecological Art movement. Students will study Land Art as a type of site-specific, often public, art and consider how Land Art relates to theories of sculpture, public space, landscape, locational identity, community and ecology. Course looks at the significance of Land Art as an art form that exists outside of the confines of the studio, museum and /or gallery space.

Prerequisite/Restriction: ARTH 2710 and ARTH 2720 or permission of instructor.

Semester(s) Traditionally Offered: Alternate Years
ARTH 4730 - Baroque and Rococo Art
3 Credits:
Development of painting, sculpture, and architecture in Europe from the late sixteenth through the eighteenth centuries.

Prerequisite/Restriction: ARTH 2710 and ARTH 2720 or permission of instructor

ARTH 4790 - Art History Seminar and Special Problems
1-6 Credits:
Capstone course for art history emphasis area. 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: Completion of at least one art history course at the 3000 level or above; or permission of instructor.
Repeatable for credit
Semester(s) Traditionally Offered: Spring
ARN 4800 - Directed Reading and Research in Art History
1-3 Credits:
Directed reading, writing, and research in art history.

Prerequisite/Restriction: Permission of instructor.

Semester(s) Traditionally Offered: Fall, Spring
ARTH 4810 - Museum Internship
1-3 Credits:
Through this course, advanced art history students may arrange for credit in conjunction with a local museum. Supervisor at museum oversees student’s work. A faculty member in Art History oversees the written component, including portfolio, documentation, and research paper, depending on number of credits student is enrolled for.
Prerequisite/Restriction: Permission of instructor.

Semester(s) Traditionally Offered: Fall, Spring

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

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Fall, Spring

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.

Semester(s) Traditionally Offered: Spring alternate years

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

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

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

Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

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

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

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

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
Effective Term
Fall 2015

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
Effective Term
Fall 2015

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 - Graduate Modern Art
3 Credits:

This course examines the history of modern art from the nineteenth century World War II.

Prerequisite/Restriction: ARTH 2720 or permission of instructor and graduate status.

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

ARTH 6750 - Graduate Contemporary Art
3 Credits:

This course examines the history of contemporary art from the 1940s to the present.

Prerequisite/Restriction: Graduate status

Semester(s) Traditionally Offered: Spring

ARTH 6760 - Graduate American Art
3 Credits:

History of painting, sculpture, and architecture from the post-impressionists to the present.

Prerequisite/Restriction: Graduate status.

Semester(s) Traditionally Offered: Fall

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 permission of instructor.

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.

Campus: USU Eastern only

AUTO 0010 - AUTO I Introduction to Automotive Technology
90 Credits:

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.

Campus: USU Eastern only

AUTO 0020 - AUTO II Suspension/Alignment
180 Credits:

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.

Campus: USU Eastern only

AUTO 0021 - AUTO II Brakes
180 Credits:

Students will learn the basics of brake system operations,
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.

Campus: USU Eastern only

AUTO 0031 - AUTO III Electrical
180 Credits:

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.

Campus: USU Eastern only

AUTO 0035 - AUTO IV Electrical Lab
180 Credits:

Shop laboratory where students do live work to demonstrate their knowledge and hands on skills for electrical problems.

Campus: USU Eastern only

AUTO 0040 - AUTO IV Heating and Air Conditioning
180 Credits:

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.

Campus: USU Eastern only

AUTO 0045 - AUTO V Engine Performance Lab
180 Credits:

Shop laboratory where students do live work to demonstrate their knowledge and hands on skills for engine performance problems.

Campus: USU Eastern only

AUTO 0099 - ASE Test Prep
3 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

Tune-up from points to computerized systems. Using meters and scan tools for diagnosis. Also, emissions and fuel delivery systems.
AUTO 0122 - Engine Performance II
21 Credits:
This course takes all the elements of AUTO 0121 to a more advanced level.

AUTO 0123 - Engine Rebuild
36 Credits:
This course includes some engine theory, as well as all aspects of engine tear-down, cleaning, boring, components servicing, and rebuilding.

AUTO 0130 - Basic Air Conditioning
18 Credits:
This course includes environmental issues, different refrigerants, basic systems and retrofitting older systems over to R134A.

AUTO 0140 - Basic Electrical
21 Credits:
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.

AUTO 0150 - Brakes
18 Credits:
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.

AUTO 0160 - Steering and Suspension
18 Credits:
This course includes the study of different suspensions systems and their repair, also the using of a wheel alignment machine.

AUTO 0170 - Differentials
21 Credits:
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.

AUTO 0180 - Transmission O & R
36 Credits:
Repair and overhaul of transmissions; including theory, diagnosis and proper repair.

AUTO 0190 - Automotive Electronics
21 Credits:
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.

AUTO 0191 - Auto Hobby
21 Credits:
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.

AUTO 0300 - Utah State Safety Inspection
16 Credits:
Course covering the required curriculum from the Utah Highway Patrol to inspect light duty vehicles such as cars, light duty trucks and motorcycles.
AUTO 0310 - Utah State Heavy Truck Inspection
16 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:

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 Credits:

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

Campus: USU Eastern only

AUTO 0799 - Special Problems
1-360 Credits:

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

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 1200 - Automatic Transmission/Transaxle Theory
3 Credits:

Covers the principles of the automatic transmission system. Including gear sets, apply devices, power flow, hydraulic systems, torque converter, shift controls (manual, hydraulic and electronic) problem solving, repair procedures, and maintenance procedures. Physics and math will be included as part of system operation.

Prerequisite/Restriction: AUTO 1000

Corequisite: AUTO 1205
AUTO 1205 - Automatic Transmission/Transaxle Lab
2 Credits:

Students will complete checks necessary to analyze and diagnose automatic transmission systems. Lab assignments include major and minor repair procedures including disassembly, verifying clearances and specifications and reassembly to manufacturer specifications. Students will have the opportunity to complete all P-1 and P-2 NATEF tasks for this area of study. Completion of all tasks will require students to plan and use the time available wisely.

Corequisite: AUTO 1200

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

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 1300

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

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

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

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

AUTO 1550 - Professional Vocational Leadership (VICA)
1 Credits:
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 2600 - 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
Campus: USU Eastern only

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: Permission of instructor
Campus: USU Eastern only
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
Campus: USU Eastern only

Aviation Technology

AV 1000 - Private Pilot Introduction
1 Credits:
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 Credits:
Covers attributes of aviation professional, career planning, and certification process.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $5.00

AV 1130 - Flight Principles
2 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

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.
AV 1170 - Aircraft Structures
3 Credits:
Accepted methods and repair for metal structures. Organic finishes and application techniques with laboratory applications and practical experience.

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
2 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.

Semester(s) Traditionally Offered: 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.

Corequisite: AV 2100.

Semester(s) Traditionally Offered: Fall
Course Fee: $70.00

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

Semester(s) Traditionally Offered: Spring

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

Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

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.

Semester(s) Traditionally Offered: Spring

AV 2175 - Robinson Helicopter Systems
2 Credits:

In depth look into Robinson R22 and R44 pilot operating handbook.

Prerequisite/Restriction: AV 2355

Semester(s) Traditionally Offered: Spring

AV 2180 - Aircraft Hydraulic and Pneumatic Systems
2 Credits:

Theory and operation of aircraft hydraulic, landing gear, and brake systems.

Semester(s) Traditionally Offered: Fall

AV 2190 - Aircraft Systems Lab
1 Credits:

Laboratory application of principles and components studied in AV 2170.

Corequisite: AV 2170.

Semester(s) Traditionally Offered: Spring

Course Fee: $58.00

AV 2200 - Aircraft Hydraulics and Pneumatics Systems Lab
1 Credits:

Laboratory application of principles and components studied in AV 2180.

Corequisite: AV 2180.

Semester(s) Traditionally Offered: Fall

Course Fee: $59.00

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: $180.00
Course 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
1 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: $10,535.00
Course Fee (additional): $75.00

AV 2355 - Private Pilot Helicopter Certification
1 Credits:

FAA approved flight training program meeting all requirements for, and the issuance of, the Private Pilot Helicopter License.

Semester(s) Traditionally Offered: Fall, Spring, Summer
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 Stage I Flight
1 Credits:

Flight training program that introduces initial time building towards commercial rating. Includes cross country flight time.

Prerequisite/Restriction: AV 2350

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $5,395.00

AV 2415 - Commercial Stage II Flight
1 Credits:

Flight training program designed to build time towards the commercial rating. Commercial maneuvers are introduced.

Prerequisite/Restriction: AV 2350 and AV 2410

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10,463.00

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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Spring

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.

AV 2510 - Intermediate Flight
1 Credits:

FAA approved flight training program that fulfills the cross country requirements for commercial and instrument ratings.

Prerequisite/Restriction: AV 2350.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $9,935.00

Course Fee (additional): $50.00

AV 2515 - Intermediate Flight Helicopter
1 Credits:

FAA approved flight training program that fulfills the cross country requirements for instrument and commercial helicopter ratings.

Prerequisite/Restriction: AV 2355

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $13,250.00

Effective Term
Spring 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 2330.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $190.00

AV 2525 - Instrument Pilot Ground School Helicopter
3 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 2335

Semester(s) Traditionally Offered: Fall, Spring

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).

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $6,215.00Course Fee (additional): $50.00
Effective Term
Spring 2016

AV 2545 - Instrument Pilot Helicopter Certification I
1 Credits:

FAA approved flight training program introducing requirements for issuance of the Instrument Pilot Helicopter rating.

Prerequisite/Restriction: AV 2355

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

Course Fee: $5,035.00
Effective Term
Spring 2016

AV 2550 - Instrument Pilot Certification II
1 Credits:

Continuation of AV 2540. Completes all requirements for issuance of the instrument pilot airplane rating.

Prerequisite/Restriction: AV 2540.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $6,815.00Course Fee (additional): $50.00

AV 2555 - Instrument Pilot Helicopter Certification II
1 Credits:

Continuation of AV 2545. Completes all requirements for issuance of Instrument Pilot Helicopter rating.

Prerequisite/Restriction: AV 2545

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

Course Fee: $10,497.00
Effective Term
Spring 2016

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 2410, AV 2415, and AV 2520. (may be taken concurrently).

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $165.00Course Fee (additional): $10.00

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
Semester(s) Traditionally Offered: Fall, Spring

AV 2660 - Commercial Pilot Certification
1 Credits:
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).

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $13,355.00Course Fee (additional): $75.00

AV 2665 - Commercial Pilot Helicopter Certification
1 Credits:
FAA approved flight training program introducing requirements for the issuance of Commercial Pilot Helicopter rating.

Prerequisite/Restriction: AV 2545 and AV 2555

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $23,255.00
Effective Term Spring 2016

AV 2670 - Commercial Multi-engine Certification
3 Credits:
FAA approved flight training that meets 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: $13,660.00
Effective Term Spring 2016

AV 2740 - CFI Certification
1 Credits:
FAA-approved flight training program meeting all requirements for the issuance of the Certified Flight Instructor Airplane Rating.

Prerequisite/Restriction: AV 2620, AV 2660; and AV 3720 (may be taken concurrently).

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $7,655.00Course Fee (additional): $50.00

AV 2745 - Certified Flight Instructor Certification Helicopter
1 Credits:
FAA approved flight training program introducing requirements for the issuance of Certified Flight Instructor Helicopter rating.

Prerequisite/Restriction: AV 2665

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $9,605.00
Effective Term Spring 2016

AV 2860 - CFII Certification
1 Credits:
FAA approved flight training program meeting all the requirements for, and issuance of, the Certified Flight Instructor, Airplane Instrument Rating.

Prerequisite/Restriction: AV 2620, AV 2660, AV 3720, and AV 2740.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $2,220.00

AV 2865 - Certified Flight Instructor Instrument Certification Helicopter
1 Credits:
FAA approved flight training program introducing requirements for the issuance of Certified Flight Instructor Instrument Helicopter rating.

Prerequisite/Restriction: AV 2745

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $7,653.00
Effective Term Spring 2016
AV 2870 - Commercial Single-Engine Add-On
1 Credits:

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: $2,535.00

AV 2880 - Multi-Engine Certification
1 Credits:

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 only. AV 1100 and a grade of C- or better in MATH 1050

Semester(s) Traditionally Offered: Fall

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 only. AV 1100 and a grade of C- or better in MATH 1050

AV 3140 - Advanced Avionics Systems and Flight Simulation
3 Credits:

Advanced instrument simulation training.

Prerequisite/Restriction: Aviation technology majors only. AV 1100, AV 2540, and a grade of C- or better in MATH 1050

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

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 3300 - Air Transport Pilot Ground School
4 Credits:

This course will introduce and teach the concepts related to the FAA airline transportation pilot rating for commercial operations.

Prerequisite/Restriction: AV 2670

Semester(s) Traditionally Offered: Spring
AV 3410 - FCC License
1 Credits:
Prepares students to obtain the FCC General Radio Telephone Operator’s License. Covers electronic fundamentals through microwave radar and FCC rules and regulations.
Prerequisite/Restriction: TEE 3400.
Semester(s) Traditionally Offered: Spring

AV 3610 - AeroTechnology Design I
1 Credits:
Students select and plan a senior project. Requires written proposal, including technical description of the project and management plans.
Prerequisite/Restriction: Aviation technology majors only. AV 1100 and a grade of C- or better in MATH 1050
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: Aviation technology majors only. AV 1100, AV 2620, AV 2660 and a grade of C- or better in MATH 1050
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. Aviation Technology majors only.
Semester(s) Traditionally Offered: Fall, Spring

AV 3825 - Certified Flight Instructor-Instrument Ground School Helicopter
1 Credits:
Designed to prepare students to pass the FAA oral and written examinations required for becoming certified flight instructor-instrument.
Prerequisite/Restriction: AV 2745, AV 3725
Semester(s) Traditionally Offered: Fall, Spring

AV 3860 - Multiple Engine Instructor Certification
1 Credits:
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 2740 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: $4,295.00

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
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 4150 - AOG (Aircraft On Ground) Aircraft Maintenance
1-3 Credits:

In this class, students will practice learned procedures to safely, yet quickly return an aircraft to service. They will use teamwork skills, delegation and cooperation in performing tasks that they will use in industry practice and collegiate level competitions.

Prerequisite/Restriction: AV 1140, AV 1240, AV 2170

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

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

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 - Airline 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 only. AV 1100 and a grade of C- or better in MATH 1050

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

AV 4300 - History of Aviation in America
3 Credits:

Historical events, individuals and milestones in the development of aviation in America during the 20th century. Students will evaluate the growth of aviation in relation to the economy, military, and society in the United States. The course is intended for upper level aviation students pursuing a career in aviation or aviation related fields.

Prerequisite/Restriction: AV 4280

AV 4480 - Certified Flight Instructor Practicum
2 Credits:

Under supervision of ground school instructor, students gain practical experience teaching ground school subjects.

Prerequisite/Restriction: AV 2740.

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 only. AV 1100 and a grade of C- or better in MATH 1050

Semester(s) Traditionally Offered: Spring
AV 4505 - Advanced Robinson Helicopter Systems
3 Credits:
Robinson Safety course and maintenance seminar.
Prerequisite/Restriction: AV 1100, AV 2665 and a grade of C- or better in MATH 1050
Semester(s) Traditionally Offered: 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 1100, AV 2555 and a grade of C- or better in MATH 1050
Semester(s) Traditionally Offered: Fall
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: Aviation technology majors only. AV 1100, AV 3610, and a grade of C- or better in MATH 1050
Semester(s) Traditionally Offered: Fall
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: Aviation technology majors only. AV 1100, AV 4610, and a grade of C- or better in MATH 1050
Semester(s) Traditionally Offered: 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 only. AV 1100, AV 5400, and a grade of C- or better in MATH 1050
Semester(s) Traditionally Offered: Fall, Spring
3 Credits:
Introduction to crew resource management, safety management, and aeronautical decision making.
Prerequisite/Restriction: AV 1100, AV 2665 and a grade of C- or better in MATH 1050
Semester(s) Traditionally Offered: Spring
Course Fee: $1,600.00
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
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

Prerequisite/Restriction: Aviation technology majors only. AV 1100 and a grade of C- or better in MATH 1050

Semester(s) Traditionally Offered: 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

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: Aviation technology majors only. AV 1100, AV 5410, and a grade of C- or better in MATH 1050

Semester(s) Traditionally Offered: Spring
Course Fee: $2,075.00

Biological Engineering

BENG 1000 - Introduction to Undergraduate Research and Engineering Design
1 Credits:

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 Credits:
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:
Execution and completion of a comprehensive senior design project. Design reviews and written reports are required.
Prerequisite/Restriction: BENG 3870; BENG 3670 or CEE 3670 (prerequisite or corequisite); and Admission to the Professional Engineering Program
Semester(s) Traditionally Offered: Spring
BENG 4890 - Biological Engineering Design III (CI)
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

Semester(s) Traditionally Offered: Spring

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 the 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

Semester(s) Traditionally Offered: Fall

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 permission of instructor; 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 devises (BioMEMS) technologies and many BioMEMS devices and biomedical applications.

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 5850 - 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, BENG 5020 and Admission to the Professional Engineering Program

Cross-listed as: BENG 6850.

Semester(s) Traditionally Offered: Fall
Biological Engineering

BENG 5890 - 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 permission of instructor; and Admission to the Professional Engineering Program

Cross-listed as: BENG 6890.

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 permission of instructor; 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

Cross-listed as: BENG 5600

Semester(s) Traditionally Offered: Spring

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 Credits:

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 permission of instructor

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 devises (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 2330 and BENG 5020

Cross-listed as: BENG 5840

Semester(s) Traditionally Offered: Spring

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
1 Credits:

Promotes familiarization with departmental and graduate school rules, procedures, and research.

Cross-listed as: BENG 7860.
Semester(s) Traditionally Offered: Fall
BENG 6870 - Research Planning
1 Credits:
Tools and techniques for writing research proposals and giving presentations.
Cross-listed as: BENG 7870.

Semester(s) Traditionally Offered: Spring
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 permission of instructor
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 permission of instructor.
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.

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 Credits:
Introduces graduate students to the current biological engineering research and applications in academia and industry.
Cross-listed as: BENG 6510

Semester(s) Traditionally Offered: Spring
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
1 Credits:
Promotes familiarization with departmental and graduate school rules, procedures, and research.
Cross-listed as: BENG 6860.

Semester(s) Traditionally Offered: Fall
BENG 7870 - Research Planning
1 Credits:
Tools and techniques for writing research proposals and giving presentations.

Cross-listed as: BENG 6870.

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

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 Credits:

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
4 Credits:

Principles of cell biology, energetics, and genetics; plant structure, function, and development. Three lectures and one lab. To receive University Studies Breadth Life Sciences (BLS) credit, students must complete both BIOL 1610 and either BIOL 1620 or BIOL 3300. The BIOL 1610 and BIOL 3300 option for BLS credit is available only to students majoring in Biological Engineering or Environmental Engineering. The BIOL 1610 and BIOL 3060 option for BLS credit is available only to students in the Bioinformatics Emphasis of the Computer Science Major.

Semester(s) Traditionally Offered: Fall
Course Fee: $95.00

BIOL 1620 - Biology II (BLS)
BLS Breadth Life Sciences
4 Credits:

Animal structure, function, and development; principles of evolution, ecology, and behavior. Three lectures and one lab.

Prerequisite/Restriction: BIOL 1610.

Semester(s) Traditionally Offered: Spring
Course Fee: $95.00

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
BIOL 2035 - Genetics Lab
1 Credits:

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 instructor directed and assisted experiment at the beginning of the semester to scientific problem solving using student designed experiments as students progress in their independence and problem solving skills.

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 2320, BIOL 2420, 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: $70.00

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: NR 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: $70.00

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: $70.00

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 Credits:

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: Permission of instructor

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: Spring

BIOL 3040 - Plants and Civilization (DSC)
DSC Depth Life and Physical Sciences
3 Credits:

Examines the importance of plants as food, shelter, clothing, medicine, and drugs. Social and historical role of plants in aesthetics, religion, energy, biotechnology, human exploration, and migration.

Prerequisite/Restriction: University Studies Breadth Life Sciences (BLS) course.

Semester(s) Traditionally Offered: Fall

BIOL 3060 - Principles of Genetics (QI)
QI Quantitative Intensive
4 Credits:

Introduction to transmission, population, and molecular aspects of modern genetics.

Prerequisite/Restriction: BIOL 1610; CHEM 1110 or CHEM 1210. The BIOL 1610 and 3060 option for BLS credit is available only to students in the Bioinformatics Emphasis of the Computer Science Major.

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

BIOL 3065 - 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.
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: $90.00

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: $170.00

BIOL 3500 - Plagues, Pests, and People (DSC)
DSC Depth Life and Physical Sciences
3 Credits:
Examines the biology and diversity of medically important insects and their associated diseases. Emphasizes the basic principles and concepts in medical, veterinary, and forensic entomology, as well as the historical impact of insect-borne diseases.

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

BIOL 4000 - Human Dissection
1 Credits:
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: $100.00

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 NR 2220
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 permission of instructor. Programming recommended.

Cross-listed as: MATH 4230.

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.

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.

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.

BIOL 4422 - Plant Taxonomy II
1 Credits:

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 permission of instructor.

Cross-listed as: BIOL 6422.

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: $80.00

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 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: Fall
Effective Term
Spring

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: $60.00

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 permission of instructor.

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

BIOL 4710 - Teaching Internship
1 Credits:

Advanced undergraduates function as teaching interns under supervision of a faculty member. Only 1 credit may be counted toward Biology degree electives.

Prerequisite/Restriction: Permission of instructor.

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 permission of instructor.

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 Effective Term Fall 2015

BIOL 5250 - Evolutionary Biology (CI) 3 Credits:

CI Communications Intensive

Current topics in organic evolution from molecular to macroevolutionary scales.

Prerequisite/Restriction: BIOL 3060 or WILD 4880 or permission of instructor; BIOL 2220/NR 2220 recommended.

Semester(s) Traditionally Offered: Fall, 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 permission of instructor.  
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 permission of instructor.  
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: $75.00  
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 Credits:  
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 Credits:  
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 permission of instructor.

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 permission of instructor.

Cross-listed as: BIOL 6380.

Semester(s) Traditionally Offered: Fall

BIOL 5390 - Genes and Behavior (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 2016

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.

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

Semester(s) Traditionally Offered: Spring

BIOL 5530 - Insect Systematics and Evolution
3 Credits:

Evolution, biology, and classification of insects, including basic external morphology. Emphasizes role of phylogeny in systematics and importance of systematics in comparative biology.

Prerequisite/Restriction: BIOL 1620.

Semester(s) Traditionally Offered: Fall

Course Fee: $40.00

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 permission of instructor.

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: $90.00

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: $100.00

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

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 permission of instructor.

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: $75.00

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 permission of instructor.

Repeatable for credit.

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

BIOL 5810 - Bachelor's Thesis
3 Credits:

Preparation of a written thesis, based upon individual investigation, under the supervision of faculty.

Prerequisite/Restriction: 3 credits of BIOL 5800 (or concurrent enrollment) and permission of instructor.

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

BIOL 5850 - Microbiology Seminar
1 Credits:

Cross-listed as: BIOL 6850.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall, Spring

BIOL 6010 - 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 5010.

Semester(s) Traditionally Offered: Spring

BIOL 6190 - 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 5190.

Semester(s) Traditionally Offered: Spring

BIOL 6200 - Biogeochemistry of Terrestrial Ecosystems
3 Credits:

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.

Prerequisite/Restriction: BIOL 1620, PSC 3000, CHEM 2300 or CHEM 2310, or permission of instructor.

Cross-listed as: PSC 6200 and WILD 6200.

Semester(s) Traditionally Offered: Fall

BIOL 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 permission of instructor.

Cross-listed as: BIOL 5220 and ADVS 6220/ADVS 5220
BIOL 6240 - Physiological Ecology of Vertebrates
3 Credits:

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.

Prerequisite/Restriction: Permission of instructor

Semester(s) Traditionally Offered: Fall

BIOL 6250 - Graduate Internship
1-6 Credits:

Work experience, for which the student is paid, tied to academics in a graduate student's field of study.

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 permission of instructor.

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 Credits:

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 Credits:

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 permission of instructor.

Cross-listed as: BIOL 5324

Semester(s) Traditionally Offered: Fall

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 permission of instructor.

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: Spring

Effective Term Spring 2016

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 Credits:

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 permission of instructor.

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 permission of instructor.

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 permission of instructor.

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 Credits:

Format for general graduate-level seminar topics.
BIOL 6850 - Microbiology Seminar
1 Credits:
Cross-listed as: BIOL 5850.

BIOL 6870 - Ecology Seminar
1 Credits:

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.

BIOL 6910 - Special Problems
1-3 Credits:
Individual or group study under faculty guidance.
Prerequisite/Restriction: Permission of instructor.

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

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 Credits:
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.

Campus: USU Eastern only

BCCM 0020 - Green Construction - Building Site Layout/Concrete
120 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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
90 Credits:

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 0200 - Basic Print Reading
90 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 0300 - Concrete I
180 Credits:

Instruction covers using a builders’ 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.

Campus: USU Eastern only
BCCM 0310 - Concrete II
180 Credits:
Principles in forming, placing and finishing of concrete in actual construction settings including footing, walls and slabs.
Campus: USU Eastern only

BCCM 0400 - Framing I
180 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.
Campus: USU Eastern only

BCCM 0410 - Framing II
180 Credits:
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.
Campus: USU Eastern only

BCCM 0500 - Exterior Finish I
180 Credits:
This course provides an introduction to the application of siding, stucco, brick, rock and other typical exterior wall finishing materials.
Campus: USU Eastern only

BCCM 0510 - Exterior Finish II
180 Credits:
Proper installation of exterior doors, windows and cornice finish are included.
Campus: USU Eastern only

BCCM 0520 - Interior Finish I
180 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.
Campus: USU Eastern only

BCCM 0530 - Interior Finish II
180 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.
Campus: USU Eastern only

BCCM 0798 - Special Problems
1-360 Credits:
Individual work approved by the department instructor. Time and membership hours to be arranged.
Campus: USU Eastern only

BCCM 0799 - Special Problems
1-360 Credits:
Individual work approved by the department instructor. Time and membership hours to be arranged.
Campus: USU Eastern only

BCCM 1010 - Building Construction Safety
1 Credits:
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 2030 - Framing II
2 Credits:

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.

Prerequisite/Restriction: BCCM 2010 must be completed or taken concurrently. 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: 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: Permission of instructor
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
1-3 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.

Prerequisite/Restriction: Admission to Huntsman School Global Learning Experience

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $2,300.00

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: Permission of instructor.

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

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 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 2.5 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 Credits:

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; choose one statistics course from STAT 1040, STAT 1045, 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 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 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.

BUS 6310 - MBA Career Development  
0.5 Credits:

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

BUS 0010 - Business Writing  
1-90 Credits:

Focuses on business English essentials including sentence structure, grammar, punctuation, parts of speech, and proofreading.

Campus: USU Eastern only

BUS 0020 - Business Writing Techniques  
1-90 Credits:

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

BUS 0030 - 10-Key Calculations  
1-60 Credits:

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

BUS 0100 - Communication Skills I  
24 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 0140 - Customer Service I
16 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

This class will look at communications from a sociological standpoint. We will look at 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 Credits:

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 at conflict resolutions skills and workplace relations skills.

Campus: USU Eastern only

BUSN 0170 - Work and Education Preparation I
16 Credits:

This course is set up to help a person by looking at both 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 Credits:

This is a self-paced online support to the teacher lead portion of this class.

Campus: USU Eastern only

BUSN 0300 - Introduction to Entrepreneurship
24 Credits:

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.

Campus: USU Eastern only

BUSN 0310 - FastTrac Growth Venture
30 Credits:

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.

Campus: USU Eastern only

BUSN 0320 - Ndevel Business Basics
24 Credits:

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.

Campus: USU Eastern only

BUSN 0340 - Ice House Introduction to Entrepreneurship Thought
45 Credits:

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.

Campus: USU Eastern only

BUSN 0798 - Special Problems
1-360 Credits:

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

Campus: USU Eastern only

BUSN 0799 - Special Problems
1-360 Credits:
Individual work approved by the department instructor.
Time and membership hours to be arranged.

Campus: USU Eastern only

BUSB 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

BUSB 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

BUSB 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

Campus: USU Eastern only

BUSB 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 Summer on demand only

BUSB 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

BUSB 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

BUSB 1500 - Business Leadership Club
1 Credits:

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.
**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 2160 - Introduction to Business Finance**

3 Credits:

Introductory course in business finance. Course topics will include the financial sector, financial analysis, budgeting, the time value of money, sources of financing, the cost of capital, and basic securities.

Prerequisite/Restriction: A basic understanding of algebra. It is strongly recommended that this course be taken after the student as completed BUSN 2010.

**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.

**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.

Campus: USU Eastern only

BUSN 2390 - Organizational Behavior (HR)
HR Human Relations
3 Credits:

Comprehensive study of human behavior in the workplace. Focuses on the application of psychological theories of attribution, learning, motivation, and group processes to enhance productivity, quality, and job satisfaction.

Prerequisite/Restriction: Introductory writing course

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

BUSN 2451 - Travel and Tourism
2 Credits:

Designed to help students understand the underlying principle and practices of domestic and international tourism. Examines how these dimensions effect travel services, marketing strategies, planning, development, research and policy making in the area of hospitality management.

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

BUSN 2590 - Business Ethics and Social Responsibility
2 Credits:

Explores theories of business responsibility from a multidisciplinary and managerial perspective. Presents current theories of business ethics and examines how they apply to a number of case studies. Topics include ethical and social responsibility issues with regard to consumer product safety, advertising, affirmative action, sexual harassment, employee rights, whistle-blowing, conflicts of interest, and worker safety.

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

BUSN 2600 - Business Consulting
1-3 Credits:

Designed for the business student to provide consulting opportunity and experience as well as exposure to the practical realities of the business world. Under the 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 Credits:

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...
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: Permission of instructor
Repeatable for credit
Campus: USU Eastern only

BUSN 2988 - Special Problems
1-3 Credits:
Provides an opportunity for business students to study or research a special area of interest approved by an instructor. Time and credit is to be arranged.
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
130 Credits:
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.
Campus: USU Eastern only

BCIS 0030 - Robot Programming
120 Credits:
To introduce students to robots construction, and programming. Students will learn to develop correct software in a simple programming language environment that will drive their robot through several challenges.
Campus: USU Eastern only

BCIS 0040 - Introduction to Programming
130 Credits:
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 user of text files. Students will learn to design, code, and test their own programs. Student will also apply mathematical skills throughout the course.
Campus: USU Eastern only

BCIS 0050 - Introduction to Super Computers
130 Credits:
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.
Campus: USU Eastern only

BCIS 0060 - Introduction to A+ Essentials
130 Credits:
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 student for hardware exams, such as the A+ hardware certification.
Campus: USU Eastern only

BCIS 0070 - Linux+
130 Credits:
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.

Campus: USU Eastern only

BCIS 0080 - Introduction to Game Design and Programming
130 Credits:

This course is a basic course that will introduce students to game design and programming. No prior experience in programming and graphic design required.

Campus: USU Eastern only

BCIS 0090 - Networking Technology
130 Credits:

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 student for exams such as Network+ Certification Exam and qualifies as one exam in the Microsoft Certified Systems Administrator (MCSA).

Campus: USU Eastern only

BCIS 0110 - Keyboarding Basics
1-30 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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

BCIS 0261 - Database Applications I
1-60 Credits:

Teaches the creation of database and introduces the application of database capabilities for information management and data manipulation. Students will learn how to design, create, manipulate, extract, and present data.

Campus: USU Eastern only

BCIS 0262 - Database Applications II
1-60 Credits:

This is a continuation of BCIS 0261 and is designed to provide students with advanced skills in database design and creation, data extraction and presentation, database relationships, and data interconnectivity.

Campus: USU Eastern only

BCIS 0310 - Desktop Publishing
1-90 Credits:

Introduce business application features of desktop publishing. Students will arrange text and graphics to create attractive, professional-looking documents.

Campus: USU Eastern only

BCIS 0320 - Electronic Presentations
1-60 Credits:

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 Credits:

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.
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.

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.

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.

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.

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.

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.

This beginning class will teach the student how organize, analyze, and present information using Microsoft Word.
BCIS 0620 - Introduction to Excel
30 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

This course focuses on introducing Power Point 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 Credits:

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

Campus: USU Eastern only

BCIS 0799 - Special Problems
1-360 Credits:

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
Semester(s) Traditionally Offered: Fall, Spring

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.
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 pre-defined 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 Credits:

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 1910 - 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 (e.g., BCIS 1400 or BCIS 1405) or prior experience with a word processing program.

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: On Demand only

BCIS 2010 - Business Computer Applications
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: Fall, Spring

BCIS 2210 - 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 2300 - Web Programming
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 permission of instructor

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: Fall, Odd Years

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-experience creating business Web pages including shopping carts and other interactive elements.

Prerequisite/Restriction: BCIS 1300 or previous HTML and web design experience

Campus: Regional Campuses and Distance Education
Semester(s) Traditionally Offered: Spring, Even Years

BCIS 2550 - Fundamentals of Fortran
3 Credits:
Introduction to programming using the high-level language FORTRAN 90. Emphasis will be on structured problem solving and algorithm development using control structures, arrays, functions, and subroutines. It is recommended that Engineering students take this class during the Sophomore year.

Prerequisite/Restriction: MATH 1210 and MATH 1100
BCIS 2610 - Administering Windows® Professional 
3 Credits:

Designed to teach fundamental installation, implementation, and configuration management tasks in Microsoft Windows® Professional. Intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification.

Prerequisite/Restriction: Previous experience and familiarity with Windows suggested.

Campus: Regional Campuses and Distance Education 
Semester(s) Traditionally Offered: Fall, Odd Years

BCIS 2611 - Administering Windows® Server
3 Credits:

Designed to teach fundamental installation, configuration, and administrative management tasks in Microsoft Windows® Server. Intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification.

Prerequisite/Restriction: BCIS 2610

Campus: Regional Campuses and Distance Education 

BCIS 2612 - Administering Windows® Network Infrastructure
3 Credits:

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

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 2610 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 2610 and BCIS 2613

Campus: Regional Campuses and Distance Education 
Semester(s) Traditionally Offered: On Demand only
BCIS 2616 - Managing a Microsoft Windows® Network Environment
3 Credits:

Course is designed to prepare students for the challenges they will face as a networking professional responsible for administering and supporting Windows network skills that are in high demand in today’s business environment. Students learn how to administer and support a Windows network and prepare for the Microsoft Certified Professional Exam 70-218, a core requirement for MCSA certification and an elective for MCSE. Covers how to: set up client and server computers; manage data storage, shared resources, and permissions; configure network infrastructure, including TCP/IP, DHCP, and name resolution services; install Internet Information Services; create user and group objects, and administer Active Directory services; use group policies to manage desktops and network security; troubleshoot remote access and VPN connections; and monitor server health and performance.

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: Fall, Even Years

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
Semester(s) Traditionally Offered: On Demand only

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
Semester(s) Traditionally Offered: On Demand only

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
Semester(s) Traditionally Offered: On Demand only

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: Permission of instructor
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 3300 - Clinical Experience I in Business Education
1 Credits:
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
Effective Term
Fall 2015

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

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 Credits:

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 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 2015

Campus: USU Eastern only

BHIS 2015 - Virtual Medical Coding for E/M
1 Credits:

Virtual Medical Coding I introduces the student to the virtual world of coding. A web-based medical coding application will be presented and discussed. Authentic medical records are analyzed and coded. Throughout the course students are provided the opportunity to further master Evaluation and Management (E/M) coding as they actually work in a real-world, web-based, virtual environment.

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 1025 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 Credits:

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 1025 and BHIS 2010 and BHIS 2015 or instructor permission

Corequisite: BHIS 2020

Campus: USU Eastern only

BHIS 2030 - Advanced ICD-9-CM Coding II
1 Credits:

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 Credits:

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 Credits:

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: Permission of instructor

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: Permission of instructor

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: Permission of instructor

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 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: Completion of at least 30 credits.

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.

Graded SP (Satisfactory Progress) only.
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 Credits:
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
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) OR a C or better in MATH 1010 OR an Accuplacer score of 60 or better OR MATH ACT of 24 OR MATH SAT or 570 OR satisfactory completion (C or better) of the MATH 0995 as a prerequisite.
Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Spring 2016
CHEM 1115 - General Chemistry I Laboratory
1 Credits:
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
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $55.00

CHEM 1120 - General Chemistry II (BPS)
BPS Breadth Physical Sciences
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 Credits:

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 MATH 1050 or higher; or corequisite of MATH 1050. High school chemistry recommended.

Semester(s) Traditionally Offered: Fall, Spring

CHEM 1215 - Chemical Principles Laboratory I
1 Credits:

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 Credits:

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

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00

CHEM 1990 - Introduction to the Chemistry and Biochemistry Professions
1 Credits:

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 Credits:

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 permission of instructor.

Semester(s) Traditionally Offered: Spring

CHEM 2325 - Organic Chemistry Laboratory II
1 Credits:

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: Permission of instructor.
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.

Semester(s) Traditionally Offered: Fall
CHEM 3005 - Quantitative Analysis Laboratory  
1 Credits:  
One three-hour laboratory per week. Must be taken concurrently with CHEM 3000.  
Prerequisite/Restriction: CHEM 1215, CHEM 1225, MATH 1050 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  
3 Credits:  
Prerequisite/Restriction: CHEM 3060.  
Semester(s) Traditionally Offered: Spring  

CHEM 3080 - Physical Chemistry Laboratory I (CI)  
CI Communications Intensive  
1 Credits:  
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 Credits:  
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 Credits:  
 Covers basic aspects of inorganic synthesis and compound characterization.  
Corequisite: CHEM 3510.  
Semester(s) Traditionally Offered: Spring  
Course Fee: $75.00  

CHEM 3650 - 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.  

CHEM 3710 - Introductory Biochemistry Laboratory
1 Credits:
Laboratory course designed to accompany CHEM 3700.
Corequisite: CHEM 3700.

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.

CHEM 4800 - Research Problems (CI)
CI Communications Intensive
1-3 Credits:
Directed undergraduate research.
Prerequisite/Restriction: Permission of department.
Repeatable for credit.

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.

CHEM 4990 - Undergraduate Seminar (CI)
CI Communications Intensive
2 Credits:
Writing and speaking skills necessary for presenting scientific information.
Repeatable for credit.

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; and PHYS 2120 or PHYS 2220.

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 permission of instructor

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

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.
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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Spring

CHEM 5700 - General Biochemistry I  
3 Credits:  
General biochemistry for science majors, including proteins, enzymes, catalysis, bioenergetics, and catabolic metabolism.

Prerequisite/Restriction: CHEM 2320.

Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Spring

CHEM 5720 - General Biochemistry Laboratory (CI)  
CI Communications Intensive  
3 Credits:  
Prerequisite/Restriction: ENGL 2010 and CHEM 5710 (may be taken concurrently).

Semester(s) Traditionally Offered: Spring

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
Semester(s) Traditionally Offered: Spring, Odd Years
CHEM 6010 - Quantum Chemistry
3 Credits:
Quantum mechanics applied to chemical problems. Theory of atoms and molecules.
Prerequisite/Restriction: CHEM 3070, MATH 2250.

Semester(s) Traditionally Offered: Fall
CHEM 6020 - Molecular Spectroscopy
3 Credits:
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 Credits:
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.

Semester(s) Traditionally Offered: Fall
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 permission of instructor.

Semester(s) Traditionally Offered: Spring
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 permission of instructor.

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 permission of instructor.

Cross-listed as: BIOL 6740.

Semester(s) Traditionally Offered: Spring
CHEM 6750 - Principles of Structural Biology
3 Credits:

General principles of protein and nucleic acid structure. Approaches to understanding biological function through structural analysis.

Prerequisite/Restriction: CHEM 5700 or CHEM 6700 or permission of instructor.

Semester(s) Traditionally Offered: Fall
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 permission of instructor.

Semester(s) Traditionally Offered: Spring
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.
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 7300 - 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 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.

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.

CHEM 7500 - Coordination Chemistry
3 Credits:
Theory and spectroscopy of transition metal coordination complexes.
Prerequisite/Restriction: CHEM 3070, CHEM 6500, CHEM 6510.

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.

CHEM 7600 - Analytical Spectroscopy
3 Credits:
Practical description of spectroscopy-based analysis, emphasizing instrumentation and methods.

Prerequisite/Restriction: CHEM 5640, graduate standing, or permission of instructor.

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 permission of instructor.

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 permission of instructor.

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 permission of instructor.

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 Credits:
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.
Semester(s) Traditionally Offered: Spring
Course Fee: $24.00
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: Summer

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: Fall
Course Fee: $24.00

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 folktales, 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 permission of instructor

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: Permission of instructor

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 permission of instructor.

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
3 Credits:

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 permission of instructor

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: Spring

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: Permission of instructor.

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 permission of instructor

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 Credits:
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: Permission of instructor.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

Civil and Environmental Engineering

CEE 1880 - Civil and Environmental Engineering Orientation and Computer Applications
1 Credits:

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 credit for MATH 1050 and MATH 1060. Enrollment 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
3 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

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

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

CEE 2890 - Environmental Engineering Sophomore Seminar
1 Credits:

Introduces students to the field of environmental engineering, emphasizing design, ethics, and leadership in the environmental engineering profession. Emphasizes creative thinking, organizational skills, team work, 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 - Water and Wastewater Engineering
4 Credits:

Engineering analysis and design of processes for treatment of water and wastewater. Major topics include water quality evaluation; physical, chemical, and biological treatment systems; design of facilities for production of drinking water and for treatment and reclamation of municipal and industrial wastewater; and management of residuals from water and wastewater treatment facilities.

Prerequisite/Restriction: CEE 3610/PUBH 3610 and student must be in the Professional Engineering Program.

Semester(s) Traditionally Offered: 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 Credits:

First of three-semester sequence. Team organization and teamwork, preparing proposals, project planning, scheduling, and management, engineering for government or privately, contracts, ethics and responsibility, marketing services. 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 Credits:

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 teamwork, 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.

Semester(s) Traditionally Offered: Spring
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.

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: CEE 3020 and student must be in the Professional Engineering Program or have Graduate Standing.

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.

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. 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 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 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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Fall

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.

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

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.

Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Spring

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:

Computer simulation of steady/transient 3D groundwater flow in aquifers, watershed runoff, and surface water routing. Sources, sinks, boundary conditions, particle tracking, hydrologic model classification, statistical methods, flood warning and loss, reservoir design, environmental studies, neural networks.

Prerequisite/Restriction: CEE 3430 and student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6450

Semester(s) Traditionally Offered: Spring

CEE 5460 - 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, CEE 4200 and student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: CEE 6460.

Semester(s) Traditionally Offered: Fall

CEE 5470 - 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 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.

Semester(s) Traditionally Offered: Fall

CEE 5550 - 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 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: PSC 5620.

Semester(s) Traditionally Offered: Fall

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.
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.

Semester(s) Traditionally Offered: Spring

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 Credits:

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

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: Fall

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:

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: Permission of instructor.

Semester(s) Traditionally Offered: Spring

CEE 6040 - Structural Reliability
3 Credits:


Prerequisite/Restriction: Permission of instructor.

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: Permission of instructor.

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 permission of instructor

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.
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.

Semester(s) Traditionally Offered: Fall

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 6420 - Engineering Risk Assessment and Risk Management
3 Credits:

Comprises both quantitative risk assessment techniques and a range of issues in risk management. Examples drawn from various civil engineering subdisciplines such as: environmental engineering, geotechnical engineering, hydraulics and hydrology, structural engineering.
transportation engineering, and water resource 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:

Computer simulation of steady/transient 3D groundwater flow in aquifers, watershed runoff, and surface water routing. Sources, sinks, boundary conditions, particle tracking, hydrologic model classification, statistical methods, flood warning and loss, reservoir design, environmental studies, neural networks.

Prerequisite/Restriction: CEE 3430

Cross-listed as: CEE 5450.

Semester(s) Traditionally Offered: Spring

CEE 6460 - 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 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: Fall

CEE 6480 - Groundwater 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 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 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: WATS 6520.

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: Permission of instructor.

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: Fall

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 permission of instructor

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.

Semester(s) Traditionally Offered: Spring
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 permission of instructor.

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 multi-disciplinary nature of impact assessment frameworks.

Prerequisite/Restriction: CEE 6690/CEE 5690 or permission of instructor.

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 - Environmental Quality Modeling  
3 Credits:

Development and application of mathematical models for conventional and toxic pollutants in environmental systems. Description of advection, dispersion, sediment transport, partitioning, interphase transfer, and transformation kinetics applied to organic and inorganic pollutants. Equilibrium, steady state, and nonsteady systems.

Semester(s) Traditionally Offered: Spring

CEE 6750 - Eco-Hydraulics for Natural Systems Engineering  
4 Credits:

Provides students with advanced multi-disciplinary modeling course in the application of hydraulics and water resource modeling in light of impact assessment frameworks for natural systems modeling. Focuses on application on one-dimensional and two-dimensional hydraulic modeling as basis for examining quantitative impacts on stream and riparian ecosystems under altered flow, as well as channel conditions with particular emphasis on fish and aquatic macro-invertebrates.

Prerequisite/Restriction: CEE 6690/CEE 5690.

Semester(s) Traditionally Offered: Fall

CEE 6800 - Division of Environmental Engineering Seminar  
1 Credits:

Environmental engineering graduate seminar for faculty, student, and guest lecturer research presentations.

Semester(s) Traditionally Offered: Fall, Spring

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.
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.

Prerequisite/Restriction: Participation in an In*Step Science Program in the public schools.
Repeatable for credit.

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

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 permission of instructor.

Semester(s) Traditionally Offered: Spring

CEE 6900 - Directed Reading
1-3 Credits:

Prerequisite/Restriction: Permission of instructor.
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: Permission of instructor.
Repeatable for credit.

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

CEE 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 permission of instructor.
Cross-listed as: WATS 6940.
Course Fee: $35.00

CEE 6950 - Practical Training
3 Credits:
Intended for graduate students who are interested in practical training before graduation.
Pass/Fail only.

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

CEE 6970 - Thesis Research
1-6 Credits:

Prerequisite/Restriction: Permission of instructor.
Repeatable for credit.
Pass/Fail only.

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

CEE 6990 - Continuing Graduate Advisement
1-9 Credits:

Prerequisite/Restriction: Permission of instructor.
Repeatable for credit.
Pass/Fail only.

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 permission of instructor.

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: Permission of instructor.

Cross-listed as: MAE 7080.

Semester(s) Traditionally Offered: Fall

CEE 7110 - Constitutive Modeling and Structural Response of Engineering Materials
3 Credits:

Prerequisite/Restriction: Permission of instructor.

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: Permission of instructor.

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

CEE 7150 - Effective Engineering Instruction
1 Credits:
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 Credits:
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 Credits:
Seminar-style course designed to give PhD candidates insight and guidance into research methods in engineering.

Semester(s) Traditionally Offered: Spring

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 7330 - Advanced Soil Dynamics
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: 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 7470 - Continuous and Macro-Scale Hydrologic Modeling
3 Credits:

Presents existing different approaches to the modeling of continuous hydrologic systems and long-term forecasting. Reviews and analyzes lumped and distributed catchment and macroscale hydrologic models, as well as state-of-the-art computer codes.

Prerequisite/Restriction: CEE 6440

Semester(s) Traditionally Offered: Fall

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: Permission of instructor.

Repeatable for credit.

Pass/Fail only.

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

CEE 7990 - Continuing Graduate Advisement
1-9 Credits:
Prerequisite/Restriction: Permission of instructor.
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 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 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

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.

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

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.

Semester(s) Traditionally Offered: Fall

CHSS 4910 - Study Abroad
1-20 Credits:

A semester study abroad experience through a student exchange program.

Prerequisite/Restriction: Approval from the Study Abroad Office
SP (Satisfactory Progress) only.

CHSS 5250 - 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 6250 - Graduate Internship/Co-op
1-15 Credits:

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

CHSS 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

Communication Studies

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.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $40.00

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.

Semester(s) Traditionally Offered: Fall, Spring

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.

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.

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.

CMST 3000 - Speech Communication Teaching Practicum
1 Credits:
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 permission of instructor

CMST 3250 - Organizational Communication (CI)
CI Communications Intensive
3 Credits:
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.

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.

CMST 3300 - Clinical Experience I
1 Credits:
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.
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 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.

Semester(s) Traditionally Offered: Spring
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.

CMST 3700 - Introduction to Health Communication (CI)
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 permission of instructor

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).

Semester(s) Traditionally Offered: Fall, Spring, Summer
CMST 4300 - Clinical Experience II
1 Credits:

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.

Corequisite: CMST 5370

Course Fee: $50.00

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

Semester(s) Traditionally Offered: Fall and Spring
Effective Term
Spring 2016
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
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 permission of instructor) and either STAT 1040 or STAT 1045
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2015

CMST 5000 - Studies in Communication Studies
1-5 Credits:
Study of special topics in interpersonal, small group, organizational, or intercultural communication theory and research.
Prerequisite/Restriction: Permission of instructor.
Repeatable
Semester(s) Traditionally Offered: Fall and Spring
Effective Term
Spring 2016

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 permission of instructor
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 5800 - Communication Studies Senior Capstone  
1 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 permission of instructor.

Semester(s) Traditionally Offered: Fall, Spring

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 Credits:
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, Spring, Summer
Course Fee: $100.00

COMD 3010 - American Sign Language I (CI)
Cl 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, Summer

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

COMD 3080 - American Sign Language Practice
1 Credits:
Provides opportunities for practice and continued improvement of receptive and expressive skills in American Sign Language.

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, resonance, articulation, neurology, and hearing.

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

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

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.

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.

Semester(s) Traditionally Offered: Fall

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

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

Course Fee: $15.00

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.
COMD 4100 - Clinical Practicum in Speech-Language Pathology (CI) 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: $100.00

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

COMD 4300 - Clinical Experience in Teaching American Sign Language 1 Credits:
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 permission of instructor.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $35.00

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 2016

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 respiration are examined in detail through the collection and analysis of physiologic data. Undergraduate credit only.

Prerequisite/Restriction: Minimum grade of B- in COMD 3100 and COMD 3400 and COMD 3500

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

Course Fee: $25.00

COMD 5100 - Language Science (CI)
CI Communications Intensive
3 Credits:

Study of clinical analysis of syntactic and morphological properties of speech. Undergraduate credit only.

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

Course Fee: $25.00

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: Minimum grade of B- in COMD 3100 and COMD 3400

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

COMD 5730 - Children with Multiple Disabilities and Hearing Loss
3 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 6730.

Semester(s) Traditionally Offered: Fall

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 permission of instructor

Cross-listed as: COMD 6740

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

COMD 5860 - 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: Spring

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.

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: Permission of instructor

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: Permission of instructor

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: Permission of instructor

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: $35.00

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

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: Summer

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.

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

Course Fee: $75.00

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.

Semester(s) Traditionally Offered: Fall

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.

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

Course Fee: $80.00

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.

Semester(s) Traditionally Offered: Summer
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.

Semester(s) Traditionally Offered: Summer

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.

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

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.

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

COMD 6370 - Educational Audiology 3 Credits:


Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Fall

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

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Communicative Disorders and Deaf Education

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 permission of instructor

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.

Prerequisite/Restriction: COMD 6640, COMD 6650, and permission of instructor.

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: $400.00

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: Permission of instructor.
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 permission of instructor.
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 permission of instructor

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 student with 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: Permission of instructor.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
COMD 6990 - Continuing Graduate Advisement
1-9 Credits:
Repeatable for credit.
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: Permission of instructor.
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 audiolologic 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 for credit.
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 the auditory mechanism, and development and maintenance of an effective hearing conservation program.

Prerequisite/Restriction: Admission to the Audiology Program.

Semester(s) Traditionally Offered: Fall

COMD 7420 - Amplification II  
3 Credits:
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 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 - Audiological Management and Counseling
3 Credits:

Management plans for audiological services and principles of audiological counseling. Students will develop plans, present methods for bringing change to clinical services, apply plans in clinical practicum, and discuss process.

Prerequisite/Restriction: COMD 6370

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

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

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

COMD 7820 - Clinical Research in Audiology
1 Credits:

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 Credits:

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 Credits:

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 2016

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 Credits:
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.

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 Credits:
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 or Math ACT score of at least 25.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $60.00

CS 1405 - Introduction to Computer Science–CS 1 Lab
1 Credits:
One-hour lab taught in conjunction with CS 1400. Students learn to develop correct software in a hands-on structured environment. Computer science majors are required to pass both the laboratory and the lecture, and
are required to enroll in CS 1400 concurrently with CS 1405. For students not majoring in computer science, this laboratory is advised, but not required, for CS 1400.

Prerequisite/Restriction: Grade of C- or better in MATH 1050 or Math ACT score of at least 25.

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

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 2250 - Cooperative Work Experience
1-9 Credits:

Provides credit for students working at a participating firm under faculty supervision.

Prerequisite/Restriction: 2.5 GPA; permission of instructor.

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 1400

Repeatable
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 Credits:

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.
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; permission of instructor. 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- 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 computer science faculty member.
Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 and permission of instructor. Not available to pre-Computer Science majors.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

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: Spring

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: Fall, Spring

CS 5070 - Computer Science Capstone I
1 Credits:
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 used for credit by BS/CS majors or PhD/CS majors.
Semester(s) Traditionally Offered: Spring

CS 5200 - Distributed and Network Programming
4 Credits:
Introduction to programming concepts and techniques for distributed and networked environments. Explores concurrency, process synchronization, network
protocols, connectionless and connection-oriented communications, network architectures and topology, load balancing, and transmission media.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 3100. Not available to pre-Computer Science majors.

Semester(s) Traditionally Offered: Fall

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 permission of instructor. Not available to pre-Computer Science majors.

Cross-listed as: CS 6600.

Semester(s) Traditionally Offered: Fall

CS 5650 - CVPRIP I: Computer Vision, Pattern Recognition, and Image Processing
3 Credits:

Introduction to theories and techniques of machine intelligence, with emphasis on pattern recognition, computer vision, fuzzy logic, and neural networks.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in all of the following: CS 2420, MATH 2270, STAT 2000 or STAT 3000. Not available to pre-Computer Science majors.

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: Permission of instructor.

Semester(s) Traditionally Offered: Fall

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 5700 - Object-Oriented Software Development
3 Credits:

Study of fundamental object-oriented principles, e.g., abstraction, encapsulation, classification, and inheritance. Application of these principles in all phases of software development, with emphasis on analysis, design, and testing. Introduction to software design patterns.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 3450. Not available to pre-Computer Science majors.

Semester(s) Traditionally Offered: Fall

CS 5800 - Introduction to Database Systems
3 Credits:

Comparison of various database systems, normal forms, protection, concurrency, security and integrity, and distributed and object-oriented systems.

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

CS 5850 - Systems Analysis
3 Credits:

Theory and practice of analysis, design, and implementation of information systems. Students will construct an information system.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 5800. Not available to pre-Computer Science majors.

Semester(s) Traditionally Offered: Spring

CS 5890 - Topics in Computer Science
1-4 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 and permission of instructor. Not available to pre-Computer Science majors.

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

CS 5950 - Independent Study
3 Credits:

Provides for independent study of selected topics.

Prerequisite/Restriction: 2.0 GPA; grade of C- or better in CS 2420 and permission of instructor. Not available to pre-Computer Science majors.

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

CS 6050 - Computational Geometry: Algorithms and Applications
3 Credits:

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: Permission of instructor.

Semester(s) Traditionally Offered: Spring

CS 6100 - 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: 3.0 GPA and enrollment in Computer Science master’s or PhD program.

Semester(s) Traditionally Offered: Fall

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 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; permission of instructor 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

CS 6450 - Human-Centered Design
3 Credits:

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 permission of instructor

Semester(s) Traditionally Offered: Spring

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 permission of instructor.

Semester(s) Traditionally Offered: Fall

Effective Term
Spring 2016

CS 6460 - Computer Security II
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

CS 6500 - Parallel Computing Systems
3 Credits:

Design of large-scale parallel systems. Explores machine organizations SIMD and/or MIMD modes of parallelism, emphasizing interconnection patterns among processors. Discussion of low-level parallel processing algorithms. Presents case studies of existing and proposed systems.

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

CS 6600 - AI: Advanced Intelligent Systems
3 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. Graduate students must complete an independent project.

Prerequisite/Restriction: 2.5 GPA; grade of C- or better in CS 2420 or instructor permission; and enrollment in Computer Science master’s or PhD program.

Cross-listed as: CS 5600.

Semester(s) Traditionally Offered: Fall

CS 6610 - AI: Advanced Topics in Artificial Intelligence (Topic)
3 Credits:

Advanced course in selected theories and techniques of artificial intelligence.
**Prerequisite/Restriction:** CS 5600 or CS 6600 or permission of instructor

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

CS 6630 - Fuzzy Logic and its Application
3 Credits:

Introduces students to machine learning and problem solving techniques based on fuzzy logic.

**Prerequisite/Restriction:** 3.0 GPA; grade of B- or better in CS 2420 and advanced standing, or permission of instructor; and enrollment in Computer Science master's or PhD program.

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

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 permission of instructor.

**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 permission of instructor.

**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.

**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 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:** Spring

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 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; permission of instructor and enrollment in Computer Science master’s or PhD program.

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

CS 6900 - Seminar
1 Credits:
Series of one-hour seminars on current research topics presented by computer science faculty.

Prerequisite/Restriction: 3.0 GPA; permission of instructor 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; grade of B- or better in CS 6100 (or permission of instructor) 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; permission of instructor 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; permission of instructor and enrollment in Computer Science master’s or PhD program.

Repeatable for credit.

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 permission of instructor) and enrollment in Computer Science master’s or PhD program.

Semester(s) Traditionally Offered: Spring

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; permission of instructor 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 permission of instructor.

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; permission of instructor 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; permission of instructor 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; permission of instructor 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; permission of instructor and enrollment in Computer Science master’s or PhD program.

Semester(s) Traditionally Offered: Fall

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 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; permission of instructor 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.
CS 7920 - Special Topics in Parallelism (Topic)
3 Credits:
Topics of current interest in the area of parallelism.
Prerequisite/Restriction: Permission of instructor 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; permission of instructor 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 permission of instructor.
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; permission of instructor 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: Permission of instructor.
Semester(s) Traditionally Offered: Fall, Spring, Summer

CS 7970 - Dissertation Research
1-15 Credits:
PhD dissertation research.
Prerequisite/Restriction: 3.0 GPA; permission of instructor 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; permission of instructor 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
5 Credits:
Covers bacteriology, decontamination and infection control, permanent wavy, chemical hair relaxing, hair cutting and hair lightening. Emphasis on new technology and product knowledge from industry.
COST 1110 - Cosmetology Lab
10 Credits:
Lab instruction and practical application. Teaches shampooing, scalp treatments, manicuring, hair cutting, hair dressing, tinting and bleaching, and facials.

COST 1200 - Cosmetology Theory
5 Credits:
Covers hair coloring, skin and disorders, chemistry, properties of scalp and hair, wet and thermal hair styling.

COST 1210 - Cosmetology Lab
10 Credits:
Lab instruction and practical application teaches shampooing, scalp treatments, manicuring, hair cutting, hair dressing, tinting and bleaching, and facials.

COST 1500 - Professional Vocational Leadership (VICA)
1 Credits:
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
COST 2300 - Intermediate Cosmetology Theory
5 Credits:
Covers salon business, electricity and light therapy, nails and disorders, manicuring, pedicuring.

COST 2310 - Intermediate Cosmetology Lab
10 Credits:
Lab instruction and practical application teaches shampooing, scalp treatments, manicuring, hair cutting, hair-dressing, tinting and bleaching, and facials.

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).

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.

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
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.
Prepares student for State Board Examinations and includes experience in teaching theory and lab. State Law requires 1000 clock hours for licensing.

Prerequisite/Restriction: Permission of instructor

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.

Designed as adjustable credit hours contingent on needed clock hours (to meet State Law requirement of 2000 clock hours).

Repeateable for credit

Designed for all students. Introduces students to the history, processes and functions of the American criminal justice system and its primary components, namely law enforcement, courts, and corrections. Students will generally understand the history, process, and functions of the police, courts, and corrections as they relate to the operation of our criminal justice system and key constitutional provisions.

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.

Six credit hours will be awarded for successful POST certification.

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.
CJ 1300 - Introduction to Corrections (CI)  
CI Communication Intensive  
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.

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.

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.

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.

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

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.

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 Credits:

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 Credits:

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 Credits:

This course is intended to introduce the cadet to: Approaching subjects and position 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 Position, 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.

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

**CJ 1910 - Corrections Legal**  
1 Credits:

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 Generaltional Perspectives.

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

CJ 1913 - Inmate Management
1 Credits:

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.


Semester(s) Traditionally Offered: Spring

CJ 1921 - Peace Officer Criminal Law
1 Credits:

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.


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.


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.


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, Cohabitant Abuse Procedures, Identity


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 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 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 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 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.

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

CJ 2977 - Cooperative Education
1-3 Credits:

(for second year program majors only) Open to all students in the Criminal Justice program who meet the minimum cooperative work experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. Students will gain first hand experience and knowledge of an area of criminal justice through on the job training.

Repeatable for credit

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring
CJ 2988 - Special Problems
1-3 Credits:

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)

DANC 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

DANC 1100 - Ballet I
1 Credits:

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 Frenc-Bouronville 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, theater and performance techniques as well as physics. Based on proficiency, some of these student may become eligible to audition for Ballet Repertory Ensemble, DE 2310.

Prerequisite/Restriction: Permission of instructor.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 1210 - Ballet II
1 Credits:

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 Ballet Repertory Ensemble, DE 2310.

Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 1220 - Beginning Pointe
1 Credits:

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: Permission of instructor.
Repeatable for credit
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

DANC 1240 - Musical Theatre Movement
1 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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: Permission of instructor.
Repeatable for credit
DANC 2210 - Basic Partnering
1 Credits:

Designed to acquaint both the men and women in the art of supporting and dancing with a partner. Men will work on the proper lifting techniques and women will learn the skills and adjustments required to be partnered and lifted. Pas de Deux from at least five Ballets will be learned. Video will be used for more exposure. Designed for the intermediate or advanced, mature dancer.

Grading is based on attendance and proficiency. Male and female dancers must be registered for a technique class and women must be registered for DANC 2200.

Prerequisite/Restriction: Permission of instructor.

Repeatable for credit

DANC 2220 - Modern Dance II
1 Credits:

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.

Prerequisite/Restriction: Membership is by audition conducted by the Artistic Director.

Repeatable for credit

DANC 2240 - Ballet III
1 Credits:

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: 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: Permission of instructor
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 Credits:
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 0990 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 0990 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 0990 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 0990 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 manuals. 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 guidelines 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 Credits:

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: Permission of instructor

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, STAT 2300.

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:

Explores in detail the idea of hypothesis formulation and evidence in the context of analytical rigor. The idea of necessary skepticism as an element of analytical rigor is discussed.

Prerequisite/Restriction: ECN 1500

Semester(s) Traditionally Offered: Spring

ECN 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.

Cross-listed as: MGT 3300.

Semester(s) Traditionally Offered: Fall

ECN 3400 - Introduction to Global Economic Institutions and Business Environment (DSS)
DSS Depth Social Sciences
3 Credits:

Designed for future business leaders who want an understanding of the global economic environment in which businesses operate. Topics include global regulatory and political institutions, trade policy, and international capital and currency markets.

Prerequisite/Restriction: ECN 2010/APEC 2010.

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

ECN 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 ECN 4010/APEC 4010.

Prerequisite/Restriction: ECN 2010/APEC 2010, MATH 1100, and STAT 2300.

Cross-listed as: APEC 4010.

Semester(s) Traditionally Offered: Fall, Spring

ECN 4020 - Intermediate Macroeconomics
3 Credits:

Analysis of underlying causes of unemployment, economic instability, inflation, and economic growth.

Prerequisite/Restriction: ECN 1500 and MATH 1100

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 and MATH 1100.

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: Permission of instructor

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.
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

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

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
interpersonal 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 growth theories, monetary theory, 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

Semester(s) Traditionally Offered: Spring

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.

Campus: USU Eastern only

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.

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 permission of instructor.

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 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 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 permission of instructor.

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 Credits:
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 2016

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

Semester(s) Traditionally Offered: Fall, Summer

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 permission of instructor.

Cross-listed as: PSY 7670.
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: Fall

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

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 Credits:
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 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 Credits:
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 Credits:
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 Credits:
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-domain and z-domain 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: ECE 3640 and student must be in the Professional Engineering Program or have Graduate Standing.

Semester(s) Traditionally Offered: Fall

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.

Prerequisite/Restriction: ECE 5310 and student must be in the Professional Engineering Program or have
Graduate Standing.

Cross-listed as: MAE 5320

Semester(s) Traditionally Offered: 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.

Semester(s) Traditionally Offered: Fall

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.

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: CS 1400, ECE 2700; student must be in the Professional Engineering Program or have 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 or have Graduate Standing.

Cross-listed as: ECE 6470

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.

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.

Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Spring

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 permission of instructor. Student must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: BENG 5700 and PHYS 5700

Semester(s) Traditionally Offered: Spring

Course Fee: $100.00

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.

Semester(s) Traditionally Offered: Fall

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
ECE 5760 - Hardware and Embedded Systems Security
4 Credits:
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, ECE 3710, and student must be in the Professional Engineering Program and have Graduate Standing.

Semester(s) Traditionally Offered: Spring

ECE 5770 - Microcomputer Interfacing
4 Credits:
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

ECE 5780 - 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 6780

Semester(s) Traditionally Offered: Spring

ECE 5800 - Electromagnetics II
3 Credits:
General plane wave solution of Maxwell’s equations, potential functions, radiation, 2-D solution to Laplace’s equation, and fundamental electromagnetic theory.

Prerequisite/Restriction: ECE 3870. Student must be in the Professional Engineering Program or have Graduate Standing.

Semester(s) Traditionally Offered: Fall

ECE 5810 - Microwaves I
3 Credits:
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

ECE 5850 - Antennas I
3 Credits:
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

ECE 5930 - Special Topics in Electrical and Computer Engineering
1-4 Credits:
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.
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.

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.

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.

Prerequisite/Restriction: ECE 5140

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

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.

ECE 6250 - Graduate Internship/Coop
1-3 Credits:

Planned work experience in industry. Detailed program; must have prior approval. Written report required.

Prerequisite/Restriction: Permission of instructor.

Pass/Fail only.

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.

ECE 6340 - Spacecraft Attitude Control
3 Credits:

Spacecraft attitude dynamics and controls. Spin stabilized, three axis, and dual spin modes. Attitude determination techniques.
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.
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: Fall

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 6780 - 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
ECE 6800 - Electrical Engineering Colloquium
0.5 Credits:
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:

ECE 7030 - Detection and Estimation Theory
3 Credits:
Prerequisite/Restriction: ECE 6010, ECE 6030.
Semester(s) Traditionally Offered: Fall

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.
Semester(s) Traditionally Offered: Spring

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.
Semester(s) Traditionally Offered: Spring

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 permission of instructor.

Cross-listed as: MAE 7360.

Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Fall

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 or equivalent or permission of instructor

Semester(s) Traditionally Offered: Fall

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, Summer

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, Summer

Electronics Engineering Technology (USU Eastern)

ELET 1110 - Electronics/Electrical Mathematics (MA)
MA Mathematics
3 Credits:

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 0990 or ASSET/ACT test scores indicating a math level of MATH 0990 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 of or concurrent registration in MATH 1060 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 of or concurrent registration in ELET 1140 and MATH 1060 or ELET 1110

Campus: USU Eastern only

ELET 1140 - Circuit Analysis Lab
1 Credits:

Provides practical experience related to topics in the 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 of or concurrent registration in MATH 1060 or ELET 1110 and ELET 1120
Corequisite: ELET 1160

ELET 1160 - Digital Systems Lab
1 Credits:
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 Credits:
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 Credits:
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
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 1170 and ELET 1180
Corequisite: ELET 2140

ELET 2140 - Communication Systems lab
1 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.
Corequisite: ELET 2130

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

ELET 2160 - Industrial Instrumentation Systems Lab
1 Credits:
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

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

ELET 2220 - Advanced PLC’s Lab
1 Credits:
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

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 equipment, programming of PLC's, interfacing to control 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 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.

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 Credits:
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 Credits:
Gives practical application to the topics studied in ELET 2330, as well as familiarizes the student with the use of basic tools, equipment, and techniques used by Telecom professionals installing, managing, 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 Credits:
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: Permission of instructor
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 Credits:
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 2016

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 Credits:
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.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $30.00 per credit

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 - Practicum: USU ArtsBridge
1-2 Credits:

Creation and implementation of a field-based arts project within a K-6 classroom. Integrated arts curriculum design used. Arts specialization may include: fine arts, art, music, physical education, or language arts. Service-learning scholarship available by application.

Prerequisite/Restriction: Permission of instructor.

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

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 Credits:

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:


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 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, MATH 2010, and 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.

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

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:

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

ENGR 1000 - Introduction to Engineering Design
2 Credits:

Introduction to engineering design, problem solving, and computer application skills. Orient 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 Credits:

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 data base 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 1000 - Research Experience for Undergraduate Students
1 Credits:

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 Credits:

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 Credits:
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
Effective Term
Spring 2016

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 Credits:
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/coordinate and employer at the beginning and periodically during the course to determine and evaluate objectives, hours to be worked, and credit.

Prerequisite/Restriction: Permission of instructor
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 Credits:
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
Semester(s) Traditionally Offered: Fall, Spring, Summer

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
Effective Term
Spring 2016

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:

Procedures in financial administration of industrial
education monies. Budget preparation, budget operation
and control, and school accounting. In-depth review of
steps and techniques needed for grant writing.

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.

EED 7810 - Research Seminar
1 Credits:

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 0798 - Special Problems
1-360 Credits:

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

Campus: USU Eastern only

EDDT 0799 - Special Problems
1-360 Credits:

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

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

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

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

EDDT 1100 - Residential Architectural Drafting
3 Credits:

Designed to teach AutoCAD techniques utilized in architectural drafting. The student will apply architectural drafting standards in the preparation of a complete set of house plans. Students will learn architectural terminology and nomenclature as used in the building industry. Applications of advance AutoCAD features and third party software will be employed in the course. Students should have CAD skills and be prepared to spend extra time in the CAD lab to complete their assignments.

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

EDDT 1500 - Introduction to Geographic Information Systems
3 Credits:

Introduction for the Geographic Information System field. Students planning careers in Engineering, Drafting, Geology, Natural Resources, and Law Enforcement will find this elective class useful either for employment or transfer support. The course covers general GIS applications and teaches the use of software for research and problem solving. Class requires a computer lab experience. In class discussion and lecture methods are used to achieve course goals and objectives. This course is taught on an as needed basis. MATH 1050 is recommended.

Campus: USU Eastern only

EDDT 2100 - Commercial Architectural Drafting
3 Credits:

Designed to teach CAD techniques utilized in commercial architectural drafting. The student will apply architectural drafting standards in the layout, detailing, and dimensioning, of commercial small building plans. Students will learn the architectural terminology and nomenclature associated with the building industry. Applications of advanced AutoCAD features and third party software will be employed in the course. Students should have CAD skills and be prepared to spend extra time in the CAD lab to complete their assignments.

Completers should have sufficient entry level skills to
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

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: Permission of instructor

Repeatable for credit

EDDT 2988 - Special Problems
1-3 Credits:

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

Repeatable for credit

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 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 Credits:

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 Credits:

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 2300 - 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: Permission of instructor

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 - Perspectives in Folklore (DHA)
DHA Depth Humanities and Creative Arts
3 Credits:
In-depth study of folklore for nonmajors. Topics vary according to faculty expertise.
Cross-listed as: HIST 3070.
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Summer
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
3 Credits:
Covers a variety of literary genres and movements from 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 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 3385 - World Literary History Pre-1900**
3 Credits:

**ENGL 3395 - World Literary History Since 1900**
3 Credits:

**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.

Prerequisite/Restriction: Enrollment limited to English majors only.

**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
**Effective Term**
Spring 2016

**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 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 - Folklore Colloquium (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 for credit.
Semester(s) Traditionally Offered: Spring
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 4220 - 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

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 for credit
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:
Explores elements of page layout, graphic design, type fonts, and design of documents to suit client’s needs for print (F) or digital (Sp) media.
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $50.00

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
Course Fee: $50.00

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 4610 - Western American Literature
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

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.

Cross-listed as: HIST 4640.

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 for credit.

Semester(s) Traditionally Offered: Summer

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 Credits:

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 Literary Studies (CI)
CI Communications Intensive
3 Credits:
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 for credit
Semester(s) Traditionally Offered: Fall, Spring

ENGL 5400 - Specialized Documents
3 Credits:

Students in the Professional and Technical Writing emphasis prepare documents frequently encountered in business and government, including proposals, environmental impact statements, brochures, and newsletters.

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

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, Spring
Course Fee: $50.00

ENGL 5420 - Project Management in Technical Communication
3 Credits:

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 2016

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 Credits:

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 2016
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.
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.

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

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, Spring
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, Spring
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.
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 documentation, proposals, manuals, annual reports, newsletters, and fact sheets. Topics vary.

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.

ENGL 6600 - American Studies Theory and Method
3 Credits:
Provides students with theory and method of graduate-level research in American Studies.

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.

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.

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.

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.
Semester(s) Traditionally Offered: Spring
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.

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

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: Fall, Spring

Course Fee: $50.00

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 6882 - Fiction Writing Workshop
3 Credits:

Students write fiction and participate in writing workshops, where their work is critiqued by the class. Course also involves study of the art and craft of fiction, its history, form, and content, especially that of contemporary fiction 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.
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.

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

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.
Pass/Fail only.
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

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: Fall, Spring
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, Spring
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.

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

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.

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

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, Spring
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.

Repeatable for credit.
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, Spring
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: Fall, Spring
Course Fee: $50.00

ENGL 7480 - 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 6480.

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

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.
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.

Cross-listed as: ENGL 1050

ESOL 1030 - International Student Orientation
1 Credits:
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

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.

Cross-listed as: ENGL 1055

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

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.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

ESOL 1065 - Grammar
2 Credits:

Basic review of English grammar, including mechanics and usage. Studies types of sentences, phrases, 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 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.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

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.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

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.

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring
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

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 Credits:

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 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 3000; MATH 1050

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 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 Credits:
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.

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

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 permission of instructor
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
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
1-3 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

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 Credits:

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 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: 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 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: Fall
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 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 internship/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
Semester(s) Traditionally Offered: Spring

ENVS 6330 - 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
Semester(s) Traditionally Offered: Spring

Course Fee: $30.00

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 Credits:
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 permission of instructor

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
1 Credits:

Cross-listed as: ENVS 7800.
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 6830 - Graduate Student Publishing Seminar
2 Credits:

Grounds graduate students of the natural resources and environmental sciences in the processes of academic publishing and helps them to start early in their programs to build their resumes of published articles.

Cross-listed as: ENVS 7830

Semester(s) Traditionally Offered: Fall

ENVS 6840 - Graduate Introductory Seminar for Environment and Society
1 Credits:

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.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

ENVS 6870 - Ecology Seminar
1 Credits:

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.

Repeatable for credit.

Pass/Fail only.

Semester(s) Traditionally Offered: Fall

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.

Pass/Fail only.

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

ENVS 6990 - Continuing Graduate Advisement
1-9 Credits:

Repeatable for credit.
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 scales. Focuses on systems theory, social and environmental sustainability, and scientific integration for ecosystem planning, policy, and management.
Cross-listed as: ENVS 6000.

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.

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.

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.

ENVS 7800 - Environment and Society Departmental Seminar
1 Credits:
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.

ENVS 7830 - Graduate Student Publishing Seminar
2 Credits:
Grounds graduate students of the natural resources and environmental sciences in the processes of academic publishing and helps them to start early in their programs to build their resumes of published articles.
Cross-listed as: ENVS 6830.

ENVS 7840 - Graduate Introductory Seminar for Environment and Society
1 Credits:
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.

Pass/Fail only.

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

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 1100 - Critical Issues in Family, Consumer, and Human Development
1 Credits:

Introduction to the majors, minors, emphases, and disciplines in family, consumer, and human development. Emphasizes career opportunities and how scholars in this field address critical social issues.

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, Summer

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 permission of instructor.
Corequisite: FCHD 2630

Semester(s) Traditionally Offered: Fall, Spring

FCHD 2620 - Planning Creative Experiences for Young Children
3 Credits:

A course for early childhood and elementary education students covering the development and use of creative materials, equipment, and the skills needed to plan and teach age, individually, and developmentally appropriate curriculum for young children. Lab experience to be arranged (2 hours per week)
Prerequisite/Restriction: FCHD 2510 and FCHD 2600

Campus: USU Eastern only

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.
Campus: USU Eastern only
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 Credits:
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 and FCHD 2620

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

FCHD 3310 - Consumer Policy
3 Credits:

Examines different tools for policy analysis. Provides conceptual and analytical framework for understanding the role of consumer sciences professionals as political actors and the potential to influence the shaping of public policy, particularly consumer and government policies.

Semester(s) Traditionally Offered: 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 3510 - Infancy and Early Childhood
3 Credits:

Development and growth of the child from conception to five years. Physical, social, and emotional growth; and parenting skills.

Prerequisite/Restriction: Junior standing and FCHD 1500, FCHD 2660.

Corequisite: FCHD 3550

Semester(s) Traditionally Offered: Fall, Spring

FCHD 3520 - Children in the Middle Years
3 Credits:
Growth and development of normal children. Guidance principles related to behavior of children at these age levels.

Prerequisite/Restriction: Junior standing and FCHD 1500, FCHD 2660.

Corequisite: FCHD 3560

Semester(s) Traditionally Offered: Fall

FCHD 3530 - Adolescence
3 Credits:

3 Social, psychological, and physical aspects of adolescence in modern societies. Social and cultural expectations and influences on adolescents stemming from the family, peers, school, and the community.

Prerequisite/Restriction: Junior standing and FCHD 1500.

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 Credits:

Practical experience in laboratory setting with children birth through 2 years. Lab supplements/complements course content of FCHD 3500.

Prerequisite/Restriction: Junior standing, FCHD 1500, FCHD 2660.

Corequisite: FCHD 3500

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $20.00

FCHD 3560 - Middle Childhood Lab
1 Credits:

Practical experience in laboratory setting with children in the middle years. Lab supplements/complements course content of FCHD 3570.

Prerequisite/Restriction: FCHD 1500 and junior standing

Corequisite: FCHD 3570

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $20.00

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 2400, FCHD 3540.

Semester(s) Traditionally Offered: Fall
FCHD 4330 - Family Finance Career Seminar
1 Credits:
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 4400 - Research Practicum in FCHD
1-12 Credits:
Provides placement experience in applying skills and knowledge in a research setting.
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring, Summer
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
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Family, Consumer, and Human Development
FCHD 4820 - Current Issues in Family Life Studies
3 Credits:
Explores history, purpose, impact, and contemporary status of family life studies. Discussion of current issues, policies, ethics, and approaches to family life studies. Development of empirically-informed and methodologically-sound plans and strategies.

Prerequisite/Restriction: Enrollment limited to Family Life Studies majors.

Campus: Online.
Semester(s) Traditionally Offered: Fall, Spring, Summer
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. Enrollment limited to Family Life Studies, Interdisciplinary Studies (FCHD) and General Studies (FCHD) majors.

Campus: Online.
Semester(s) Traditionally Offered: Fall, Spring, Summer

FCHD 4900 - Pre-Practicum Skills (CI)
CI Communications Intensive
1 Credits:

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 Credits:

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: $100.00

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: Permission of instructor 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: Spring

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: Fall

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 is 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 permission of instructor.

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: Permission of instructor.

Repeatable for credit.

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

FCHD 6961 - FCHD Teaching Assistantship Orientation
1 Credits:
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:

Research for master's thesis, arranged with advisor.
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
3 Credits:

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 620.

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 622.

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 623.

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 64.

Cross-listed as: FCHD 64.

Semester(s) Traditionally Offered: Spring

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 642.

Semester(s) Traditionally Offered: Will vary

FCHD 7430 - Economics of Aging
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.
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.

Semester(s) Traditionally Offered: Fall

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: Permission of instructor.

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 permission of instructor

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 permission of instructor.

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 Credits:

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 permission of instructor.

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 Credits:

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 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 Credits:
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

FCSE 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

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 Credits:

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 5630.

Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $25.00

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

FCSE 5630 - Student Teaching in Secondary Schools
10 Credits:

After assignment to a cooperating family and consumer sciences educator, students are given professional responsibilities associated with teaching.

Prerequisite/Restriction: FCSE 4300, FCSE 4400.

Corequisite: FCSE 5500.

Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $300.00

FCSE 6180 - Administration and Program Planning
3 Credits:

Application of research and theory of administration and program planning to define and clarify the role of leadership in extension and formal education situations.

Semester(s) Traditionally Offered: Fall

FCSE 6340 - Curriculum Development, Testing and Evaluation
3 Credits:

Examines current trends in curriculum and program development related to specific educational outcomes. Includes curriculum development process.

Semester(s) Traditionally Offered: Summer

FCSE 6460 - Graduate Topics in Family and Consumer Sciences Education
1-3 Credits:

Surveys selected topics in family and consumer sciences education. Topics will be unique each time course is offered.

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

FCSE 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.

Prerequisite/Restriction: Permission of instructor prior to enrollment.

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

Finance

FIN 3200 - Financial Management (QI)
QI Quantitative Intensive
2 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, ACCT 2010; 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
2 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 3400 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

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 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 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 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 4450 - Advanced Corporate Finance
3 Credits:

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.
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 3400; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits.

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 3400
Pass/Fail only

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 3400, FIN 4470.
Pass/Fail only

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 3400.

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 3400.

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 3400.

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 3400, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits.

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 3400, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits.
Semester(s) Traditionally Offered: Spring
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
FIN 5250 - Banking Regulation
3 Credits:
Since the financial crisis of 2008, discussions about and laws regarding banking regulation have been a central element of the reaction to the crisis. This course covers ongoing developments in banking regulation.
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: Spring
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-backed and international bonds). 
Prerequisite/Restriction: FIN 4410 and FIN 4460 or accepted into the Financial Economics - MS Program
Semester(s) Traditionally Offered: Spring
FIN 5350 - Quantitative Financial Modeling and Applications
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 proper uses of spreadsheet modeling, decision analysis, simulation, and optimization techniques.
Prerequisite/Restriction: FIN 3400 and MIS 2100.
Semester(s) Traditionally Offered: Spring
FIN 5440 - Cases in Finance
3 Credits:
This course will focus on advanced topics in finance through the study of cases. A wide range of topics will be covered in class including: financial analysis and forecasting, discounted cash flow analysis and valuation, portfolio construction and management, capital budgeting and the cost of capital, mergers and acquisitions, and capital structure.
Prerequisite/Restriction: FIN 4410 and FIN 4460 or accepted into the Financial Economics - MS Program.
Semester(s) Traditionally Offered: Spring
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: Fall
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 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.
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 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: Permission of instructor.
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: Permission of instructor
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.
Pass/Fail only.
Campus: Offered only through USU's study abroad program in France.
Semester(s) Traditionally Offered: Summer
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.

Campus: Offered only through USU's summer study abroad program in France.  
Semester(s) Traditionally Offered: Summer

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 - 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: Permission of instructor.

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 permission of instructor.

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 permission of instructor.

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: Permission of instructor.

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

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 Credits:

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 permission of instructor.

Repeatable for credit.

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 Credits:

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
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.

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.

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

GEOG 1990 - Professional Orientation for Geography
1 Credits:
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.

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

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 4800 - 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 6800.

Semester(s) Traditionally Offered: Fall

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 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 4800.

Semester(s) Traditionally Offered: Fall

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: Permission of instructor

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 Credits:

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 USU 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 Credits:

Accompanying laboratory course for GEO 1220.
Corequisite: GEO 1220

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 Credits:

Geologic features and processes observed in the field.
Prerequisite/Restriction: GEO 1010 or GEO 1060 or GEO 1110 or SU 1360 (may be taken concurrently) or permission of instructor.
Repeatable for credit
Pass/Fail only.
Semester(s) Traditionally Offered: Spring
Course Fee: $100.00

GEO 2700 - Science Excursion
1 Credits:

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: Permission of instructor
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.

GEO 3150 - Energy in the Twenty-first Century (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 Credits:

Course Fee: $20.00
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: USU 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
4 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. Three lectures and one two-hour lab per week.

Prerequisite/Restriction: GEO 1010 or GEO 1110.

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

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)
3 Credits:

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

Corequisite: GEO 3200

Semester(s) Traditionally Offered: Spring

Effective Term
Spring 2016

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 and MATH 1060 or MATH 1210

Corequisite: CHEM 1210
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 and either MATH 1060 or MATH 1210

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 and MATH 1060 or instructor permission

Cross-listed as: WATS 3600

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: Prerequisite or corequisite: PHYS 2210 and PHYS 2215

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.

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 permission of instructor.

GEO 4800 - Senior Seminar
1 Credits:

Prerequisite/Restriction: Permission of instructor

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: Permission of instructor.
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

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 5440 - Paleoecology (CI)
CI Communications Intensive
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 6440.

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: Fall
Course Fee: $60.00

GEO 5470 - 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.

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: $60.00

GEO 5510 - Groundwater Geology (QI)
QI Quantitative Intensive
3 Credits:

Provides graduate students and senior undergraduates with understanding of fundamental principles of groundwater geology and hydrology, and helps prepare them for careers in hydrogeology or environmental geology. Three lectures per week.

Prerequisite/Restriction: GEO 1110 and MATH 1210 or permission of instructor; GEO 3600/WATS 3600 recommended.

Semester(s) Traditionally Offered: Fall

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 permission of instructor.

Cross-listed as: GEO 6520.

Semester(s) Traditionally Offered: Spring (even years)
Course Fee: $45.00

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 permission of instructor.

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 permission of instructor.

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 permission of instructor.

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

Cross-listed as: GEO 6610.

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

GEO 5610 - 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 6610.

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: Permission of instructor.

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 permission of instructor.

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 permission of instructor.

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 permission of instructor.

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

Repeatable for credit.

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.

GEO 6120 - Advanced Geomorphology
3 Credits:
Process geomorphology seminar focusing on hillslope, tectonic, and climatic geomorphology research.

Cross-listed as: GEO 7120.

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

GEO 6690 - 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 permission of instructor.

Repeatable for credit.

GEO 7050 - Graduate Seminar in Tectonics (Topic)
1-3 Credits:
Advanced topics of current interest in tectonics and orogenesis.

GEO 7100 - Graduate Seminar in Geomorphology (Topic)
1-3 Credits:
Advanced topics of current interest in geomorphology and landscape evolution.

GEO 7120 - Advanced Geomorphology
3 Credits:
Process geomorphology seminar focusing on hillslope, tectonic, and climatic geomorphology research.

GEO 7150 - 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.

GEO 7170 - 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.

GEO 7190 - 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
 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, Spring
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
Course Fee: $60.00
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: $100.00
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.
GEO 6450 - Deep Time: Studying the Earth’s expansive past
3 Credits:

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 2016

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: $40.00

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.

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 - Techniques of Groundwater Investigations
3 Credits:

Advanced topics of current interest in hydrology.

Cross-listed as: GEO 7510.

Repeatable for credit.

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

GEO 6520 - Graduate Seminar in Hydrology (Topic)
1-3 Credits:

Advanced topics of current interest in hydrology.
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 permission of instructor.

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 permission of instructor.

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 permission of instructor.

Cross-listed as: GEO 5550.

Semester(s) Traditionally Offered: Spring

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 petrophysical properties. Graduate students examine and interpret data sets related to research projects.

Prerequisite/Restriction: GEO 3550, GEO 3700, or permission of instructor.

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 6590 - 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 7590

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.

Course Fee: $45.00

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: $50.00

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.

Cross-listed as: GEO 5640

Semester(s) Traditionally Offered: Spring Odd Years

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

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 permission of instructor

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 permission of instructor.

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 Credits:

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 6970 - Thesis
1-9 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.

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

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

GEO 7120 - Advanced Geomorphology
3 Credits:

Process geomorphology seminar focusing on hillslope, tectonic, and climatic geomorphology research.

Cross-listed as: GEO 6120.

Semester(s) Traditionally Offered: Spring
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.

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

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 Credits:

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 2016

GEO 7510 - Graduate Seminar in Hydrology (Topic)
1-3 Credits:

Advanced topics of current interest in hydrology.

Cross-listed as: GEO 6510.
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

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

Advanced topics of current interest in geophysics.

Cross-listed as: GEO 6600.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

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

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

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 German or equivalent.
Semester(s) Traditionally Offered: Fall
Course Fee: $24.00

GERM 1020 - German 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: 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 1020 - 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-cultural analysis.

Prerequisite/Restriction: GERM 2010 or equivalent.

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

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.

Semester(s) Traditionally Offered: Summer

GERM 2880 - Individual Readings
1-4 Credits:

Individual study of selected readings in German.

Prerequisite/Restriction: Permission of instructor.

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: Permission of instructor

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

Semester(s) Traditionally Offered: Fall

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

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: Permission of instructor.

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: Permission of instructor.
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 Credits:
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: Permission of instructor.

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.

Semester(s) Traditionally Offered: Fall, Spring

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 Credits:

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 Credits:

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
72 Credits:

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.

Campus: USU Eastern only

HEAL 0105 - Certified Nursing Assistant Clinical
24 Credits:

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.

Campus: USU Eastern only

HEAL 0110 - Certified Nursing Assistant First Aid/CPR
12 Credits:

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. Student can become certified in First Aid and CPR.

Campus: USU Eastern only

HEAL 0120 - Certified Nursing Assistant Written Exam Refresher
12 Credits:

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 Credits:
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 Credits:

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 Credits:

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 Credits:

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

Campus: USU Eastern only

HEAL 0799 - Special Problems
1-360 Credits:

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: Permission of instructor.

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 Credits:

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.
HEP 310 - 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 permission of instructor.

Repeatable for credit

HEP 3200 - Consumer Health
3 Credits:

Focuses on helping students become discriminating consumers of health information, health products, and health services.

Campus: Online.

HEP 3300 - Clinical Experience I
1 Credits:

Clinical experience in school health education.

Prerequisite/Restriction: Acceptance into School Health major or minor and Admission into Teacher Education

Pass/Fail only.

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.

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.

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.

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

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.

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 in-depth 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: Permission of instructor.

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

HEP 4300 - Clinical Experience II
1 Credits:

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/strategies for human sexuality education
within the secondary schools.

Prerequisite/Restriction: Formal acceptance into the School Health Education emphasis or School Health minor, or permission of instructor.

Semester(s) Traditionally Offered: Spring

HEP 4600 - Field Work in Health Education
1-6 Credits:

Supervised student participation in school or community health programs or directed projects.

Prerequisite/Restriction: HEP 3600, HEP 4100, HEP 4200 and permission of instructor.

Repeatable

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

Effective Term

Spring 2016

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 affect 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.

Semester(s) Traditionally Offered: Fall, Spring

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 CL2 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 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 system.

Prerequisite/Restriction: HEP 4400.
Pass/Fail only.

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: Permission of instructor.

Repeatable for credit.

HEP 5950 - Independent Research
1-3 Credits:

Prerequisite/Restriction: Permission of instructor.

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.

Repeatable for credit.

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: Permission of instructor.

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,
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.

Repeatable for credit.

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

HEP 6600 - Field Work in Health Education
3-6 Credits:

Supervised student participation in school or community health projects or directed projects.

Prerequisite/Restriction: Permission of instructor.

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: Permission of instructor.

Repeatable for credit.

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

HEP 6950 - Independent Research
1-3 Credits:

Prerequisite/Restriction: Permission of instructor.

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

HEP 6995 - Thesis
1-9 Credits:

Repeatable for credit.

Pass/Fail only.

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

HEP 6999 - 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 Credits:

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 Credits:

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.
HETR 0200 - Dozer Refresher
30 Credits:

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.

HETR 0210 - Dozer Journeyman Certification
8 Credits:

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 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.

HETR 0300 - Front End Wheel Loader Refresher
30 Credits:

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.

HETR 0310 - Front End Wheel Loader Journeyman Certification
8 Credits:

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.

HETR 0400 - Tractor Loader Backhoe Refresher
30 Credits:

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.

HETR 0410 - Tractor Loader Backhoe Journeyman Certification
8 Credits:

This course is designed for a person who has industry experience and has met the minimum qualifications as a journeyman 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.

HETR 0500 - Road Grader Refresher
30 Credits:

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.

HETR 0510 - Road Grader Journeyman Certification
8 Credits:

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 Credits:

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 Credits:

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.

Campus: USU Eastern only

HETR 0700 - CDL Refresher Course
100 Credits:

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 trailering 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.

Campus: USU Eastern only

HETR 0800 - Brake Adjustment and Inspection Certification
8 Credits:

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.

Campus: USU Eastern only

HETR 1610 - General Maintenance
4 Credits:

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.

Campus: USU Eastern only

HETR 1620 - Front End Loader Operation
2 Credits:

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.

Campus: USU Eastern only

HETR 1630 - Tractor Loader Backhoe Operation
2 Credits:
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.

Campus: USU Eastern only

HETR 1650 - Motor Grader Operation
2 Credits:

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/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

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.

Semester(s) Traditionally Offered: Fall, Spring

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

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: Permission of instructor

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.

Semester(s) Traditionally Offered: Fall, Spring
Effective Term
Summer 2015

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)
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)
DHA Depth Humanities and Creative Arts
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)
DHA Depth Humanities and Creative Arts
3 Credits:

In-depth study of folklore for nonmajors. Topics vary according to faculty expertise.

Cross-listed as: ENGL 3070.
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Summer

HIST 3110 - Ancient Near East (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
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.

Semester(s) Traditionally Offered: Spring

HIST 3130 - Greek History (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
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)
CI Communications Intensive
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.

Semester(s) Traditionally Offered: Spring

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...
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 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

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 Union and its Heirs
3 Credits:
Beginning with the Russian Revolution, surveys political, cultural, and economic history of the Soviet Union and the regional states emerging in its wake. Writing and computer intensive.
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 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.

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 3485 - 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 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 indigenous culture, 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 - Folklore Colloquium (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.

Semester(s) Traditionally Offered: Taught Alternate Years

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.

Semester(s) Traditionally Offered: Fall

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 Credits:
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 4390 - British Imperialism from 1688 to the Present
3 Credits:
Topical survey of British Imperialism from 1688 to the present. Topics include the interaction of British imperialism with foreign policy; social, economic, and political institutions; the life of the mind and senses; and non-European cultures.

Prerequisite/Restriction: HIST 1110.

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.

Semester(s) Traditionally Offered: Taught Alternate Years

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 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.

Semester(s) Traditionally Offered: Fall

HIST 4711 - Northern Ute History (DHA)
DHA Depth Humanities and Creative Arts
3 Credits:

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.

HIST 4720 - The Civil Rights Movement (DHA/CI)
DHA/CI Depth Humanities and Creative Arts and Communications Intensive
3 Credits:

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.

Semester(s) Traditionally Offered: Fall, Spring

HIST 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: RELS 4730

Semester(s) Traditionally Offered: Spring

HIST 4750 - Advanced Folklore Workshop: Fife Conference
3 Credits:

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.

Repeatable for credit.

Semester(s) Traditionally Offered: Summer

HIST 4760 - America in the 1960's (DHA)
DHA Depth Humanities and Creative Arts
3 Credits:

Provides an in-depth examination of the period in United States history referred to as the "Long Sixties" (1954-1974) with an emphasis on intellectual and cultural events, domestic politics, and foreign policy.

Semester(s) Traditionally Offered: Spring

HIST 4790 - American Religious History
3 Credits:

Varieties of American religious experience from settlement to the present.

Cross-listed as: RELS 4790.

Semester(s) Traditionally Offered: Fall

HIST 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: RELS 4795.

HIST 4810 - American Military History
3 Credits:
Covers evolution of the military in American history and society from 1775 to the present.

HIST 4815 - World War I: A Global Conflict (DHA)
DHA Depth Humanities and Creative Arts
3 Credits:

Dubbed “The War to End All Wars”, the First World War was a modern event that transformed societies around the world and which helped redraw the lines of nation and empire. The course will examine the origins of the war, its global fronts, and its consequences.

Semester(s) Traditionally Offered: Taught Alternate Years

HIST 4820 - World War II in Europe
3 Credits:

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)
DHA Depth Humanities and Creative Arts
3 Credits:

Focuses on Japanese and Allied fighting in the Pacific and the Asian mainland from 1937 to 1945. British, French, and Dutch losses in Asia to Japan, as well as efforts to recover them. U.S.-Japanese conflict in the Pacific Theater.

Semester(s) Traditionally Offered: 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.

Semester(s) Traditionally Offered: Fall, Spring

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.

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

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: Permission of instructor.

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.

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

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.

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

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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Spring

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: Fall

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 Religious Studies.

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 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 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 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.

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.

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.

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.

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.

HIST 6990 - Continuing Graduate Advisement
1-6 Credits:
Repeatable for credit.
Pass/Fail only.

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History

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

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.

HONR 2000 - Scholars Forum
1 Credits:

Includes orientation to the Honors Program and to undergraduate research. Gateway to the Honors Program for entering first-year students.

Campus: Online.
Semester(s) Traditionally Offered: Fall
HONR 2100 - Honors Inquiry Seminar
1 Credits:
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 Credits:
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

HONR 3020 - Special Topics: Humanities/Creative Arts (DHA/CI)
DHA 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: 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 (QI)
QI Quantitative Intensive
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

HONR 3060 - 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 Credits:

Upper-division Honors students assist in leading Honors seminars and tutorials.

Semester(s) Traditionally Offered: Fall, Spring

HONR 4800 - Thesis/Project Seminar

1 Credits:

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

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
1-9 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.

Prerequisite/Restriction: Admittance to teacher education.

Semester(s) Traditionally Offered: Fall, Spring

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.
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.

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.

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.

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.

ITLS 4300 - Clinical Experience in School Library Media
1 Credits:
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.

ITLS 4500 - Integration and Innovation of Technology in Education
1 Credits:
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.

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.

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:
Prepresents 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 permission of instructor

Cross-listed as: ITLS 6025
Campus: Also taught off campus.
Semester(s) Traditionally Offered: Spring
ITLS 5030 - 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 permission of instructor.

Cross-listed as: ITLS 6030.
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 permission of instructor.

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
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

Pass/Fail only

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 5225 - Digital Audio
3 Credits:

Explores basic concepts of digital audio, synthesis, and signal 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 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 permission of instructor

Cross-listed as: ITLS 6220

ITLS 5225 - Digital Audio
3 Credits:

Explores basic concepts of digital audio, synthesis, and signal 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 5245 - Digital Audio
3 Credits:

Explores basic concepts of digital audio, synthesis, and signal 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 6245.

ITLS 5250 - Instructional Graphic Production II
3 Credits:

Advanced 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 6250.
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
Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

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.
Semester(s) Traditionally Offered: Spring, Summer
Course Fee: $75.00

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 - Craft Technologies
3 Credits:
We transform the landscape of technology by changing the way we think of and use computers. We will use cutting edge technologies and alongside more traditional crafts to explore basics of interactive computing. Graduate students will 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 permission of instructor.

Cross-listed as: ITLS 6290
Pass/Fail
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00
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 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 permission of instructor

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: 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.

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 permission of instructor.
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 permission of instructor

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
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
Course Fee: $75.00

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: Spring, Summer
Course Fee: $75.00

ITLS 6270 - Craft Technologies
3 Credits:
We transform the landscape of technology by changing the way we think of and use computers. We will use cutting edge technologies and alongside more traditional crafts to explore basics of interactive computing. Graduate students will 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 permission of instructor

Cross-listed as: ITLS 5290

Pass/Fail
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $75.00

ITLS 6300 - ITLS Orientation
1 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.

Prerequisite/Restriction: Matriculation into the ITLS department

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 - Planning, Resources, and Implementation for Technology
3 Credits:

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 6350 and ITLS 6540 and matriculation into the ITLS department or permission of instructor

Campus: Taught off campus.
Semester(s) Traditionally Offered: Spring

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

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 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 permission of instructor

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

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 Credits:

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.
Pass/Fail only.
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: Fall

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: Permission of instructor. 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

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.

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

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, Summer

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.

IELI 1240 - Integrated Skills
3 Credits:
Multilevel speaking, reading, writing, and listening course, with an emphasis on listening, designed to develop language skills through content-based instruction. Repeatable for credit for students who place at Level 1 on the IELI placement exam.

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

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.

Pass/Fail
Semester(s) Traditionally Offered: Summer
Effective Term
Summer 2015

IELI 7920 - College Teaching Seminar
1-3 Credits:

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

Interdisciplinary Studies
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: Permission of instructor.
Semester(s) Traditionally Offered: Fall, Spring, Summer

ID 1700 - Interior Design Professional Seminar
1 Credits:

Weekly seminars to provide an orientation to the professional aspects of interior design. Exploration of related careers and professional societies. Invited participation by outside speakers. Repeatable for up to eight credits.

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

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

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.

Semester(s) Traditionally Offered: Fall, Spring

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.

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

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
Semester(s) Traditionally Offered: Spring
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 Credits:

Preparation course for ID 4710.

Prerequisite/Restriction: Permission of instructor and junior class standing.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring
ID 3730 - Interior Materials and Construction (QI)
3 Credits:

QI Quantitative Intensive
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: Permission of instructor 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: Permission of instructor 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
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 Credits:

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 data base, 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

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 to cultures and customs. Native speaker instructor. Self-study with tutorial assistance.

Prerequisite/Restriction: ITAL 1010 or equivalent.

Semester(s) Traditionally Offered: Spring

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/Restriction: ITAL 2010 or equivalent.

Semester(s) Traditionally Offered: Fall

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/Restriction: ITAL 2020 or equivalent.

Semester(s) Traditionally Offered: Spring, Summer

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: Permission of instructor

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.

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

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.

Prerequisite/Restriction: JAPN 2010 or equivalent.

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

JAPN 2020 - Japanese Second Year II
5 Credits:

Prerequisite/Restriction: JAPN 2020 or equivalent.

Semester(s) Traditionally Offered: Summer
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: Permission of instructor
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

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

JAPN 3090 - Introduction to Japanese Literature
3 Credits:
This course will introduce students to a variety of forms and styles of Japanese literary works.

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.

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
Repeatable for credit.
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 Credits:

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: Permission of instructor.

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: 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

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 permission of instructor.

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
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:
Theory and practice of photojournalism. Roles and functions of photographic images in the news media, both print and electronic. Practice in use of cameras and in darkroom techniques. Students furnish cameras and some materials.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $75.00

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.
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: Permission of instructor.

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 Credits:
Theory and practice of reporting public affairs, community news, and features. Emphasizes advanced news gathering techniques, understanding local political structures, news and feature writing skills, 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, Spring
Course Fee: $75.00

JCOM 3110 - Feature Writing (CI)
CI Communications Intensive
3 Credits:
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 permission of instructor.

Semester(s) Traditionally Offered: Fall
Course Fee: $75.00
JCOM 3120 - Copy Editing and Publication Design (CI)  
CI Communications Intensive  
3 Credits:

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 permission of instructor.

Semester(s) Traditionally Offered: Fall, Spring  
Course Fee: $75.00

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 3320 - Strategic Research Methods in Public Relations (DSS)  
DSS Depth Social Sciences  
3 Credits:

Quantitative and qualitative research methods standard to real-life applications in public relations problems and campaigns, including survey methods, 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

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
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 Credits:

Principles and theories of constitutional and case law governing the mass media, including libel and privacy, copyright, press freedom, broadcast regulation, and press responsibility.

Prerequisite/Restriction: Junior standing or permission of instructor.

Cross-listed as: JCOM 6430.

Semester(s) Traditionally Offered: Fall, Spring

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 permission of instructor.

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 permission of instructor.

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 permission of instructor.

Semester(s) Traditionally Offered: Spring

JCOM 4150 - Advanced Digital Photojournalism
3 Credits:

Advanced lab work in the use of cameras and photographic production techniques, photo imaging, and manipulation. Concludes with student exhibition of work.

Prerequisite/Restriction: Minimum grade of C in JCOM 2180 or permission of instructor.

Semester(s) Traditionally Offered: Fall, Spring

Course Fee: $75.00

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 permission of instructor.

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; permission of instructor 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: Permission of instructor.

Repeatable for credit.

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

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: Permission of instructor.

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)
3 Credits:

CI Communications Intensive

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: Permission of instructor.

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 permission of instructor.

Cross-listed as: JCOM 6220.
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 permission of instructor.

Cross-listed as: JCOM 6230.
Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring
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: Permission of instructor.

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: Permission of instructor.

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.

Semester(s) Traditionally Offered: Fall
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.

Semester(s) Traditionally Offered: Fall

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: Permission of instructor.

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 permission of instructor.

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 permission of instructor.

Cross-listed as: JCOM 5230.

Repeatable for credit.

Semester(s) Traditionally Offered: Spring
Course Fee: $150.00

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: Permission of instructor.

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: Permission of instructor.

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: Permission of instructor 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:
Principles and theories of constitutional and case law governing the mass media, including libel and privacy, copyright, press freedom, broadcast regulation, and press responsibility.

Cross-listed as: JCOM 4030.

Semester(s) Traditionally Offered: Fall, Spring

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

JCOM 6990 - Continuing Graduate Advisement
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

Korean

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.

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

KOR 2010 - Korean Second Year I
5 Credits:

Development of grammatical knowledge and writing skills.

Prerequisite/Restriction: KOR 1020 or equivalent.

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

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.
Semester(s) Traditionally Offered: Spring
Course Fee: $24.00

KOR 3010 - Korean Third Year I
4 Credits:
Development of advanced reading, writing, and conversational skills.
Prerequisite/Restriction: KOR 2020 or equivalent.

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

KOR 3020 - Korean Third Year II
4 Credits:
Continuous development of advanced reading, writing, and conversational skills.
Prerequisite/Restriction: KOR 3010 or equivalent.

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

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.

Semester(s) Traditionally Offered: Fall

KOR 4920 - Korean Language Tutoring
1 Credits:
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: Permission of instructor.

Repeatable for credit.

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

Landscape Architecture and Environmental Planning

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.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $19.00

LAEP 1200 - Basic Graphics in Landscape Architecture
4 Credits:
Graphic techniques for landscape architectural drawings, including plans, elevations, isometrics, perspective, rendering and model construction. Various media explored for preparing drawings and sketches for presentation. Two three-hour studios per week.

Semester(s) Traditionally Offered: Fall
Course Fee: $186.00Course Fee (additional):
Online - $120.00

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Landscape Architecture and Environmental Planning

LAEP 1300 - Computer Applications in Landscape Architecture
3 Credits:
Includes instruction in three major areas of computer applications: computer-aided design, digital image editing and manipulation, and three-dimensional modeling. Focuses on AutoCAD, Photoshop, and Sketchup.
Prerequisite/Restriction: Must be an LAEP major
Semester(s) Traditionally Offered: Spring
Course Fee: $90.00

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 (BHU)
BHU Breadth Humanities
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: Spring
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

LAEP 2720 - Site Planning and Design
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

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 or permission of instructor.

Semester(s) Traditionally Offered: Fall
Course Fee: $251.00

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 - Advanced Computer Applications in Landscape Architecture
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: Spring
Course Fee: $141.00

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.

Semester(s) Traditionally Offered: Spring

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, PSC 2620.

Semester(s) Traditionally Offered: Fall
Course Fee: $151.00

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
2 Credits:

Design of landscape structures and surfaces, including wood construction, free-standing and retaining walls, pavement, etc. Must be taken in conjunction with PSC 3420. Three two-hour studios per week, first half of semester only. Enrollment limited to students matriculated into the Landscape Architecture major.

Prerequisite/Restriction: LAEP 2600, LAEP 3600, MATH 1010.

Semester(s) Traditionally Offered: Spring
Course Fee: $54.00

LAEP 3700 - City and Regional Planning (CI)
CI Communications Intensive
3 Credits:

Introduction to historic and current theory and methods of city and regional planning. Includes legislative, administrative, and implementation practices of the general comprehensive plan. Three lectures per week.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement

Semester(s) Traditionally Offered: Spring

LAEP 4040 - 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 6060

Semester(s) Traditionally Offered: Spring

LAEP 4100 - Urban Theory, Systems, and Design
5 Credits:

Focuses on urban environment for design expression and processes associated with the creation of cities. Explores different aspects of urban theories and design approaches (conceptual, perceptual, and analytical) as applied to large urban areas and site-specific spaces.

Prerequisite/Restriction: LAEP 3120.

Semester(s) Traditionally Offered: Fall
Course Fee: $278.00

LAEP 4110 - Construction Document Preparation
4 Credits:

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 indepth study of a specific issue, all of which will show readiness for professional practice.

Prerequisite/Restriction: LAEP 4100 or permission of instructor
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 permission of instructor

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
LAEP 4810 - Tutorial
1 Credits:

Directed readings and discussions of landscape issues.

Prerequisite/Restriction: Permission of instructor.

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: Permission of instructor.

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 Credits:

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 permission of instructor

Semester(s) Traditionally Offered: Spring
Course Fee: $47.00

LAEP 4950 - Seminar
1 Credits:

Directed readings and reports on current and emerging areas of the profession. One recitation hour per week.

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

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 6090/PSC 5090.

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

LAEP 6030 - 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 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 permission of instructor

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 Credits:
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 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: Spring
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

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

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 permission of instructor.

Semester(s) Traditionally Offered: Fall

Course Fee: $250.00

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

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: Spring

Course Fee: $160.00

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 Credits:

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: Spring

LAEP 6862 - Faculty/Interdisciplinary Seminar II
1 Credits:

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 Credits:

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 Credits:
Selected readings directed by department faculty.
Prerequisite/Restriction: Graduate standing.
Semester(s) Traditionally Offered: Fall

LAEP 6930 - Reading Seminar II
1 Credits:
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.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

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

Language

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.

Semester(s) Traditionally Offered: Fall

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: Permission of instructor.

Repeatable for credit.

LANG 4200 - Senior Honors Seminar
1 Credits:

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: Permission of instructor.

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

LATN 1010 - Beginning Latin I
5 Credits:


Semester(s) Traditionally Offered: Fall

LATN 1020 - Beginning Latin II
5 Credits:


Semester(s) Traditionally Offered: Spring

LATN 3100 - Intermediate Latin Prose
3 Credits:

Readings in Latin prose.

Semester(s) Traditionally Offered: Fall

LATN 3130 - Intermediate Latin Poetry
3 Credits:

Readings in Latin poetry.

Semester(s) Traditionally Offered: Spring

LATN 4100 - Advanced Latin Readings
3 Credits:

Readings in Latin poetry and/or prose.

Semester(s) Traditionally Offered: Fall, Spring
LATN 4860 - Latin Pedagogy
3 Credits:

Prepares students to teach Latin at the secondary level. Students survey the most important issues in Latin pedagogy, and discuss the best teaching practices. Students also translate selections from core Latin authors, focusing on authors not previously studied.

Prerequisite/Restriction: LATN 3100 and LATN 3130 with minimum grades of B or better.

Semester(s) Traditionally Offered: Fall, Spring

LATN 4930 - Directed Readings in Latin Poetry and Prose Authors
1-3 Credits:

Directed readings in advanced Latin poetry and prose authors. Prerequisite: Successful completion of at least three semesters of Latin.

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

LATN 6100 - Special Topics: Latin
1-3 Credits:

Intensive Readings and group discussions of selected Latin texts.

Prerequisite/Restriction: Minimum grade of B in LATN 4100 or permission of instructor.

Repeatable for credit.

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

Latin American Studies

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

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 Credits:

First clinical practicum in middle and secondary schools. Arranged by special methods instructor. Required at Level I.

Prerequisite/Restriction: Set by Secondary Education Department.

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 Credits:

Second clinical practicum in middle and secondary schools. Arranged by special methods instructor. Required at Level II.

Prerequisite/Restriction: Set by Secondary Education Department.

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 to teaching in foreign/dual immersion programs.

Prerequisite/Restriction: Permission of instructor

Corequisite: LING 3300 or LING 4300

Semester(s) Traditionally Offered: Fall

LING 4520 - 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 6520.

Semester(s) Traditionally Offered: Summer

LING 4700 - Foundations of Dual Language Immersion
2-3 Credits:

The primary goal of Foundations of Dual Language Immersion course is to provide prospective immersion teachers and practitioners with well-designed opportunities to gain a strong theoretical and practical background about dual language immersion education as a rapidly growing educational sector, as well as how dual language immersion is being implemented in the Utah context.

Prerequisite/Restriction: LING 4400

Cross-listed as: LING 6700

Semester(s) Traditionally Offered: Spring

Effective Term
Spring 2016

LING 4900 - Analysis of Cross-Cultural Difference
3 Credits:

Develops awareness of what culture is and how it shapes perceptions and attitudes. Through interactive student-centered activities, students learn to analyze cultural differences.

LING 4920 - Practicum in Language Tutoring
1 Credits:

Allows language students to develop tutoring skills by assisting professors daily 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 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 Credits:
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 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: Permission of instructor.

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: Permission of instructor
Cross-listed as: LING 4700
Semester(s) Traditionally Offered: Spring

LING 6800 - Topics in Second Language Acquisition
3 Credits:
Advanced seminar in the acquisition and teaching of languages.
Repeatable for credit.
Semester(s) Traditionally Offered: Spring

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.
Semester(s) Traditionally Offered: Spring

LING 6910 - Exploring the Portfolio
1 Credits:
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.
Semester(s) Traditionally Offered: Fall, Spring

LING 6920 - Developing the Portfolio
1 Credits:
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.
Semester(s) Traditionally Offered: Fall, Spring, Summer

LING 6930 - Finishing the Portfolio
1 Credits:
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.
Semester(s) Traditionally Offered: Fall, Spring, Summer

LING 6940 - Independent Study
1-3 Credits:
Individually directed readings and conference. Departmental permission required before registration.

Prerequisite/Restriction: Permission of instructor.

Repeatable for credit.

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

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.

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

Machine Tool Technology (USU Eastern)

MACH 0798 - Special Problems
1-360 Credits:

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

Campus: USU Eastern only

MACH 0799 - Special Problems
1-360 Credits:

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 gauges 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: Permission of instructor  
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 and critical thinking techniques. Lecture.

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 permission of instructor.

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: 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 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: 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 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: Admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits or permission of instructor. 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: 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 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: 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 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 - Entrepreneurial Executive Lecture Series
1 Credits:

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.

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

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 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: Permission of instructor; 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

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: Fall, 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: Spring

MGT 3810 - Employment Law and Policy Development (DSS)
DSS Depth Social Sciences
3 Credits:

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 industry.

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.

Cross-listed as: MGT 6070.

Semester(s) Traditionally Offered: Fall

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 3110 or MGT 3500 or MGT 3700 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

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, cumulative GPA of 2.67 or higher, 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.

Semester(s) Traditionally Offered: Fall, Spring

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 in MGT 3500; admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits.

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

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: 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, Summer

Effective Term: Spring 2016

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: Permission of instructor.

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.

Semester(s) Traditionally Offered: Spring

MGT 4730 - Business and Society
2 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;
MGT 4740 - Quality Management
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, Spring

Spring 2016

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 permission of instructor.

Repeatable for credit

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

MGT 4890 - Strategic Planning and Execution (CI)
CI Communications Intensive
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 3110, MGT 3500, MGT 3700; 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 permission of instructor.

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

MGT 5730 - Problem Solving and Continuous Improvement
3 Credits:

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 2016

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 Credits:

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: Permission of instructor.

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. Students evaluate interests and capabilities, implement a personal development plan, get feedback on career development, and receive an objective outsider assessment of career readiness.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

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 Credits:

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 Credits:

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 Credits:

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 production and operations related projects. 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 Credits:

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

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...
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 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

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 Operations Management
2-3 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, Summer

MGT 6730 - Lean Continuous Improvement
2 Credits:

Application of tools and techniques of continuous improvement based on the principles of lean manufacturing. Topics include: value stream mapping, 5S, mistake proofing, and standard work.

Cross-listed as: MGT 5730

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

Effective Term
Spring 2016

MGT 6735 - Continuous Improvement in a Lean Environment
2 Credits:

This course introduces students to the tools and techniques of continuous improvement in a lean manufacturing environment. Topics to be covered include Six Sigma, 5S, Mistake Proofing, Process Level Value Stream Mapping.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720.

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

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:

This course introduces students to principles of leadership, human capital development, and organizational culture in a lean manufacturing environment. Topics to be covered include creating a lean culture, managing culture change, motivation, developing human capital, and creating effective team based environments.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720.

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

MGT 6755 - Managing in a Lean Environment
2 Credits:

This course examines the roles and responsibilities of management in a lean manufacturing environment. Topics to be covered include 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

MGT 6756 - Managing the Supply Chain in a Lean Environment
2 Credits:

This course introduces students to supply chain principles in a lean manufacturing environment. Topics
to be covered include establishing customer based pull, leveling production, managing material flow based on Kanban, driving pull to suppliers, and the use of information and metrics to achieve intra/inter-organizational alignment.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720.

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

MGT 6757 - Measurement and Reporting in a Lean Environment
2 Credits:

This course introduces students to principles of measurement and accounting in a lean manufacturing environment. Topics to be covered include 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

MGT 6758 - Quality Systems in a Lean Environment
2 Credits:

This course examines Quality Systems in a lean manufacturing environment. Topics to be covered include Work Instruction Documents (WID), Standard Operating Procedures (SOP), Validation Procedures, Design of Experiments (DOE), Root Cause Analysis, the Voice of the Customer, and the Quality Roadmap.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720.

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

MGT 6759 - Work Systems in a Lean Environment
2 Credits:

This course introduces students to the tools, processes, and systems used in a lean manufacturing environment to design and implement work activities consistent with the principle of waste reduction. Topics to be covered include but are not limited to Standard Work, Gemba 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

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 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:

In this course, students will learn about the Shingo Model and the Shingo Guiding Principles, and how the model and principles help drive enterprise excellence. Student will also learn how to use the Shingo evaluative process to constructively assess an organization's implementation of the principles.

Prerequisite/Restriction: ACCT 6350, FIN 6420, MGT 6520, and MGT 6720.
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

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 Credits:
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. Students will be working directly with executives in a quasi-consulting arrangement. Executives from one large corporation will engage the class in a significant strategic decision the company either faces now or did so in the recent past. Along with some new 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.

Pass/Fail Only

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

MGT 6892 - Systems Thinking and Advanced Tactics II
1 Credits:
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.

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

MGT 6970 - Thesis
1-4 Credits:
Designed for students preparing a master's degree thesis.

Repeatable for credit
Pass/Fail only.
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
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, admittance to a USU major, cumulative GPA of 2.67 or higher, completion of at least 40 credits.

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 permission of instructor

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 Credits:

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 2016

MIS 4330 - 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 3330 or equivalent.

Cross-listed as: MIS 6330.

Semester(s) Traditionally Offered: Spring

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: 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 Credits:

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 Credits:

Intensive workshops designed to enhance the MBA experience.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

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.
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.

MIS 6330 - 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 3330 or equivalent.
Cross-listed as: MIS 4330.

MIS 6350 - 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.
Cross-listed as: MIS 4350.

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).

MIS 6500 - Developing Business Information Systems with Advanced Software Concepts
3 Credits:
Creation of custom applications to solve typical business problems or support common functions using Visual Basic programming and OLE Automation with MS Office software.
Prerequisite/Restriction: Knowledge of database and spreadsheet software.
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: Admission into Management Information Systems - MS

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 - 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.
Includes information necessary to pass Certified Information Systems Security Professionals exam.

Prerequisite/Restriction: MIS 3500 or graduate admission.

Cross-listed as: MIS 4800.

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 Credits:

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
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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.
Remedial
Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring, Summer
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 17 or higher; SAT Math score of 420 or higher; Grade of C- or better in MATH 0990; or satisfactory score on the Math Placement Exam.

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

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): ACT Math score of 17 or higher; SAT Math score of 420 or higher; Grade of C- or better in MATH 0990; or satisfactory score on the Math Placement Exam.

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

MATH 1010 - Trade Mathematics
Mathematics
3 Credits:
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: MATH 0990; or satisfactory score on the Math Placement Exam.

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

MATH 1020 - Trade Mathematics
Mathematics
3 Credits:
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: MATH 0990; or satisfactory score on the Math Placement Exam.

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; SAT Math score of 500 or higher; 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 Quantitative Literacy
4 Credits:


Prerequisite/Restriction: One of the following within the last year or three consecutive semesters (including summer): ACT Math score of 23 or higher; SAT Math score of 540 or higher; AP Calculus AB score of at least 3; 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, Summer

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; SAT Math score of at least 540; AP Calculus AB score of at least 3; 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, Summer

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; SAT Math score of at least 580; 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; SAT Math score of at least 620; AP Calculus AB score of at least 3; Grade of C- or better in MATH 1050 and MATH 1060; or satisfactory score on the Math Placement Exam.

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

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:

For pre-service elementary school teachers. To help 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 2020 or the equivalent; grade of C- or better in MATH 1050; ACT Math score of at least 25; SAT Math score of 580 or higher; AP Calculus AB score of at least 3; or satisfactory score on the Math Placement Exam and declared major in Elementary Education,
Special Education, Pre-Elementary Education, or Pre-Special Education.

Semester(s) Traditionally Offered: Fall, Spring

MATH 2020 - Euclidean Geometry and Statistics for Elementary Education School Teachers (QI)
QI Quantitative Intensive
3 Credits:

For pre-service elementary school teachers. To help students develop a deep conceptual understanding of Euclidean geometry and statistics 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; grade of C- or better in MATH 1050; ACT score of 25 or higher; SAT Math score of 580 or higher; AP Calculus AB score of at least 3; or satisfactory score on the MATH Placement Exam and 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: Permission of instructor.
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: Permission of instructor.
Repeatable for credit

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 Credits:

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: Taught as needed
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.

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, MATH 2250; or C- or better in MATH 2210, MATH 2270, 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 permission of instructor. 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 Credits:

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, MATH 2280; or C- or better in MATH 2210, 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 a 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; and one of 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: Permission of instructor.
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: C- or better in MATH 3310; and successful completion of, or concurrent enrollment in, MATH 3110, MATH 4200, MATH 4310, MATH 4400, and 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 inservice 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, MATH 2250; or C- or better in MATH 2210, MATH 2270, MATH 2280.

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.

Prerequisite/Restriction: C- or better in MATH 5210.

Semester(s) Traditionally Offered: Spring

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 2210, MATH 2250; or C- or better in MATH 2210, MATH 2270, MATH 2280.

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; or C- or better in MATH 4310; or permission of instructor.

Semester(s) Traditionally Offered: Fall

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, MATH 2250; or C- or better in MATH 2210, MATH 2270, 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: Spring

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 and 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: C- or better in MATH 5710, STAT 3000, and permission of instructor.

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: C- or better in MATH 2210, C- or better in MATH 2250 or MATH 2270, and 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; and 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; and 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; and C- or better in MATH 2250 or MATH 2270.

Semester(s) Traditionally Offered: Fall, Spring

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.

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Fall

MATH 5810 - Topics in Mathematics
1-3 Credits:

Prerequisite/Restriction: Permission of instructor.

Repeatable for credit.

MATH 5820 - Topics in Mathematics
1-3 Credits:

Prerequisite/Restriction: Permission of instructor.

Repeatable for credit.

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

MATH 5910 - Directed Readings and Conference
1-3 Credits:

Prerequisite/Restriction: Prior arrangement with a specific instructor.

Repeatable for credit.

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

MATH 5950 - Honors Senior Project
1-4 Credits:

A senior project required for completion of the departmental honors program.

Prerequisite/Restriction: Permission of instructor.

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

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.
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.

Semester(s) Traditionally Offered: Fall, Spring

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.

Semester(s) Traditionally Offered: Spring

MATH 6300 - Practicum in Mathematics/Statistics Instruction for Graduates Pursuing Secondary Licensure
1 Credits:
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 MATH 6320.

MATH 6320 - 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 MATH 6350.
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.
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
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 6750 - 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.

MATH 6760 - 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.

Semester(s) Traditionally Offered: Fall, Spring

MATH 6810 - Topics in Mathematics (Topic)
3 Credits:
Prerequisite/Restriction: Permission of instructor.
Repeatable for credit.

MATH 6820 - Topics in Mathematics (Topic)
3 Credits:
Prerequisite/Restriction: Permission of instructor.
Repeatable for credit.

MATH 6910 - Directed Reading and Conference
1-3 Credits:
Prerequisite/Restriction: Permission of instructor.
Repeatable for credit.

MATH 6970 - Thesis
1-9 Credits:
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 6990 - Continuing Graduate Advisement
1-9 Credits:
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
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 7210 - Analysis (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7220 - Analysis (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7310 - Algebra (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7320 - Algebra (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7410 - Differential Equations (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7420 - Differential Equations (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7510 - Topology (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 7520 - Topology (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7610 - Numerical Analysis (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7620 - Numerical Analysis (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7750 - Probability (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7760 - Probability (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7810 - Topics in Mathematics (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7820 - Topics in Mathematics (Topic)
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MATH 7910 - College Teaching Internship
3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

MATH 7970 - Dissertation Research
1-15 Credits:
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
MATH 7990 - Continuing Graduate Advisement
1-9 Credits:
Repeatable for credit. Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer

Mechanical and Aerospace Engineering

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 or Math ACT score of 27 or higher or AP Calculus score of 3 or higher.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $53.00

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 Credits:
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: Spring

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 and student must must be in the Professional Engineering Program or have Graduate Standing.

Cross-listed as: ECE 5320

Semester(s) Traditionally Offered: Spring
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: MAE 3320 and student must be in the Professional Engineering Program or have Graduate Standing.

Semester(s) Traditionally Offered: Spring

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 Credits:
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 and MAE 3440. Student must be in the Professional Engineering Program or have Graduate Standing.

Semester(s) Traditionally Offered: Spring

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: Fall
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 permission of instructor. 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 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:  
Cross-listed as: CEE 6130  
Semester(s) Traditionally Offered: Spring

MAE 6180 - Dynamics and Vibrations  
3 Credits:  
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 permission of instructor.  
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.  
Semester(s) Traditionally Offered: Spring

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 6930 - 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 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 6990 - Continuing Graduate Advisement
1-12 Credits:

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 permission of instructor.

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 permission of instructor.

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: Permission of instructor.

Cross-listed as: CEE 7080.
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.

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 permission of instructor.

Cross-listed as: ECE 7360.

MAE 7380 - Advanced Dynamics and Vibrations  
3 Credits:  
Advanced techniques in dynamics and vibrations.

Prerequisite/Restriction: CEE 6180/MAE 6180.

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.

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.

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.

MAE 7930 - Special Problems  
1-3 Credits:  
Independent or group study of engineering problems not covered in regular course offerings. Repeatable for credit.

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 explored 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 permission of instructor.
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 permission of instructor.
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 reactions as well as the principles of serological procedures.

Prerequisite/Restriction: Admission to the MLT program or permission of instructor.
Campus: USU Eastern only

MLT 2280 - Immunohematology
4 Credits:
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 permission of instructor.
Campus: USU Eastern only

MLT 2430 - Clinical Chemistry I
3 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 permission of instructor.
Campus: USU Eastern only
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 permission of instructor.

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 permission of instructor.

Campus: USU Eastern only

MLT 2550 - Practicum in Medical Technology
3 Credits:
Supervised practicum within the clinical setting. Provides laboratory practice in hematology urinalysis, microbiology, serology, clinical chemistry, and immunohematology. Emphasis is placed on clinical skills and performance in areas such as specimen preparation and examination, instrumentation, reporting of results, management of data, quality control, recovery, isolation, culturing and identifying microorganisms, detection and identification of antibodies, the typing of blood, compatibility testing of blood and blood components, computerized instrumentation and the ability to recognize technical problems. Upon completion, students should be able to organize tasks and to perform various basic laboratory analyses with accuracy and precision and to be prepared to enter the work force.

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 permission of instructor.

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 permission of instructor.

Campus: USU Eastern only

Military Science Leadership

MSL 1010 - Leadership and Personal Development
2 Credits:
Presen...
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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:
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: Permission of instructor.
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: Permission of instructor.
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 Credits:
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 Credits:

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: Permission of instructor.

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: Permission of instructor.

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 ROTC cadets are eligible for this course.

Semester(s) Traditionally Offered: Fall

MSL 4015 - Military Science Leadership Lab
1 Credits:

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 Credits:

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: Permission of instructor.

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 Permission of instructor.

Repeatable for credit.

Pass/Fail only

Semester(s) Traditionally Offered: Summer

Mining (USU Eastern)

MINT 0100 - Surface New Miner Orientation Coal
16 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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.
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 Credits:

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 0160 - Surface Foreman
24 Credits:

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 Credits:

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 mines explosions, and mine equipment.

Campus: USU Eastern only

MINT 0310 - Underground Annual Refresher Coal M/NM
8 Credits:

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 Credits:

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 Credits:

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.

Campus: USU Eastern only

MINT 0410 - Instructor Part 46 Refresher (8 hour)
8 Credits:

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.

Campus: USU Eastern only

MINT 0500 - Initial Electrical
90 Credits:

This course will prepare students for the Utah State Mine electrician certification test. It follows both state and federal topics for electrical certification testing.

Campus: USU Eastern only

MINT 0520 - Electrical Recertification
8 Credits:

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.

Campus: USU Eastern only
MINT 0600 - Mine Foreman/Fire Boss
90 Credits:
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.
Campus: USU Eastern only

MINT 0700 - Mine Rescue
20 Credits:
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.
Campus: USU Eastern only

MINT 0710 - Advanced Mine Rescue
8 Credits:
Team building and team rescue methods. Use of mine rescue equipment in emergency procedures. Simulated rescue practice.
Campus: USU Eastern only

MINT 0798 - Special Problems
1-360 Credits:
Individual work approved by the department instructor. Time and membership hours to be arranged.
Campus: USU Eastern only

MINT 0799 - Special Problems
1-360 Credits:
Individual work approved by the department instructor. Time and membership hours to be arranged.
Campus: USU Eastern only

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
Campus: USU Eastern only

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

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 permission of instructor.
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: Permission of instructor
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: Permission of instructor
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: Permission of instructor
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: Permission of instructor

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 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: 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.

Prerequisite/Restriction: MUSC 1105 or permission of instructor

Semester(s) Traditionally Offered: Spring

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

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: MUSC 1105 or permission of instructor

Semester(s) Traditionally Offered: Spring

MUSC 1120 - Music Theory II
3 Credits:

Traditional harmony in four parts, using nonchord tones, seventh chords, and secondary dominant functions.

Prerequisite/Restriction: MUSC 1110.

Semester(s) Traditionally Offered: Fall

MUSC 1130 - Aural Skills I
1 Credits:

First in a four-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: MUSC 1105 or permission of
MUSC 1140 - Aural Skills II
1 Credits:

Second in a four-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: MUSC 1130.

Semester(s) Traditionally Offered: Fall

MUSC 1150 - Beginning Group Piano
1 Credits:

Group piano instruction for nonmusic majors.

Semester(s) Traditionally Offered: Spring

MUSC 1160 - Intermediate Group Piano
1 Credits:

Group piano instruction for nonmusic majors.

Semester(s) Traditionally Offered: Fall

MUSC 1170 - Keyboard Harmony I
1 Credits:

Development of keyboard skills, in conjunction with MUSC 1110, for music majors and minors.

Prerequisite/Restriction: Pre-music major or music major and permission of instructor

Semester(s) Traditionally Offered: Fall

MUSC 1180 - Keyboard Harmony II
1 Credits:

Development of keyboard skills, in conjunction with MUSC 1120, for music majors and minors.

Prerequisite/Restriction: Completion of MUSC 1170 with a C- or better, or faculty authorization.

Semester(s) Traditionally Offered: Spring

MUSC 1185 - Group Piano for Music Therapy Majors
1 Credits:

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 Credits:

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.
MUSC 1280 - Keyboard Harmony for Piano Majors II
1 Credits:
Development of keyboard skills, catered to Piano Pedagogy and Piano Performance majors
Prerequisite/Restriction: Admitted into piano program or instructor permission.

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 pre-music and music majors.

MUSC 1320 - Music Therapy Ensemble
1 Credits:
Intended for music therapy majors. Designed to help students increase their performance skills in the areas of accompanying, improvisation, and popular music styles.
Repeatable for credit.

MUSC 1340 - Piano 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.

MUSC 1420 - Pedagogy Practicum
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.

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.

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.

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.

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.

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 Credits:

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 Credits:

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 Credits:

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 permission of instructor

Semester(s) Traditionally Offered: Fall, Spring

MUSC 1560 - Intermediate Group Guitar
1 Credits:

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 Credits:

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 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 Credits:

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:

Study of chromatic harmony in four parts, using modulation, mode mixture, and neapolitan and augmented sixth chords.

Prerequisite/Restriction: MUSC 1110 and MUSC 1120.

Semester(s) Traditionally Offered: Spring

MUSC 2120 - Music Theory IV
3 Credits:

Study of Twentieth Century tonal, atonal, and avantegarde composition techniques.
guarde harmonies and compositional techniques.

Prerequisite/Restriction: MUSC 3110 and MUSC 3120.

Semester(s) Traditionally Offered: Fall

MUSC 2130 - Aural Skills III
1 Credits:

Third in a four-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: MUSC 1130 and MUSC 1140.

Semester(s) Traditionally Offered: Spring

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 Music majors only

Semester(s) Traditionally Offered: Fall, Spring

MUSC 2210 - Instrumental Conducting Ensemble
1 Credits:

Lab group for MUSC 4240. Music and nonmusic majors play major and secondary instruments in two concerts per semester.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall

MUSC 2220 - Individual Harp Instruction (Second Instrument) for Music Majors
1 Credits:

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 - Introduction to Observational and Behavioral Methods in Music Therapy
2 Credits:

Basic behavioral terminology and methods, including systematic observations and recording methods for use in music therapy. Students conduct observations in clinical settings in the community.

Semester(s) Traditionally Offered: Fall

MUSC 2320 - Music Therapy Methods and Materials
2 Credits:

Music interventions and techniques appropriate for a wide range of patient populations, including hospitalized children, older adults, and individuals with orthopedic handicaps.

Prerequisite/Restriction: MUSC 1310 and MUSC 2310.

Semester(s) Traditionally Offered: Spring

MUSC 2350 - Conducting
2 Credits:

Designed to provide students with basic conducting techniques.

Prerequisite/Restriction: Enrollment limited to pre-music and music majors.

Semester(s) Traditionally Offered: Fall, Spring
MUSC 2410 - Individual Organ Instruction (Second Instrument) for Music Majors
1 Credits:

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

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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2470 - Individual Jazz Piano Instruction (Second Instrument) for Music Majors
1 Credits:

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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2490 - Individual Piano Instruction (Second Instrument) for Music Majors
1 Credits:

Designed to give music majors private 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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per credit

MUSC 2500 - Individual String Bass Instruction (Second Instrument) for Music Majors
1 Credits:
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 Credits:

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 Credits:

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 Credits:

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.

Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Spring

MUSC 2590 - Individual Guitar Instruction (Second Instrument) for Music Majors
1 Credits:

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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per 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 2700 - Woodwind Techniques I: Flute, Clarinet
1 Credits:

Provides music education major with an introduction to performance and pedagogy of the flute and clarinet.

Prerequisite/Restriction: Enrollment limited to majors, or with permission of instructor.
SEMESTER(S) TRADITIONALLY OFFERED: FALL
MUSC 2710 - WOODWIND TECHNIQUES II: SAXOPHONE, OBOE, BASSOON
1 CREDITS:
Provides music education major with an introduction to performance and pedagogy for the saxophone, oboe, and bassoon. Enrollment limited to majors or with permission of instructor.

Prerequisite/Restriction: MUSC 2700.

SEMESTER(S) TRADITIONALLY OFFERED: SPRING
MUSC 2720 - MARCHING BAND
1 CREDITS:
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 CREDITS:
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 CREDITS:
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 CREDITS:
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
MUSC 2760 - INDIVIDUAL OBOE INSTRUCTION (SECOND INSTRUMENT) FOR MUSIC MAJORS
1 CREDITS:
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
MUSC 2770 - INDIVIDUAL CLARINET INSTRUCTION (SECOND INSTRUMENT) FOR MUSIC MAJORS
1 CREDITS:
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
MUSC 2780 - INDIVIDUAL BASSOON INSTRUCTION (SECOND INSTRUMENT) FOR MUSIC MAJORS
1 CREDITS:
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 Credits:

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 Credits:

Designed to give prospective music teachers a basic playing experience and theoretical understanding of the high brass instruments.

Semester(s) Traditionally Offered: Spring

MUSC 2810 - Brass Techniques II: Trombone, Tuba, Euphonium
1 Credits:

Designed to give prospective music teachers a basic playing experience and theoretical understanding of the low brass instruments.

Semester(s) Traditionally Offered: Fall

MUSC 2850 - Individual Trumpet Instruction (Second Instrument) for Music Majors
1 Credits:

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 Credits:

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 Credits:

Designed to give music majors private French horn 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 2880 - Individual Tuba/Euphonium Instruction (Second Instrument) for Music Majors
1 Credits:

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,
MUSC 2890 - Individual Percussion Instruction (Second Instrument) for Music Majors
1 Credits:

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.

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: Permission of instructor.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $300.00 per 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.

Semester(s) Traditionally Offered: Fall

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

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.

Semester(s) Traditionally Offered: Fall

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: MUSC 3110

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Spring

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, including the influence of non-Western musical traditions.

Prerequisite/Restriction: MUSC 3110 and MUSC 3120.

Semester(s) Traditionally Offered: Fall

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

MUSC 3220 - Choral Methods and Materials
2 Credits:

Investigates factors relating to administration and teaching of choral music in middle and secondary schools.

Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Spring

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:
Effects of music on physical, social, cognitive, and communication skills of children with disabilities.

Semester(s) Traditionally Offered: Fall

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 3330 - Music Therapy Practicum
1-3 Credits:
Supervised practicum experience in a community setting with disabled adults, children, older adults, or individuals in a medical setting.

Prerequisite/Restriction: MUSC 2320.

Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $464.00

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 per credit

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.

Prerequisite/Restriction: Admission by audition only, with 16 students per section.
Repeatable for credit.
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. 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 per credit

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 per credit

MUSC 3500 - Symphony Orchestra (DHA)
DHA Depth Humanities and Creative Arts
1 Credits:
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.

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: Permission of instructor.

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

MUSC 3530 - Cache Symphony Orchestra
1 Credits:

Provides experience for nonmusic majors in performing standard orchestral literature.

Prerequisite/Restriction: Permission of instructor

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

MUSC 3540 - Guitar Performance Practicum
1 Credits:

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 per credit

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 Credits:

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 Credits:
Survey of German Lieder and French Melodie, including styles, history, and performance practice.
Semester(s) Traditionally Offered: Fall

MUSC 3620 - Vocal Repertory II (CI)
CI Communications Intensive
2 Credits:
Survey of Italian, American, and British song, including styles, history, and performance practice.
Semester(s) Traditionally Offered: Spring

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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 per 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: Permission of instructor.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 per 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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 per credit
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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 per 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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 per 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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 per 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.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $464.00 per credit

MUSC 3760 - Jazz Ensemble
1 Credits:

Select ensemble performing big band jazz music.

Prerequisite/Restriction: Admission by audition only.

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

MUSC 3770 - Jazz Orchestra
1 Credits:

Preparation and performance of big band jazz music.

Prerequisite/Restriction: Admission by audition only.

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

MUSC 3780 - Flute Ensemble
1 Credits:

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 Credits:

Performance of significant works from symphonic band repertoire.

Prerequisite/Restriction: Admission by audition or Permission of instructor.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 3800 - Trombone Ensemble
1 Credits:

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 per credit

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 per credit

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 per credit

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.

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 per credit
MUSC 3850 - Brass Ensemble
1 Credits:

Helps students gain knowledge and understanding of brass ensemble, gain knowledge of rehearsal techniques for perfecting chamber music, and demonstrate mastery of these skills through performance.

Prerequisite/Restriction: Permission of instructor.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

MUSC 3860 - Individual Percussion 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 percussion 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 per credit

MUSC 3870 - Percussion Ensemble
1 Credits:

Provides opportunity for percussionists to perform select percussion literature in a chamber music setting.

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

MUSC 3880 - Song Writing I
2 Credits:

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 permission of instructor.
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: Permission of instructor.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $464.00 per credit

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: Permission of instructor.

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: Permission of instructor.

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 contrapuntal 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 Credits:
Music therapy methods for adults with major mental illness. Overview of DSM-IV criteria. Psychotherapy models, including cognitive-behavioral and person-centered approaches to treatment.

Semester(s) Traditionally Offered: Fall
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 permission of instructor.

Semester(s) Traditionally Offered: Spring
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: MUSC 4310. Music Therapy majors only.

Semester(s) Traditionally Offered: Spring

MUSC 4340 - Internship in Music Therapy
2 Credits:

Six-month resident internship in affiliated, approved clinical setting.

Prerequisite/Restriction: Successful completion of senior year in music therapy.

Pass/Fail only.

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

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

Semester(s) Traditionally Offered: Fall

Effective Term

Fall 2015

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

Semester(s) Traditionally Offered: Fall

Effective Term

Fall 2015

MUSC 4500 - String Ensemble
1 Credits:

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 permission of instructor for nonmajors.

Repeatable for credit.

Semester(s) Traditionally Offered: Fall, Spring

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 per credit

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 per credit

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 per credit

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 per credit

MUSC 4550 - Acoustic Guitar Ensemble
1 Credits:

Offers opportunity for guitarists to rehearse and perform intermediate and advanced music written for acoustic guitar.

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

MUSC 4600 - University Chorale (DHA)
DHA Depth Humanities and Creative Arts
1 Credits:

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 Credits:

Application of principles of choral music education in public school setting.

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

MUSC 4650 - Chamber Singers (DHA)
DHA Depth Humanities and Creative Arts
1 Credits:

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 Credits:

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

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 Credits:
Performance of pieces selected by the student and approved by the instructor, for performance in accordance with specific music area requirements.
Prerequisite/Restriction: Permission of instructor
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.

Semester(s) Traditionally Offered: Fall, Summer

**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 6100 - 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 6410 - Collaborative Artistry**
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 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:

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: Permission of instructor.

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

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 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

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

National Environmental Policy Act

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 (FONSIs), and Records of Decisions.

NEPA 6230 - Risk Communication for NEPA Specialists:
Strategies and Implementation
2 Credits:

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.

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:


NEPA 6370 - NEPA Capstone Experience
1 Credits:

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 Credits:

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 Credits:

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.

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Natural Resources

NR 2000 - Natural Resources Professional Orientation
1 Credits:

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.

Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $17.00

NR 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

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 Credits:

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: Permission of instructor.

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: Permission of instructor.

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: Permission of instructor.

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: Permission of instructor.

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.

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: Permission of instructor

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: Permission of instructor

Semester(s) Traditionally Offered: Spring

NAV 3050 - Navajo Descriptive and Narrative Writing
3 Credits:
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: Permission of instructor

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: Permission of instructor

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 “Hózhóógo liná” four-direction Diné philosophy of learning paradigm.

Prerequisite/Restriction: Permission of instructor

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 Credits:

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: Admission to the PN program

Campus: USU Eastern
Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

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.

Prerequisite/Restriction: BIOL 2320 with a B- or higher
FCHD 1500 with a B- or higher, admission to the Practical Nursing Program

Corequisite: NURS 1030, NURS 1110 and BIOL 2420

Campus: USU Eastern
Semester(s) Traditionally Offered: Fall
Effective Term
Fall 2015

NURS 1030 - Fundamental Concepts of Nursing Clinical
4 Credits:
Nursing laboratory and clinical experiences allow the nursing student opportunities to practice the concepts and principles learned in NURS 1020. Clinical experiences include long-term care, acute care in a medical/surgical unit at a hospital, and community care in local clinics/physician offices. Successful completion of all laboratory, theoretical, and clinical components are required to receive credit for the course.

Prerequisite/Restriction: BIOL 2320, NURS 1010, FCHD 1500

Corequisite: BIOL 2420, NURS 1110, NURS 1020

Campus: USU Eastern
Semester(s) Traditionally Offered: Fall

NURS 1110 - Pharmacology
3 Credits:

This course explores the theoretical principles that apply to the administration of medications. Emphasis is placed on competence in the administration of medications, assessment of therapeutic and adverse effects, and nursing interventions which will maximize the desired outcome of drug therapy.

Prerequisite/Restriction: BIOL 2320, FCHD 1500, NURS 1010, PSY 1010

Corequisite: NURS 1020, NURS 1030 and BIOL 2420

Campus: USU Eastern
Semester(s) Traditionally Offered: Fall

NURS 1115 - Pharmacology Lab
1 Credits:

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 1120 - Family Nursing I
1 Credits:

This course applies the concepts and skills of nursing care for the family (mother, father and newborn) before, during, and after childbirth. Increased awareness of assessment and interventions for clients are integrated through the use of the nursing process. Nursing care related to male and female reproductive systems is included.

Prerequisite/Restriction: BIOL 2320, BIOL 2420, FCHD 1500, NURS 1010, NURS 1020, NURS 1030, NURS 1110

Corequisite: NURS 1220, NURS 1230, and BIOL 2060

Campus: USU Eastern
Semester(s) Traditionally Offered: Spring

NURS 1220 - Nursing Process I
3 Credits:

This course explores the theoretical concepts necessary for the care of clients with common health problems. Basic human needs and pathophysiology are explored and appropriate nursing care is determined. A greater understanding of the nursing process and NANDA nursing diagnoses are utilized to direct the care of clients across the lifespan. This course builds upon previous knowledge and integrates concepts from support courses.

Prerequisite/Restriction: NURS 1010, NURS 1020, NURS 1030, NURS 1110, BIOL 2320, BIOL 2420, FCHD 1500

Corequisite: NURS 1220, NURS 1230, BIOL 2060

Campus: USU Eastern
Semester(s) Traditionally Offered: Spring

NURS 1230 - Nursing Process I Clinical
4 Credits:

This clinical experience provides the nursing student with opportunities to actively participate in planning and implementing nursing care for clients in multiple health care settings. Emphasis is placed on application of theoretical concepts presented in NURS 1220.

Prerequisite/Restriction: NURS 1010, NURS 1020, NURS 1030, NURS 1110, BIOL 2320, BIOL 2420, FCHD 1500
Corequisite: NURS 1120, NURS 1220, BIOL 2060

Campus: USU Eastern
Semester(s) Traditionally Offered: Spring

NURS 2020 - Nursing Process II
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, MATH 1050

Corequisite: NURS 2030 and NURS 2120

Campus: USU Price, Blanding, and Vernal
Semester(s) Traditionally Offered: Fall

NURS 2030 - Nursing Process II 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, MATH 1050

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, MATH 1050

Corequisite: NURS 2020 and NURS 2030

Campus: USU Price, Blanding, and Vernal
Semester(s) Traditionally Offered: Fall

NURS 2220 - Manager of Care
5 Credits:

This theoretical course is the culmination of all prior nursing and support courses. It builds upon theoretical concepts and skills to meet holistic needs of clients. Concepts include the associate degree nursing role of provider care, manager of care, client educator, and member of the interdisciplinary team. While all NANDA domains are explored, specific units provide a focus on the Nutrition, Elimination, Perception/Cognition, Self-Perception and Coping/Stress Tolerance domains.

Prerequisite/Restriction: NURS 2020, NURS 2030, NURS 2120, MATH 1050, CHEM 1110 and CHEM 1115

Corequisite: NURS 2230

Campus: USU Price, Blanding, and Vernal
Semester(s) Traditionally Offered: Spring

NURS 2230 - Manager of Care Clinical
5 Credits:

Service Learning
This clinical experience is designed to integrate the theoretical concepts learned throughout the program, and to apply this knowledge during the direct care of clients. Critical thinking and problem solving skills are used during the nursing role performances of provider of care, client educator, manager of care, and member of the interdisciplinary team. Clinical experiences include hospitals and community settings.
Prerequisite/Restriction: CHEM 1110, CHEM 1115, NURS 2020, NURS 2030, NURS 2120, MATH 1050

Corequisite: NURS 2220

Campus: USU Price, Blanding, and Vernal

Semester(s) Traditionally Offered: Spring

NURS 2240 - Advanced Family Nursing Care 2
1 Credits:

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

Spring 2016

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: Permission of instructor.

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: Permission of instructor.

Repeatable for credit
Campus: USU Price, Blanding, and Vernal

Nutrition, Dietetics, and Food Sciences

NDFS 1000 - Food Science from Farm to Fork
1 Credits:

Explores the science and technology of food, including careers, disciplines, food commodities, food product development, and the future of food science.

Prerequisite/Restriction: Enrollment limited to freshman (up to 30 credits) and sophomores (up to 60 credits)

Semester(s) Traditionally Offered: Fall

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.

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

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.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $110.00

NDFS 1030 - Introduction to Dietetics
1 Credits:

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).

Semester(s) Traditionally Offered: Fall

NDFS 1050 - Food Safety Manager Certification
0.5 Credits:

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.

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

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.

Semester(s) Traditionally Offered: Spring

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.

Prerequisite/Restriction: Enrollment limited to Nutrition and Food Sciences majors, Family and Consumer Sciences majors, and Family and Consumer Sciences Education majors only.

Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $80.00

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.

Prerequisite/Restriction: NDFS 1020.
Semester(s) Traditionally Offered: Spring
Course Fee: $10.00

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.

Prerequisite/Restriction: NDFS 1020.

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
1 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

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.

NDFS 4020 - Advanced Nutrition
3 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 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.
NDFS 4450 - Clinical Nutrition I Lab
1 Credits:
Supplement to NDFS 4550. Explores application of nutrition care process to medical case studies.

Semester(s) Traditionally Offered: Fall
Course Fee: $10.00

NDFS 4460 - Clinical Nutrition II Lab
1 Credits:
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
Course Fee: $100.00

NDFS 4560 - Medical Nutrition Therapy II (CI)
CI Communications Intensive
4 Credits:
Continuation of NDFS 4550.

Prerequisite/Restriction: NDFS 4550.

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

NDFS 4570 - Clinical Nutrition Experience I
1 Credits:
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.

Semester(s) Traditionally Offered: Fall
Course Fee: $785.00

NDFS 4580 - Clinical Nutrition Experience II
2 Credits:
Continuation of NDFS 4570.

Prerequisite/Restriction: NDFS 4570

Semester(s) Traditionally Offered: Spring
Course Fee: $1,000.00

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.

Semester(s) Traditionally Offered: Fall
Course Fee: $1,800.00

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.

Semester(s) Traditionally Offered: Fall
Course Fee: $70.00

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.

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

NDFS 4730 - Food Service Systems Lab
2 Credits:

Prerequisite/Restriction: NDFS 1260 and acceptance into Coordinated Program in Dietetics.

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

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.

Semester(s) Traditionally Offered: Spring
Course Fee: $160.00

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
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

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 Credits:
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 4990 - Nutrition and Food Sciences Seminar
1 Credits:

Senior student paper and presentation on current topics in nutrition and food sciences.
Prerequisite/Restriction: Senior in NDFS.

Semester(s) Traditionally Offered: Spring

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

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 Credits:

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)
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

NDFS 5111 - Food Microbiology Laboratory
1 Credits:
Laboratory experiences working with microorganisms in food spoilage, poisoning, preservation, and sanitation.
Cross-listed as: NDFS 6111
Semester(s) Traditionally Offered: Spring
Course Fee: $30.00

NDFS 5150 - Clinical Nutrition Practice
1 Credits:
Reinforces principles of medical nutrition therapy for preparation of dietetic internships. Includes detailed discussion of nutrition care process and its application in clinical settings. Reviews charting methods, education techniques, and various disease states commonly treated.
Prerequisite/Restriction: NDFS 4550, NDFS 4560.
Semester(s) Traditionally Offered: Spring

NDFS 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 PSC 5160.
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
2 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 higher, NDFS 1020.
Cross-listed as: NDFS 6200.

NDFS 5210 - Advanced Public Health Nutrition (CI)
CI Communications Intensive
2 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 higher, CHEM 1120 or higher.

Cross-listed as: NDFS 6210

Semester(s) Traditionally Offered: Spring

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 permission of instructor.

Cross-listed as: NDFS 6220 and ADVS 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 permission of instructor.

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 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 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.

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:** Fall

**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.

Cross-listed as: NDFS 5030

Semester(s) Traditionally Offered: Fall

Course Fee: $20.00

NDFS 6040 - Dairy Foods Processing Laboratory
1 Credits:

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 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.

Repeatable for credit
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.

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
2 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 higher, NDFS 1020.

Cross-listed as: NDFS 5200.

Semester(s) Traditionally Offered: Fall

NDFS 6210 - Advanced Public Health Nutrition
2 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 higher, 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 permission of instructor.

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 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/transporter 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.
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.

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

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.

NDFS 6620 - Microbiology of Fermented Dairy Foods
1 Credits:
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.

NDFS 6640 - Food Proteins
1 Credits:
Covers topics in protein structure, folding, functional properties, allergens, and purification.

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.

NDFS 6660 - Cheese Science
2 Credits:
Studies application of chemistry and microbiology to the manufacture of cheese.

NDFS 6670 - Food Biosecurity and Crisis Management
1 Credits:
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.

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 Credits:  
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  
1 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  
NDFS 6720 - Lipid Analysis and Metabolism  
1 Credits:  
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 Credits:  
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 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 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

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.

Office Systems Support

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 Credits:
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 Credits:
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 Credits:
Selected topics related to using computers.

Semester(s) Traditionally Offered: Taught as needed
Effective Term
Fall 2015

OSS 1420 - Word Processing Applications
3 Credits:
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 Credits:
Instruction in the use of small business accounting software.

Prerequisite/Restriction: OSS 1050 or equivalent.

Semester(s) Traditionally Offered: Taught by request

OSS 1550 - Business Correspondence
3 Credits:
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 Credits:
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

Semester(s) Traditionally Offered: Taught as needed
Effective Term
Fall 2015

OSS 2400 - Web Design Applications
3 Credits:
Design, development, and evaluation of documents for electronic media utilizing the worldwide web.

Prerequisite/Restriction: OSS 1400

Semester(s) Traditionally Offered: Taught as needed
Effective Term
Fall 2015

OSS 2450 - Spreadsheets and Databases
3 Credits:
Use of spreadsheets and databases to accomplish application development.

Prerequisite/Restriction: OSS 1400

Semester(s) Traditionally Offered: Taught as needed
OSS 2500 - Visual Basic Applications
3 Credits:

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

Semester(s) Traditionally Offered: Taught as needed

Effective Term
Fall 2015

OSS 2520 - Integrating Office Technology
3 Credits:

Advanced applications of office technology for production of business documents, emphasizing efficient use of word processing, graphics, and desktop publishing.

Prerequisite/Restriction: OSS 1400

Semester(s) Traditionally Offered: Taught as needed

Effective Term
Fall 2015

OSS 2600 - Office Procedures
3 Credits:

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.

Semester(s) Traditionally Offered: Taught as needed

Effective Term
Fall 2015

OSS 2800 - Principles of Selling
2 Credits:

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.

Semester(s) Traditionally Offered: Taught as needed

Effective Term
Fall 2015

Outdoor Product Design and Development

OPDD 1700 - Outdoor Product Design & Development Professional Seminar
1 Credits:

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

Semester(s) Traditionally Offered: Fall, Spring

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
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: Permission of instructor

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 Credits:

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

PRP 1340 - Introduction to Tour Guiding
1 Credits:

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 Credits:

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 remainder 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: Permission of instructor

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 2015

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 MATH 1030 or STAT 1040 or STAT 1045 or a higher MATH or STAT course.

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.

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: Permission of instructor, 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 Credits:

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, PRP 4500, PRP 4550 and fulfillment of CL2 requirement (ENGL 2010). PRP 3075 and PRP 4100 may be taken concurrently.

Corequisite: PRP 3050 and PRP 4550

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 interest.

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

PRP 5900 - Independent Study
1-3 Credits:

Students work on special projects and/or research out of the classroom, with approval and guidance of instructor.

Prerequisite/Restriction: Permission of instructor

Repeatable for credit

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

PRP 5910 - Independent Research
1-3 Credits:

Students work on research out of the classroom, with approval and guidance of instructor.
Prerequisite/Restriction: Permission of instructor

Repeatable for credit

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

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 6070.

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 5090 - 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 5060/PFP 6060, PFP 5070/PFP 6070, PFP 5080/PFP 6080 (all prerequisites may be taken concurrently).

Cross-listed as: PFP 6090.

PFP 6060 - Personal Financial Planning and Advising
3 Credits:

Fundamental concepts and principles of personal financial planning for individuals.

Cross-listed as: PFP 5060.

Semester(s) Traditionally Offered: Fall

PFP 6070 - 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 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 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 STAT 1040.

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

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 permission of instructor

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 permission of instructor

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 permission of instructor

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 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
Effective Term
Spring 2016

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 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 permission of instructor

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 permission of instructor

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

PHIL 4920 - Senior Honors Seminar
1 Credits:

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: Permission of instructor.
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 Credits:

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: $40.00

PE 1014 - Turbo Dance Aerobics
1 Credits:

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 Credits:

Course Fee: $40.00
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 Credits:

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 Credits:

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 Credits:

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 Credits:


Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $35.00

PE 1058 - Yoga II
1 Credits:

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 Credits:

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 Credits:

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 2016

PE 1085 - Weight Training
1 Credits:

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 Credits:

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 life style. 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 Credits:

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 Credits:

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 Credits:

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

PE 1105 - Badminton
1 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

Provides skills and knowledge in the fundamentals of handball.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $30.00

PE 1130 - Golf Beginning
1 Credits:

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.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $55.00

PE 1131 - Golf Intermediate
1 Credits:

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 Credits:

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 Credits:

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 Credits:

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
PE 1141 - Marksmanship II
1 Credits:

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 1146 - Bowling Intermediate
1 Credits:

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 1160 - Trap and Skeet Shooting
2 Credits:

Introduction to basic techniques of fencing.

Repeatable for credit.
Pass/Fail only.

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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, Spring
Course Fee: $15.00

PE 1245 - Ultimate Frisbee
1 Credits:

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
Course Fee: $15.00

PE 1246 - Ultimate Frisbee Intermediate
1 Credits:

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

PE 1260 - Ice Hockey Beginning
1 Credits:

Designed for students desiring a basic understanding of
ice hockey. Conditioning and skill development achieved
through active participation in drills and games.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $15.00

PE 1261 - Ice Hockey Intermediate
1 Credits:

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.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $85.00

PE 1265 - Officiating Ice Hockey
1 Credits:

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.

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

PE 1300 - Swimming Beginning
1 Credits:

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.

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

PE 1301 - Lap Swimming
1 Credits:

Designed for swimmers desiring to improve swimming
skills and enhance cardiovascular and muscular fitness.
Repeatable for credit.
PE 1315 - Water Aerobics
1 Credits:

Provides students with opportunity to maintain personal fitness, with an emphasis on non-weight-bearing cardiovascular activity in water.

Repeatable for credit.
Pass/Fail only.

PE 1340 - Life Guard
1 Credits:

Campus: USU Eastern only

PE 1345 - Water Safety Instructor
1 Credits:

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.

Campus: USU Eastern only

PE 1350 - Scuba Diving I
1 Credits:

Foundational knowledge and skills they need to be able to dive with a buddy and be independent of supervision. A student will learn to plan, conduct and log open water “no stop” dives when properly equipped and when accompanied by a buddy in conditions in which they have training and/or experience. Professional Association of Diving Instructors (PADI) standards will be used and at the end of the course the student may 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 Credits:

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.

PE 1407 - Rape Aggression Defense
1 Credits:

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.

PE 1410 - Tai Chi Chuan
1 Credits:

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.

PE 1440 - Aikido
1 Credits:

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.

PE 1430 - Karate
1 Credits:
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 Credits:

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 Credits:

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 Credits:

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

PA 1505 - Kayaking I
1 Credits:
Provides basic skills and knowledge in kayaking.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $125.00

PA 1506 - Kayaking II
1 Credits:
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 for river trips.

Prerequisite/Restriction: PE 1505

Campus: USU Eastern only

PA 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

PA 1509 - River Running I
1 Credits:
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

PA 1510 - Fly Fishing
1 Credits:
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

PA 1511 - Fly Tying Beginning
1 Credits:
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

PA 1512 - Fly Tying Intermediate
1 Credits:
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 Credits:

Designed for students desiring a basic understanding of fly casting techniques and strategies.

Repeatable for credit.
Pass/Fail only.

PE 1514 - Fly Rod Building
1 Credits:

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.

PE 1515 - Sailing
1 Credits:

Provides skills and knowledge in the fundamentals of sailing and water safety.

Repeatable for credit.
Pass/Fail only.

PE 1520 - Hiking
1 Credits:

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.

PE 1523 - Orienteering
1 Credits:

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.

PE 1527 - Rock Climbing: Basic
1 Credits:

Provides skills and knowledge in basic rock climbing, teaching safe judgment and proper techniques in a climbing gym.

Repeatable for credit.
Pass/Fail only.

PE 1529 - Introduction to Wall Climbing
0.5 Credits:

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 Credits:

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 Credits:

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 Credits:

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
Semester(s) Traditionally Offered: Fall, Spring

PE 1536 - Desert Backpacking
1 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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.
Semester(s) Traditionally Offered: Spring
Course Fee: $186.50

PE 1625 - Cross Country Skiing I
1 Credits:

Focuses on knowledge, techniques, equipment, and safety necessary to participate in and enjoy winter recreational activities, including cross country ski touring and snowshoeing.

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

PE 1630 - Cross Country Skiing II
1 Credits:

Designed for students interested in developing a healthy life style 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 Credits:

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.
Semester(s) Traditionally Offered: Spring
Course Fee: $186.50

PE 1655 - Snowshoeing
1 Credits:

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.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $40.00

PE 1670 - Figure Skating Beginning
1 Credits:

Designed for students desiring to learn basic figure skating skills. Conditioning and skill development achieved through active participation.

Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $85.00

PE 1671 - Figure Skating Intermediate
1 Credits:

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.
Semester(s) Traditionally Offered: Fall, Spring
Course Fee: $85.00

PE 1680 - Curling
1 Credits:

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 Credits:

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.

PE 1701 - Introduction to Modern Dance
1 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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, Summer

PE 1910 - African Dance
1 Credits:

Introduces students to African dance using live drummers. 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 Credits:

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.

PE 2000 - Personal Instruction and Conditioning
1 Credits:

Designed for students and prospective members of varsity teams, as well as for the student/athlete requiring a personalized program.

Repeatable for credit.

PE 2010 - Varsity Cross Country
1 Credits:

Designed to meet the needs of varsity student/athletes in cross country.

Repeatable for credit.

PE 2020 - Varsity Football
1 Credits:

Designed to meet the needs of varsity student/athletes in football.

Repeatable for credit.

PE 2030 - Varsity Soccer
1 Credits:

Designed to meet the needs of varsity student/athletes in soccer.

Repeatable for credit.

PE 2040 - Varsity Volleyball
1 Credits:

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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
Designed to meet the needs of varsity student/athletes in tennis.
Repeatable for credit.
Pass/Fail only.
Semester(s) Traditionally Offered: Spring

PE 2120 - Varsity Weight Training
1 Credits:
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 Credits:
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
Effective Term
Spring 2016

PE 3020 - Yoga Teaching Methodology I
3 Credits:

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.

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

PE 3021 - Yoga Teaching Methodology II
3 Credits:

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.

Prerequisite/Restriction: Yoga Teaching Methodology I

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

PE 4000 - Lifeguard Training
2 Credits:

Designed to prepare students as pool or nonsurf open water lifeguards. Presents knowledge and skills necessary for lifeguard functions. American Red Cross certification available.

Repeatable for credit.
Pass/Fail only.

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

PE 4050 - Water Safety Instructor
2 Credits:

Attention given to methods of teaching swimming and lifesaving. Presents knowledge and skills necessary for lifeguard functions. American Red Cross certification available.

Repeatable for credit.
Pass/Fail only.

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

PE 4200 - Athletic Transition
2 Credits:

Life skills course designed to meet the needs of fourth-year and fifth-year student athletes. Provides personal and career assistance.

Semester(s) Traditionally Offered: Fall, Spring

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 Credits:

Knowledge of the rules and mechanics of officiating all Utah high school sports.

PEP 2100 - Skills 1 (Swimming, Volleyball, Football)
1 Credits:

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 Credits:

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 Credits:

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 Credits:

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.

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

PEP 2500 - Skills 5 (Dance Activities)
1 Credits:
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.

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

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: Permission of instructor
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.

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

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.

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

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.

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

PEP 3200 - Motor Learning and Technology in Skill Analysis (CI)
CI Communications Intensive
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 Credits:
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 higher or Math ACT score of 25 or higher.

Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $10.00

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, permission of instructor, 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 3250; and MATH 1050 or higher or Math ACT score of 25 or higher.

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

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: Permission of instructor.

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

PEP 4300 - Clinical Experience II
1 Credits:

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 Credits:

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 Credits:

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).

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

**PEP 4800 - Methods of Coaching Basketball, Baseball, and Softball**
1 Credits:

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.
Semester(s) Traditionally Offered: Fall, Spring

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 Credits:
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: Permission of instructor

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, dysrhythmias, 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: Spring

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 Credits:
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 Credits:

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 Credits:

Guided experience in conducting research on topics in Pathokinesiology.

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

PEP 7070 - Grant Writing for Pathokinesiology
1 Credits:

Guided experience in preparation of grant proposals.

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

PEP 7080 - Publication
1 Credits:

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 Credits:

Individualized experience in presenting scholarly work at academic conferences.

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

PEP 7330 - Supervision Internship
1 Credits:

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 Credits:

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 Credits:

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: Permission of instructor

Repeatable for credit

Pass/Fail Only

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

PEP 7910 - Independent Research
1-3 Credits:

Conducting research.

Prerequisite/Restriction: Permission of instructor

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: Permission of instructor

Repeatable for credit

Pass/Fail Only

Semester(s) Traditionally Offered: Fall, Spring, Summer
PEP 7990 - Continuing Graduate Advisement
1-12 Credits:

Prerequisite/Restriction: Permission of instructor

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

Physics

PHYS 1010 - Elementary Physics (BPS)
BPS Breadth Physical Science
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: MATH 1010 competency

Campus: USU Eastern only
Semester(s) Traditionally Offered: Fall, Spring

PHYS 1015 - Elementary Physics Laboratory
1 Credits:

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
3 Credits:

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 Schrödinger’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: $25.00

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: 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.

Prerequisite/Restriction: PHYS 2010 and PHYS 2015

Corequisite: PHYS 2025

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

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: Fall
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: MATH 1100 or MATH 1210, PHYS 2110.

Course Fee: $30.00

PHYS 2200 - Elements of Mechanics
2 Credits:
Calculus-based introduction to particle mechanics. Kinematics, Newton's laws of motion, momentum, work and energy, and angular momentum. Required recitation and lab. Prerequisite: MATH 1210.

Course Fee: $15.00

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

PHYS 2215 - Physics for Scientists and Engineers Lab I
1 Credits:
Computer assisted laboratory investigations of mechanics and thermal physics principles taught in PHYS 2210.

Corequisite: PHYS 2210 (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 2200 or PHYS 2210, or a minimum score of 4 or higher on the AP Physics B exam, or a minimum score of 3 on the AP Physics C (Mechanics) exam.

Course Fee: $10.00

PHYS 2225 - Physics for Scientists and Engineers Lab II
1 Credits:
Computer assisted laboratory investigations of wave, electricity and magnetism, optics and quantum physics principles taught in PHYS 2220.

Prerequisite/Restriction: PHYS 2220 (may be taken concurrently)
Course Fee: $20.00

PHYS 2400 - Introductory Topics in Physics
1-3 Credits:
Explores issues in contemporary physics at an introductory level.

Prerequisite/Restriction: Permission of instructor.
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 or PHYS 2120 (may be taken concurrently) or PHYS 2220 (may be taken concurrently).

Course Fee: $25.00

PHYS 2700 - Science Excursion
1 Credits:
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, PHYS 2120 or PHYS 2220.

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: Permission of instructor.
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: USU 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 permission of instructor.

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, PHYS 2120 or PHYS 2220.

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
2 Credits:
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).

Course Fee: $40.00

PHYS 3880 - Advanced Physics Laboratory (CI)
CI Communications Intensive
2 Credits:
Modern experimental physics techniques, with emphasis on student designed and implemented experimental projects.

Prerequisite/Restriction: PHYS 3870.

Course Fee: $40.00

PHYS 3900 - Projects in Physics
1-3 Credits:
Individual study pursued under direction of staff member.

Prerequisite/Restriction: Permission of instructor.

Repeatable for credit.

PHYS 4010 - Chaos Under Control (DSC/QI)
DSC/QI Depth Life and Physical Sciences and Quantitative Intensive
3 Credits:
Introduction to principles and applications of new sciences of fractals, chaos, and complexity. Importance of describing physical, geological, biological, and natural resource structures with fractals. Practical benefits of understanding and controlling erratic behavior in physical and living systems. Technological consequences of self-organized, adaptive behavior.

Prerequisite/Restriction: Completion of University Studies Quantitative Literacy (QL) and Breadth Physical Sciences (BPS) requirements.

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; permission of instructor

Cross-listed as: BENG 5700 and ECE 5700

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

PHYS 5800 - Physics Colloquium
1 Credits:

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.

Corequisite: ECE 5230.

Cross-listed as: ECE 6240.

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 6550.

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 3700 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

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Physics

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, Spring, Summer

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.

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.

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

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: Spring
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.

Semester(s) Traditionally Offered: Spring

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 3450 - 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 3460 - 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 3470 - 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.

PSC 3480 - 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 3490 - 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

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.

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

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: MATH 1030 or STAT 1040 or completion of University Studies 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 permission of instructor.

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

Cross-listed as: PSC 6810

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

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: PSC 3820/WATS 3820 or GEO 5680.

Semester(s) Traditionally Offered: Fall

PSC 4890 - Senior Seminar (CI)
CI Communications Intensive
1 Credits:

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.

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

PSC 4900 - Special Problems
1-4 Credits:

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

PSC 4970 - Undergraduate Research
1-6 Credits:

Independent and faculty mentored undergraduate research in Plants, Soils, and Climate.

Prerequisite/Restriction: Departmental approval
Repeatable for credit
Semester(s) Traditionally Offered: Fall, Spring, Summer

PSC 5000 - 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 6000.

Semester(s) Traditionally Offered: Fall, Odd Years

PSC 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: 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, MATH 1050 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

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

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: Fall
Course Fee: $25.00

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 permission of instructor.

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:

Quantitatively analyzes the relationship between physiological processes and growth of whole plants. Energy balance and water use efficiency. Light
interception and canopy geometry. Canopy photosynthesis and respiration. Carbon partitioning and source/sink relationships.

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 permission of instructor.

Cross-listed as: PSC 6350 and WILD 5350/WILD 6350.
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: $23.00

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 permission of instructor.

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 Credits:

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 5760 - 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 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, MATH 1050 or higher.

Cross-listed as: PSC 5050.

Semester(s) Traditionally Offered: Spring, Odd Years

PSC 6070 - 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.


Semester(s) Traditionally Offered: Spring

Effective Term
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.
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.

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.

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.

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 permission of instructor.

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: Fall, Odd Years

PSC 6230 - Readings in Landscape Water Conservation
1 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: Spring, Even Years

PSC 6240 - Water Efficient Landscaping Seminar
1 Credits:

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 permission of instructor.

Cross-listed as: PSC 5350 and WILD 6350/WILD 5350.

Semester(s) Traditionally Offered: Spring

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 6530 - Soils and Plant Nutrient Bioavailability
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 5530.

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: Fall

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 permission of instructor.

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 permission of instructor.

Semester(s) Traditionally Offered: Spring, Odd Years

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 permission of instructor.

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 6810 - 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 Credits:

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 Credits:

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 Credits:

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
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 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 diplomatics, 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)
BSS 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: Permission of instructor

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: Permission of instructor

Repeatable for credit
Pass/Fail only.
Campus: USU Eastern only

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: Permission of instructor
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: Permission of instructor
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 2978 - 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: STAT 1040; MATH 1030 or MATH 1050

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: Fall, Spring

POLS 3120 - Law and Politics (DSS)
DSS Depth Social Sciences
3 Credits:
Examines history, processes, and theories underlying American law and politics. Makes selective comparison of the American legal system with other legal systems.
Semester(s) Traditionally Offered: Fall

POLS 3130 - United States Legislative Politics (DSS)
DSS Depth Social Sciences
3 Credits:
Legislative process.
Semester(s) Traditionally Offered: Spring
POLLS 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

POLLS 3150 - State and Local Government
3 Credits:
Includes state and local politics, in addition to metropolitan politics.

POLLS 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

POLLS 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.

POLLS 3210 - Western European Government and Politics (DSS)
DSS Depth Social Sciences
3 Credits:
Britain, France, Germany, Scandinavia, and the European Union.

POLLS 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.
Semester(s) Traditionally Offered: Fall

POLLS 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

POLLS 3240 - African Government and Politics
3 Credits:
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 2016

POLLS 3250 - Chinese Government and Politics (DSS)
DSS Depth Social Sciences
3 Credits:
Semester(s) Traditionally Offered: Spring

POLLS 3270 - Latin American Government and Politics (DSS)
DSS Depth Social Sciences
3 Credits:
Survey of most of the governments and politics of Latin America, emphasizing events, policies, and governmental actions of the past decade.
Semester(s) Traditionally Offered: Fall

POLLS 3310 - American Political Thought (DSS)
DSS Depth Social Sciences
3 Credits:
Survey of American political thought from colonial times
Semester(s) Traditionally Offered: Fall

POLS 3320 - The Foundations of American Constitutionalism
3 Credits:

Introduces students to debate over constitutions, constitutionalism, and constitution-making which occurred during the period (roughly) from the Revolution to the election of 1800.

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.

POLS 4000 - Political Analysis
3 Credits:

Political data, quantitative and analytical techniques.

Prerequisite/Restriction: POLS 3000.

Semester(s) Traditionally Offered: Fall

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 (CI)
CI Communications Intensive
3 Credits:

How intelligence systems function, fit within the policymaking systems of free societies, and are managed and controlled.

Prerequisite/Restriction: ENGL 2010

Semester(s) Traditionally Offered: Fall

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: POLS 1100 or POLS 2100

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

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 and POLS 2100

Semester(s) Traditionally Offered: Taught Alternate Years

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 - The Supreme Court and American Constitutional History
3 Credits:

Examines many of the major arguments made about the Constitution, which were presented before the Supreme Court of the United States.

Cross-listed as: HIST 4800.

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.

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: Permission of instructor.

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: Permission of instructor.
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.

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.

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: Permission of instructor

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: Permission of instructor.

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: Permission of instructor
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: Permission of instructor
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: Permission of instructor
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: Permission of instructor
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 permission of instructor
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 - International/Comparative Theory
3 Credits:
Introduces graduate students to prominent theories in the related fields of international relations and comparative politics.
Semester(s) Traditionally Offered: Alternate Years

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.
Semester(s) Traditionally Offered: Fall

POLS 6250 - Theories of War and Peace
3 Credits:
Examines the "classic" alternative understanding, in the history of political thought, regarding the reasons people go to war. Explores consequent proposals to erase the sources or alleviate the results of armed conflicts.
Semester(s) Traditionally Offered: Fall, Spring

POLS 6280 - U.S. Institutions
3 Credits:
This course covers core institutions of U.S. government (Congress, the presidency, and the judiciary), and basic methods of institutional analysis and how institutions structure individual and collective political action. It includes applicationsto understanding the public policy process.
Semester(s) Traditionally Offered: Taught Alternate Years

POLS 6400 - United States Foreign Policy
3 Credits:
Explores contemporary U.S. foreign policy in the context of international relations theory and global realities. Utilizing theoretical perspectives as analytical models, course examines how policy makers formulate and attempt to achieve U.S. foreign policy goals in the global arena.
Semester(s) Traditionally Offered: Alternate Years
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: Permission of instructor.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
POLS 6920 - Internship
1-15 Credits:
Internship in a public administration agency.
Prerequisite/Restriction: Permission of instructor.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
POLS 6970 - Thesis Research
1-9 Credits:
Prerequisite/Restriction: Admission to candidacy
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
POLS 6990 - Continuing Graduate Advisement
1-3 Credits:
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer
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: Spring
PORT 1800 - Portuguese I Study Abroad
1-4 Credits:
Communicative competencies in the four language skills: speaking, listening, reading, and writing, with exposure
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: Summer
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 required.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

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
Course Fee: $24.00

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 permission of instructor based on demonstration of equivalent proficiency through testing.
Semester(s) Traditionally Offered: Fall
Effective Term
Spring 2015
Course Fee: $24.00

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 permission of instructor.

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 permission of instructor 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: Permission of instructor.

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

PORT 4920 - Portuguese Language Tutoring
1 Credits:

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: Permission of instructor.

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

Psychology

PSY 0710 - Career Exploration
1 Credits:

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.
PSY 1100 - Lifespan Development
3 Credits:
Covers theories and stages of development across the lifespan.
Prerequisite/Restriction: PSY 1010

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.

PSY 1410 - Analysis of Behavior: Basic Principles Lab
1 Credits:
Laboratory experience accompanying PSY 1400.
Prerequisite/Restriction: PSY 1010.

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.

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.

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

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

PSY 3110 - Health Psychology
3 Credits:
Prerequisite/Restriction: PSY 1010.

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 - Perception and Psychophysics
3 Credits:

Analysis of how sensory processes and principles help determine behavior. Introduction to methods used to measure sensory-determined behavior. Methods, results, and principles of sensory communication. Lab required as part of 3 credits.

Prerequisite/Restriction: PSY 1010.

Semester(s) Traditionally Offered: Fall

PSY 3460 - Neuroscience I
3 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

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.
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.

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.

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.

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.

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.

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

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.

PSY 4430 - Cognitive Psychology Laboratory
1 Credits:
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.

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 4720 - Behavioral Assessment and Intervention II**
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 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.
Pass/Fail only
**Semester(s) Traditionally Offered:** Fall, Spring, Summer

**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 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, personality and sports performance.

Cross-listed as: PSY 6050 and PEP 5050/PEP 6050.

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

**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 Permission of instructor.

Semester(s) Traditionally Offered: Fall

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.

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

PSY 5600 - Psychology Honors Seminar
1 Credits:

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

Semester(s) Traditionally Offered: Fall

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: Permission of instructor

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.

Repeatable for credit.

PSY 5910 - Independent Research
1-3 Credits:

Experiments and demonstration projects are conducted and reported.

Repeatable for credit.

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: Permission of instructor

Repeatable for credit.
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 6020 - Multicultural Issues in Psychology
3 Credits:

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 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 Credits:

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 permission of instructor

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.

Semester(s) Traditionally Offered: Spring

Prerequisite/Restriction: Admission to the Professional School Counselor Education program, or approval by the program director

Semester(s) Traditionally Offered: Summer

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 and evaluation.

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 permission of instructor

Semester(s) Traditionally Offered: Spring

PSY 6450 - Introduction to School Psychology  
1 Credits:

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: Spring

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 6500 - Interdisciplinary Workshop  
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

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 permission of instructor.

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 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
Effective Term
Fall 2015

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 instuctor 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 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 Credits:

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 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
1-3 Credits:
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 for credit.
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: Permission of instructor.
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 6990 - Continuing Graduate Advisement
1-12 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 Credits:
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 7320 - Advanced Personality Assessment
2 Credits:
Theory and clinical training in personality assessment, with additional techniques than those covered in PSY 6320. Focuses on the comprehensive scoring system of Rorschach.
Prerequisite/Restriction: PSY 6320 a permission of instructor.

Semester(s) Traditionally Offered: Summer
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 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 Credits:

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 (i.e., mixed-effects, hierarchical linear) and marginal (i.e., GEE) models for both continuous and categorical outcomes. Includes application of these methods to many types of cross-sectional and longitudinal research designs (e.g., 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 permission of instructor.

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 Credits:

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 Credits:

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
1 Credits:

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

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
Cross-listed as: CEE 3870

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 Credits:

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

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

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 Credits:

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

Public Health

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 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/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 permission of instructor.

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.

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: Permission of instructor.

Corequisite: REH 6140.

Semester(s) Traditionally Offered: Summer

REH 6140 - Practicum in Rehabilitation
1-3 Credits:
Under faculty supervision, students receive a minimum of 100 hours of firsthand experience working with persons with disabilities in a rehabilitation agency or facility. Must be taken the first time concurrently with REH 6130. With faculty approval, may be repeated for credit.

Prerequisite/Restriction: Permission of instructor.
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 supervision 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: Permission of instructor.
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 employment of individuals with disabilities.

Corequisite: REH 6510 or SPED 6510

Cross-listed as: SPED 6520

Semester(s) Traditionally Offered: Spring, Summer, Even Years

REH 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: SPED 6530

Semester(s) Traditionally Offered: Fall, Even Years

REH 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: SPED 6540

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

REH 6910 - Independent Research
1-3 Credits:
Prerequisite/Restriction: Permission of instructor.
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: Permission of instructor.
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: Permission of instructor.
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: Fall, Even 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 Credits:

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: Permission of instructor.

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: Permission of instructor.

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: Permission of instructor.

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
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

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.

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

RELS 2050 - The Historical Jesus in a First Century Jewish Context
3 Credits:

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 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 Depth Humanities and Creative Arts
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
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 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 permission of instructor

RELS 3160 - Anthropology of Religion (DSS)
DSS Depth Social Sciences
3 Credits:


Cross-listed as: ANTH 3160

Semester(s) Traditionally Offered: Fall

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 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

Semester(s) Traditionally Offered: Fall

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 2016

RELS 3710 - Folklore Colloquium (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 for credit
Semester(s) Traditionally Offered: Spring

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 - Introduction to Religious Studies Methodology
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.

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

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 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 4790 - American Religious History
3 Credits:
Varieties of American religious experience from settlement to the present.

Cross-listed as: HIST 4790.

Semester(s) Traditionally Offered: Fall

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: Permission of instructor.
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: Permission of instructor.

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.

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: Spring

Course Fee: $24.00

RUSS 3510 - Business Russia (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: Permission of instructor.

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

RUSS 4920 - Russian Language Tutoring
1 Credits:

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: Permission of instructor.

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

Secondary Education

SCED 1000 - Volunteer Experience
1 Credits:

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:

Designed to lead pre-service secondary school teachers to address 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?

Prerequisite/Restriction: Program Admission

Semester(s) Traditionally Offered: Fall, Spring

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 Credits:

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.

Prerequisite/Restriction: Program admission.

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

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.

Prerequisite/Restriction: Program admission.

Semester(s) Traditionally Offered: Fall, Spring

SCED 3600 - Teaching English Language Arts
3 Credits:

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.

Prerequisite/Restriction: Program admission.

Semester(s) Traditionally Offered: Fall, Spring

Effective Term
Spring 2016

SCED 4200 - Language, Literacy and Learning in the Content Areas (CI)
CI Communications Intensive
3 Credits:

The purpose of this course is to examine 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.

Prerequisite/Restriction: Program admission and completion of Level 1.

Semester(s) Traditionally Offered: Fall, Spring

SCED 4210 - Assessment and Curriculum Design
3 Credits:

Designed to lead the preservice secondary teachers to address 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?

Prerequisite/Restriction: Program admission and completion of Level 1

SCED 4300 - Clinical Experience II
1 Credits:

Second clinical practicum (30 hours minimum) in middle and secondary schools, arranged by instructors. Required at level 2.

Prerequisite/Restriction: Admission into Teacher Education and completion of Level 1.

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

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.

Prerequisite/Restriction: Program admission, completion of Level 1, and SCED 3400.

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

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 inservice 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
2-4 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.

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

Course Fee: $300.00

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: Permission of instructor.

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

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 Credits:

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 Credits:

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 Credits:

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:

Discusses the styles and skills of leadership, utilizing historic and contemporary models and emphasizing traits of responsible Leadership. Students will develop a leadership project of their own choosing. They will also research the biography of a significant world leader and present the information to the class; combined with reflection and discussion in small groups on issues of Leadership.

Prerequisite/Restriction: Approval of the course coordinator.
SLSC 1120 - Leadership Perspectives 1120
2 Credits:

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
Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

SLSC 1130 - Leadership Perspectives 1130
2 Credits:

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
Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

SLSC 1140 - Leadership Perspectives 1140
2 Credits:

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
Campus: USU Eastern only
Semester(s) Traditionally Offered: Spring
Effective Term
Spring 2016

SLSC 1150 - College Student Affairs
1 Credits:

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 Credits:

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.
SW 4100 - Social Work Research (CI)
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.

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.

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.

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.

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 permission of instructor.
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.

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.

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:
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 I: 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.
Semester(s) Traditionally Offered: Spring

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

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:

Examine 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.

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Sociology

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 one of the following with C- or better: MATH 1030, MATH 1050, MATH 1060, MATH 1100, MATH 1210, MATH 1220, STAT 1040, STAT 1045, STAT 2000, STAT 2300.
Semester(s) Traditionally Offered: Fall, Spring, Summer

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 one of the following with C- or better: MATH 1030, MATH 1050, MATH 1060, MATH 1100, MATH 1210, MATH 1220, STAT 1040, STAT 1045, STAT 2000, STAT 2300.
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 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 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: 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 2016

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 permission of instructor.

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: Permission of instructor.
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 6650 and ANTH 5650/ANTH 6650 and GEOG 5650/GEOG 6650.
Semester(s) Traditionally Offered: Fall

SOC 6010 - 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 6100 - Advanced Methods of Social Research
3 Credits:
Examines philosophical bases, techniques, and political and ethical aspects of social research.
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, cross-tabulation, 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: Spring

SOC 6210 - 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.
Semester(s) Traditionally Offered: Fall, Spring, Summer

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 6700 - 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 permission of instructor.
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 6760 - 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.

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.
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.

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

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

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.
Repeatable 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.

Repeatable 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: Permission of instructor.
Repeatable 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 permission of instructor.

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 permission of instructor
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: Permission of instructor.

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

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 permission of instructor.

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 permission of instructor

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 permission of instructor

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 permission of instructor

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 permission of instructor

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 3300 or permission of instructor.

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

SPAN 3660 - Hispanic American Literature - Study Abroad
1-4 Credits:

Selective readings and discussions of major works and authors of Hispanic American literature.

Prerequisite/Restriction: Fulfillment of Communications Literacy CL2 requirement; SPAN 3300 or permission of instructor.

Repeatable for credit when topics change
Campus: Taught only in Studies Overseas in Spanish program.

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.

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.

Prerequisite/Restriction: Permission of instructor.

Repeatable for credit.

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

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 permission of instructor.

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 permission of instructor.

Repeatable for credit when topics change

Semester(s) Traditionally Offered: Fall, Spring

SPAN 4920 - Spanish Language Tutoring
1 Credits:

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: Permission of instructor.

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 Credits:

Includes review of coursework and comprehensive exit examination, individualized according to the courses taken for the degree.

Prerequisite/Restriction: Permission of instructor.

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
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 Credits:

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 2015

SPED 1030 - Orientation to Adult Learning & Independent Living
3 Credits:

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 2015

SPED 1040 - Career Exploration II
3 Credits:

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 2016

SPED 1050 - Self-Determination and Self-Management Skills
2 Credits:

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
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 Credits:

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 2015

SPED 2110 - Work Internship
3 Credits:

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 2015

SPED 2120 - Navigating Adulthood
2 Credits:

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 2016

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.

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:
SPED 4910 - Undergraduate Research and Creative Opportunities  
1-4 Credits: Individually directed study at the undergraduate level.
Prerequisite/Restriction: Permission of instructor 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 permission of instructor.
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 permission of instructor.
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 permission of instructor.
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 permission of instructor.
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 permission of instructor.
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
4 Credits:

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
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 Credits:

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 permission of instructor.

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.

Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring, Summer
Course Fee: $150.00

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.

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

SPED 5230 - Student Teaching in Special Education: Alternative Preparation
3-15 Credits:

Student teaching for students in alternative teacher preparation programs.

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

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 Credits:

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 permission of instructor.

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:

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 permission of instructor.
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 permission of instructor.
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 permission of instructor.

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 Credits:

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: Permission of instructor 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: Permission of instructor.
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: Permission of instructor.

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 2015

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 permission of instructor.

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: Permission of instructor

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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: Permission of instructor required.

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

SPED 5910 - Independent Research
1-3 Credits:

Prerequisite/Restriction: Permission of instructor 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: Permission of instructor.

Pass/Fail only.
Course Fee: $150.00

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.

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.

Semester(s) Traditionally Offered: Fall

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 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: REH 6510

Semester(s) Traditionally Offered: Spring, Even Years

SPED 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 employment of individuals with disabilities.

Corequisite: REH 6510 or SPED 6510

Cross-listed as: REH 6520

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

Semester(s) Traditionally Offered: Fall, Even Years

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.

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

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

Semester(s) Traditionally Offered: Spring

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

Semester(s) Traditionally Offered: Spring, Odd Years

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.
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 taken 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.

SPED 6900 - Independent Study
1-3 Credits:

SPED 6910 - Independent Research
1-3 Credits:
Prerequisite/Restriction: Permission of instructor.

SPED 6930 - Internship in Special Education
2-10 Credits:
Professional and supervised intern experience for master's program.
Prerequisite/Restriction: Permission of instructor.

SPED 6960 - Creative Project
1-6 Credits:
Culminating experience of MEd program.
Prerequisite/Restriction: Proposal approval by supervisory committee.

SPED 6970 - Thesis
1-9 Credits:
Culminating experience of MS program.
Prerequisite/Restriction: Proposal approval by supervisory committee.

SPED 6990 - Continuing Graduate Advisement
1-8 Credits:
Repeatable for credit.
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, Summer

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: Permission of instructor.
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: Permission of instructor.
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: Permission of instructor.
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.

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

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.
SPED 7700 - Single-Subject Research Methods and Designs
3 Credits:
Examine single-subject research methods for applied research, including measurement, design, and analysis issues.

Prerequisite/Restriction: SPED 6700 or permission of instructor

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

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.

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

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

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 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 Credits:

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: Permission of instructor.

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

SPED 7910 - Independent Research
1-3 Credits:

Prerequisite/Restriction: Permission of instructor.

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: Permission of instructor.

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

SPED 7940 - Journal Reading Group
1-2 Credits:

Seminar discussion of recent empirical and theoretical journal articles in special education and related fields.

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

SPED 7970 - Dissertation
1-15 Credits:

Variable credit for dissertation project in connection with doctoral program in special education.

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

SPED 7990 - Continuing Graduate Advisement
1-9 Credits:

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

Statistics

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; SAT Math score of 460 or higher; AP Calculus AB score of at least 3; Grade of C or better in MATH 0995 or MATH 1010; 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 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 at least 25; SAT Math score of at least 580; 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 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; SAT Math score of at least 580; 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; SAT Math score of at least 580; 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.
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:

Prerequisite/Restriction: Permission of instructor
Repeatable for credit.

STAT 5820 - Topics in Statistics
1-3 Credits:

Prerequisite/Restriction: Permission of instructor.
Repeatable for credit.

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: Permission of instructor.

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 5950 - Senior Honors Project
1-4 Credits:

A senior project, required for completion of the
departmental honors program and developed under the
direction of a departmental faculty member.

Prerequisite/Restriction: Permission of instructor.

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: Permission of instructor.

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: Permission of instructor

Repeatable for credit.

STAT 6820 - Topics in Statistics (Topic)
3 Credits:

Prerequisite/Restriction: Permission of instructor.

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: Permission of instructor.

Repeable 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: Permission of instructor.

Repeable 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.

Repeable for credit.
Semester(s) Traditionally Offered: Taught as needed

STAT 6970 - Thesis and Research
1-6 Credits:


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

STAT 6990 - Continuing Graduate Advisement
1-9 Credits:

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

STAT 7110 - Linear Models (Topic)
3 Credits:

Repeable for credit.

STAT 7120 - Linear Models (Topic)
3 Credits:
STAT 7550 - Computational and Graphical Statistics (Topic)  
3 Credits:  
Repeatable for credit.

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.

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

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 plus MATH 2010 or MATH 2020.

Semester(s) Traditionally Offered: Fall, Spring

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 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.

Cross-listed as: TEAL 6745

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. Additional coursework will be required for students desiring TEAL 6760 graduate credit.
Cross-listed as: TEAL 6760

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.

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

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.

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

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

Semester(s) Traditionally Offered: Fall, Spring

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 Credits:

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 Credits:

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 Credits:

Application of strategies for pre-, formative, and summative assessments with gifted learners. 5000-level

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).
Semester(s) Traditionally Offered: Fall

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 6340 - Integrating Literacy Across the Curriculum
3 Credits:

This course focuses on evidence-based literacy strategies to enhance the literacy development of secondary school students.

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

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 Credits:

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.

Cross-listed as: TEAL 5455.

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.

Cross-listed as: TEAL 7465.

Semester(s) Traditionally Offered: Spring

**TEAL 6470 - Practicum: Gifted Assessment Applications**
1 Credits:

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: Fall

TEAL 6490 - Practicum: Gifted Strategies Applications  
1 Credits:

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 Credits:
Optional practicum to be taken semester following enrollment in TEAL 6700.

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

TEAL 6730 - 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 4730.

Semester(s) Traditionally Offered: Spring, Fall

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 6745 - 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.

Cross-listed as: TEAL 4745.

Semester(s) Traditionally Offered: Spring, Fall

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 6760 - 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. Additional coursework will be required for students desiring TEAL 6760 graduate credit.

Cross-listed as: TEAL 4760
Semester(s) Traditionally Offered: Spring, 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 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
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 Credits:
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 permission of instructor.

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
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: Permission of instructor.

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: Spring

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: TEAL 7551 and TEAL 7555; 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 Ph.D. Program in the School of Teacher Education and Leadership

Semester(s) Traditionally Offered: Taught alternate, odd numbered year, spring semesters

Effective Term
Spring 2016

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 7990 - Continuing Graduate Advisement
1-12 Credits:

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

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

Teacher Education Professional Development

TEPD 5420 - Education of Gifted and Talented Learners of Professionals
2 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 Credits:
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

TEPD 5440 - Creativity in Education for Professional Educators
2 Credits:

Exploration of 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 Credits:

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 - Methods and Materials in Gifted Education 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 Credits:

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 Credits:

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

Saturday
Corequisite: TEPD 5490

TEPD 5490 - Practicum: Gifted Strategies Applications for Professional Educators
1 Credits:

Instructional models and materials used in gifted education are applied to the classroom setting. Intended for practicing teachers.

Corequisite: TEPD 5480

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

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: Bachelors 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: Bachelors 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: Bachelors 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
1 Credits:

Introduction to the technology education teaching profession, including programs, facilities, goals, and opportunities.

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

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 2030 - Wood-Based Manufacturing Systems
3 Credits:

Focuses on the instructional strategy of establishing a manufacturing enterprise utilizing woodworking equipment and techniques. Topics include management, finance and marketing strategies; and the design of product, tooling, and production systems.

Prerequisite/Restriction: TEE 1030.

Semester(s) Traditionally Offered: Fall
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.
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.

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

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.

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: Spring

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 equivalent), 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, MATH 1060.

Semester(s) Traditionally Offered: Fall

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.

TEE 3070 - K-8 Technology and Engineering Education  
3 Credits: 

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 3080 - Engineering Systems  
3 Credits: 

Classroom laboratory practicum for design, practice, and performance of technology education demonstrations and lab activities.

Prerequisite/Restriction: TEE 1000.  
Corequisite: TEE 3300.

TEE 3200 - Methods of Teaching Engineering and Technology Education I  
3 Credits: 

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 equivalent.

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 Credits:

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.

Semester(s) Traditionally Offered: Spring

TEE 3390 - Microcontrollers
3 Credits:

Study of microcontrollers and applications. Includes programming and building circuits.

Prerequisite/Restriction: TEE 3380.

Semester(s) Traditionally Offered: Fall

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.

Semester(s) Traditionally Offered: Spring

TEE 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: ASTE 3440.

Semester(s) Traditionally Offered: Fall, Spring

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 Credits:

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).
Semester(s) Traditionally Offered: Fall
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 Credits:
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.

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.

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.

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: Fall
Effective Term
Fall 2015
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

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

Course Fee: $232.00

TEE 4950 - 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 4960 - 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

Course Fee: $232.00

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.

Applicable only.

Semester(s) Traditionally Offered: Fall

TEE 5510 - 工业技术的未来
1-4 Credits:

Applicable only.

Corequisite: TEE 5500.

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.

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

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.
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 6460 - 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 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 6900 - Master’s Project
3-6 Credits:
Development of creative project emphasizing a thoroughly developed plan of action. Includes proposal, project paper, and final presentation.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring, Summer

TEE 6960 - 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.
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: 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

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

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 or permission of department

Semester(s) Traditionally Offered: Fall

THEA 1010 - Acting II: Audition Preparation
2 Credits:

Fundamentals of audition monologue preparation: selection of appropriate material, editing, staging, self direction, rehearsal and presentation.

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 1050 - Orientation for Actors
1 Credits:
Introduction to professional practices for actors, department procedures and professional standards for studio work and rehearsal.
Prerequisite/Restriction: Admission to BFA Acting Emphasis or permission of department
Semester(s) Traditionally Offered: Fall

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.

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 Credits:
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: Theatre majors and minors, 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, Spring

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

Semester(s) Traditionally Offered: Fall

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: Spring

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: Fall

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, Spring

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: Spring

THEA 2220 - Advanced Movement for Actors
2 Credits:

Theory and practice in physical and collaborative and devised theatre movement styles. Emphasis on creative approach for projecting character, emotion and action
through use of the body. History and practical experience in advanced movement styles.

Prerequisite/Restriction: Admission into BFA Acting program, THEA 1210, or permission of department

Semester(s) Traditionally Offered: 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: Fall

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 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 Credits:

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.
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: Permission of instructor. Student must have a participatory assignment in a theatre performance activity.

Repeatable for credit not to exceed 8 hours.

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: Permission of instructor.

Repeatable for credit

THEA 2988 - Special Problems
1-3 Credits:
Individual work approved by instructor. Time and credit to be arranged.

Repeatable for credit

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

Repeatable for credit

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 Credits:

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 permission of instructor

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 Credits:

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
Course Fee: $25.00

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: Theater 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 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 Credits:

Clinical apprenticeship of teaching theatre in local schools, including observation, tutorial work, small group discussions, whole class instruction, and lesson/unit planning.
Thea 4320 - Storytelling in Education (DHA)  
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  
Corequisite: THEA 4340  
Semester(s) Traditionally Offered: Fall  

Effective Term  
Spring 2016  

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 4520 - Costume Design II
3 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: Theatre major, THEA 3520, 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 4570 - 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 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 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 permission of instructor
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: Permission of instructor.

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
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: 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

THEA 6010 - Introduction to Graduate Study in Theatre
1 Credits:
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, 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: 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: Fall

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
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: Spring

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 MFA or permission of department

Semester(s) Traditionally Offered: Spring

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 MFA or permission of department

Semester(s) Traditionally Offered: Fall

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

Semester(s) Traditionally Offered: Fall, Spring

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

Semester(s) Traditionally Offered: Fall, Spring

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

Semester(s) Traditionally Offered: Fall, Spring
THEA 6790 - Seminar in Drama
1-4 Credits:
Flexible course covering a range of topics according to individual student need and/or visiting instructors, independent study, etc.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

THEA 6900 - Research Studies
1-4 Credits:
Directed individual research studies or creative projects in theatre.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

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.
Semester(s) Traditionally Offered: Fall, Spring

THEA 6920 - Graduate Projects in Theatre
2-3 Credits:
Individual production related project work.
Repeatable for credit.
Semester(s) Traditionally Offered: Fall, Spring

THEA 6930 - Theatre Production Portfolio
1 Credits:
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

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

THEA 6990 - Continuing Graduate Advisement
1-2 Credits:
Repeatable for credit
Pass/Fail only.
Semester(s) Traditionally Offered: Fall, Spring

University Studies
USU 1000 - Introduction to Computers and Information Literacy
1 Credits:
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 Credits:

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 2016

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 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 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.

Course Fee: $10.00

USU 1730 - Strategies for Academic Success
1-3 Credits:

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 2016

USU 1750 - Comprehension Strategies for College Reading
1-3 Credits:

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
Effective Term
Spring 2016

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 University 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 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 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 Credits:
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

Veterinary Medicine

VM 7350 - Skeletal Preparation
1 Credits:
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 Credits:
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 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 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 Credits:
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 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 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 Credits:
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.
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.

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.

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

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

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.

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

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

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
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 Credits:

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 medical program

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

VM 7567 - Applied Large Animal Theriogenology
1 Credits:

Integration of basic reproductive physiology with clinical aspects of reproductive management of large animals.

Prerequisite/Restriction: Must be accepted into the veterinary medical 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 Credits:

Clinical training in diagnostic and therapeutic procedures in large animal reproduction.

Prerequisite/Restriction: Must be accepted into the veterinary medical program

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

VM 7576 - Emerging and Exotic Diseases of Animals
1 Credits:

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 medical program

Pass/Fail only
Semester(s) Traditionally Offered: Spring
VM 7580 - Basic Nutrition
1 Credits:
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 Credits:
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 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 Credits:
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 Credits:
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 medical program
Pass/Fail only
Semester(s) Traditionally Offered: Spring
WATS 3110 - Fish Diversity Laboratory
1 Credits:
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 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 Credits:
Examines fundamental interrelationships between the 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 Credits:
Focuses on field collection, identification, and habitat relationships of freshwater fishes in North America.

Prerequisite/Restriction: WATS 3100 (may be taken concurrently).

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 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 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: GEO 1110 or GEOG 1000

Semester(s) Traditionally Offered: Spring

WATS 4000 - Natural Resources Teaching Experiences
1 Credits:

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 Credits:

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 systems. Graduate students write an additional research paper and present a lecture.

Prerequisite/Restriction: CHEM 1210.

Cross-listed as: WATS 6500.

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

Semester(s) Traditionally Offered: Spring

WATS 4950 - Special Topics
1-3 Credits:

Individual study and research upon selected watershed sciences problems.

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

WATS 4960 - Directed Readings
1-3 Credits:

Provides one-on-one interaction between student and instructor.

Prerequisite/Restriction: Permission of department.

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

WATS 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

WATS 4980 - Watershed Sciences Departmental Seminar
1 Credits:

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 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 permission of instructor.

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: NR 2220/BIOL 2220, WATS 3700.

Cross-listed as: WATS 7640.

Semester(s) Traditionally Offered: Spring

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 permission of instructor.

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 Credits:

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 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.

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: Fall
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 Credits:
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 Credits:
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 (QI)
QI Quantitative Intensive
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
WATS 6491 - Streamflow Analysis
1 Credits:

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.

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.

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.

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.

Cross-listed as: WATS 4530.

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.

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.
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 permission of instructor.

Cross-listed as: WATS 5680 and GEO 6680/GEO 5680 and PSC 6680/PSC 5680.

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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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

Campus: Offered online through Distance Education
Semester(s) Traditionally Offered: Spring
Course Fee: $75.00

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 permission of instructor.

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
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.

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: NR 2220/BIOL 2220, WATS 3700.

Cross-listed as: WATS 5640.

Semester(s) Traditionally Offered: Spring

WATS 7800 - Watershed Sciences Departmental Seminar
1 Credits:

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.

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

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 Credits:
Welding certifications are designed to ensure the welder's 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
180 Credits:
This course is designed for the beginner. Includes shop safety and introduction to welding methods.
Campus: USU Eastern only

WELD 0302 - Intro to Welding Technology II
180 Credits:
Intermediate level including student projects and industrial applications.
Campus: USU Eastern only

WELD 0798 - Special Problems
1-360 Credits:
Individual work approved by the department instructor.
Time and membership hours to be arranged.
Campus: USU Eastern only

WELD 0799 - Special Problems
1-360 Credits:
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 I 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

Campus: USU Eastern only

WELD 1140 - Related Welding Processes
7 Credits:

Designed for welding technology majors to expand their knowledge of other related welding processes such as: Submerged Arc Welding, Stud Welding, Plasma Arc Cutting and Welding, Electroslag Welding, Thermal Spraying, Explosion Weld, Laser Beam and Water Jet Cutting, Brazing and Soldering. Combination of theory and practice.

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 Credits:

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

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.

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.

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.

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.

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.

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.

WGS 4910 - Feminist Theories
3 Credits:

This course is designed to explore the topic of feminist theory, primarily as is 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 is 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: Fall

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: Spring

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: Fall

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 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 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: BIOL 1610 and BIOL 1620. Enrollment limited to QCNR majors. College authorization required for all non majors.

Semester(s) Traditionally Offered: Fall
Course Fee: $28.00

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

WILD 3300 - Management Aspects of Wildlife Behavior
3 Credits:

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/NR 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 NR 2220 or BIOL 2220
Department authorization required for all nonmajors.

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

WILD 3810 - Plant and Animal Populations
3 Credits:

Basics of plant and animal population ecology, including population regulation, life histories, single and multispecies interactions, and metapopulations. Case studies
will cover topics of both management and conservation concern.

Prerequisite/Restriction: NR 2220 or BIOL 2220 and one of the following: MATH 1100 or STAT 2000 or STAT 3000

Semester(s) Traditionally Offered: 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.

Semester(s) Traditionally Offered: Fall
Course Fee: $28.00

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

Semester(s) Traditionally Offered: Taught Alternate Odd Years
Effective Term
Spring 2016

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

Semester(s) Traditionally Offered: Spring

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.

Semester(s) Traditionally Offered: Spring

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

Semester(s) Traditionally Offered: Summer

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: NR 2220/BIOL 2220.

Semester(s) Traditionally Offered: Spring

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 NR 2220 or BIOL 2220

Semester(s) Traditionally Offered: Spring

WILD 4750 - Monitoring and Assessment in Natural Resource and Environmental Management
4 Credits:

Lectures, laboratory exercises, and field-based projects introduce students to the concepts, strategies, and analytical methods of natural resource and environmental monitoring and assessment.

Prerequisite/Restriction: BIOL 1620; BIOL 2220 or NR 2220; MATH 1100 or MATH 1210; STAT 2000 or STAT 3000; and a prerequisite or co-requisite of WILD 3810.

Corequisite: WILD 3810

Semester(s) Traditionally Offered: Fall
Course Fee: $60.00
Effective Term
Fall 2015

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

WILD 4960 - Directed Readings
1-3 Credits:

Individual reading research on forest, range, and wildlife science readings.

Prerequisite/Restriction: Departmental approval

Repeatable for credit.

WILD 4970 - Undergraduate Research
1-3 Credits:

Individual or team research.

Prerequisite/Restriction: Departmental permission.

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

WILD 4980 - Undergraduate Seminar
1 Credits:

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.

Cross-listed as: WILD 7300.

Semester(s) Traditionally Offered: Spring

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 permission of instructor.

Cross-listed as: WILD 6350 and PSC 5350/PSC 6350.

Semester(s) Traditionally Offered: Spring

WILD 5450 - Winter Ecology
2 Credits:

Emphasizes the effects of winter abiotic conditions on organisms and subsequent organismal adaptation to these conditions. Through lectures and field laboratories, explores energy flux, snowpack physics, organismal adaptations, and the influence of winter on wildlife management.
Semester(s) Traditionally Offered: Spring
WILD 5460 - Avalanche and Snow Dynamics
2 Credits:
Fundamentals of snow and avalanche dynamics. Avalanche safety, forecasting, hazard evaluation, and control.

Semester(s) Traditionally Offered: Spring first half of semester
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 NR 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
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 permission of instructor.

Cross-listed as: BIOL 6200 and PSC 6200.
WILD 6240 - Graduate Internship/Co-op
1-9 Credits:
Graduate-level educational experience in internship/cooperative education position approved by department.

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

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 permission of instructor.

Cross-listed as: WILD 5350 and PSC 6350/PSC 5350.

WILD 6400 - Ecology of Animal Populations
3 Credits:
Growth, fluctuation, balance, and control of animal populations.

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

WILD 6402 - Demographic Vital Rates
1 Credits:
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

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.

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.
WILD 6510 - Topics in Spatial Ecology  
1-3 Credits:

Seminars on analysis and interpretation of spatially explicit ecological data. Topics vary yearly, and range from spatial statistics to assessing uncertainty in environmental information systems to spatial analyses of plant and animal populations.

Prerequisite/Restriction: Graduate-level course in statistics and permission of instructor.

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

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 NR 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: Spring

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 - Plant Community Ecology
3 Credits:

Semester(s) Traditionally Offered: Spring

WILD 6800 - Wildland Resources Departmental Seminar
1 Credits:
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

WILD 6870 - Ecology Seminar
1 Credits:
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
Pass/Fail only.
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:
Original research for MS degree.
Repeatable for credit
Pass/Fail only
Semester(s) Traditionally Offered: Fall, Spring, Summer

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 7200 - Plant Physiological Ecology
3 Credits:
Plant response to environmental factors; includes environmental biophysics, physical and physiological factors influencing productivity, water use, resistance to stress, reproduction, establishment of plants, and competition with neighboring plants.
Semester(s) Traditionally Offered: Fall

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.
Semester(s) Traditionally Offered: Spring

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.
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.

WILD 7800 - Wildland Resources Departmental Seminar
1 Credits:
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.

WILD 7900 - Graduate Special Topics
1-6 Credits:
Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.
Repeatable for credit.

WILD 7910 - Directed Study
1-6 Credits:
Offers credit for special assignments, reading, and seminars beyond regularly scheduled courses.
Repeatable for credit.

WILD 7970 - Dissertation Research
1-12 Credits:
Original research and study for PhD degree.
Repeatable for credit.
Pass/Fail only.

WILD 7990 - Continuing Graduate Advisement
1-9 Credits:
Repeatable for credit.
Pass/Fail only.

Workforce Development (USU Eastern)
WDEV 0001 - Skills Lab
1-180 Credits:
Student can obtain additional help and study on their Open Entry/Open Exit Courses.
Campus: USU Eastern only

WDEV 0002 - Test Preparation
1-30 Credits:
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 Credits:
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 Credits:
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 analogies.

Campus: USU Eastern only

WDEV 0013 - A+ Writing I-C
1-60 Credits:

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.

Campus: USU Eastern only

WDEV 0014 - A+ Writing II
1-90 Credits:

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.

Campus: USU Eastern only

WDEV 0015 - Technical Writing
1-45 Credits:

This course is designed to cover the basic writing skills needed by students who are enrolled in auto mechanics, diesel mechanics, electronics, machine tool technology, and welding. Write logical sentences and paragraphs, utilize correct word usage, grammar and punctuation rules, compose clear and concise messages and produce mailable business documents.

Campus: USU Eastern only

WDEV 0020 - Applied Math
1-30 Credits:

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.

Campus: USU Eastern only

WDEV 0021 - A+ Math I-A
1-60 Credits:

This course is an introduction to mathematical concepts. The lessons cover numbers and counting, ordering numbers, ordinal numbers, addition readiness, vertical addition, subtraction readiness, number sense, vertical subtraction, fact families, word problems, addition sentences, subtraction sentences, identifying the operation needed to solve a problem, reading and creating graphs, identifying and counting coins, measuring length, weight, and temperature, telling time, three-dimensional figures, symmetry, and fractions. This course also strengthens mathematical skills in the following areas: numbers and counting, odds and evens, money and money strategy, graphing, addition and subtraction, using a calculator, measurement, telling time, solving story problems, fractions, and estimating. It also introduces students to measuring perimeter, congruent and symmetrical objects, probability, problem-solving strategies, logic, ordered pairs, multiplication, and division. The lessons also review reading time on digital or analog clocks.
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.

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.

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.

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 Credits:

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 Tolstoy, Longfellow, Emerson, Henry, Franklin, Thoreau, Irving, Bierce, Bradstreet, Henry, Shakespeare, and Lawrence.

Campus: USU Eastern only

WDEV 0041 - A+ Vocabulary I-A
1-60 Credits:

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 0042 - A+ Vocabulary I-B
1-60 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:

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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 Credits:
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 0510 - College Readiness - College Algebra
1-90 Credits:
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 Credits:
This course will help prepare the student to begin 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
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 Credits:

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

Campus: USU Eastern only

WDEV 0799 - Special Problems
1-360 Credits:

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

Campus: USU Eastern only