Utah State Agricultural College

BULLETIN

Catalogue Issue 1936-1937

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Utah State Agricultural College Bulletin

CATALOGUE ISSUE
1936-1937

FORTY-SEVENTH YEAR

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### 1936

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College Calendar for the Year 1936-37

FALL QUARTER

September 28, Monday Registration of freshmen
September 29, Tuesday Registration of other students.
September 30, Wednesday Instruction begins.
October 19, Monday Prospective graduates submit applications for candidacy.
October 26, Monday Last day for changing registration.
November 26, 27, Thurs., Fri. Thanksgiving recess.
November 30, Monday Instruction resumes.
December 18, Friday Fall quarter closes.
December 19, Saturday Christmas recess begins.

WINTER QUARTER

January 4, Monday Registration for all students.
January 5, Tuesday Instruction begins.
January 5, Tuesday Candidates should submit applications for graduation.
January 15, Friday Last date to submit applications for graduation without penalty.
February 1, Monday Last day for changing registration.
February 22, Monday Washington’s Birthday (holiday).
March 8, Monday Founders’ Day.
March 17, Wednesday Winter quarter closes.

SPRING QUARTER

March 22, Monday Registration for all students.
March 23, Tuesday Instruction begins.
April 19, Monday Last day for changing registration.
June 4, Friday Last day of classes.
June 5, Saturday Commencement.
June 6, Sunday Baccalaureate Sermon.

SUMMER SESSION

June 7, Monday Summer session begins.
July 16, Friday Summer session closes.

CALENDAR OF SPECIAL EVENTS

October 1, Thursday President’s Assembly.
October 22, Thursday Honor Societies Assembly.
October 24, Saturday Alumni Homecoming.
November 11, Wednesday Armistice Day Assembly.
November 19, 20, 21 Thurs., Fri., Sat. College Play.
November 25, Wednesday  Thanksgiving Assembly.
December 10, Thursday  Combined Glee Clubs' Concert.
November 30, to December 11  Adult Leaders' Training School.
December 17, Thursday  Christmas Assembly.
January 11 to 16  Extension Conference.
February 11, Thursday  Washington-Lincoln Assembly.
February 19, Friday  Military Ball.
February 24 to 26  Irrigation School.
March 1 to 6, Mon. to Sat.  Club Leaders' Training School.
March 8, 9, Mon., Tues.  College Opera "Robin Hood."
March 8, Monday  Founders' Day Assembly.
March 15 to 20  Dairy School.
March 25, Thursday  Easter Assembly.
March 26, Friday  College Band Concert.
April 22, 23, 24, Thurs., Fri., Sat.  Shakespearean Play.
May 7, Friday  High School Senior Guest Day.
May 11, Tuesday  Military Review, Annual Inspection.
May 14, Friday  Mothers' Day Assembly, Ce-ed Day.
May 20, Thursday  Livestock Exhibit and Horse Show.
May 24, Monday  Scholarship and Awards Assembly.
May 30, Sunday  College Symphony Orchestra Concert.
May 31, Monday  Senior Assembly.
June 4, Friday  Sunset Festival.
June 5, Saturday  Alumni Banquet.

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Committee on Arts and Sciences—Macfarlane, Mrs. Dorius, Mulcahy.
Committee on Education—Nye, Macfarlane, Stephens.
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Committee on Extension Division—Stephens, Mrs. Miller, Adney, Nye.
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Committee on Legislation and Finance—Mrs. Miller, Stephens, Mulcahy, Ballard, Wright.
Committee on Summer Session—Ballard, Adney, Nelson, Wright.

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  Non-Resident Professor of Forestry
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Instructor in Languages

Hope Reeder  
Assistant in the Library

Eldon M. Stock, B. S.  
Instructor in Engineering

Joseph Symons, B. S., M. S.  
Instructor in Sociology

Everett Thorpe  
Instructor in Art

Kenneth Vanderhoff, B. S.  
Assistant Coach and Instructor in Physical Education
ADMINISTRATION ASSISTANTS

Rudolph Van Kampen, B. S.
Assistant Coach and Instructor in Physical Education

Edna Ann Wilson, B. S.
Assistant Librarian

Henrietta Zezula, B. S.
Assistant in the Library

ADMINISTRATIVE ASSISTANTS

Eric A. Johnson, B. S.
Assistant Secretary

Harry C. Parker, C. E.
Superintendent of Construction and Maintenance

Charles Batt
Assistant in Water System and Heating

Rasmus Oluf Larson
Assistant in Buildings and Grounds

Bert L. Dryden, B. S., M. S.
Assistant in Animal Husbandry

Ora Southwick
College Nurse

NORMAL TRAINING SCHOOL STAFF

*Ernest A. Jacobsen, A. B., A. M.
Dean, School of Education

Charles E. McClellan, A. B., M. A.
Acting Dean and Director of Teacher Training and Principal of
Training School

Edith Bowen, B. A., M. A.
Supervisor of Elementary Teacher Training

Francis Holyoak
Assistant Principal

*Wanda Robertson
In Charge of Fourth Grade

Ellen S. Humpherys
In Charge of Third Grade

*Addie Swapp, B. S.
In Charge of Second Grade

Myrtle Jensen
In Charge of First Grade

Emma Eccles Jones, B. S., M. A.
In Charge of Kindergarten

*On leave.
MAP OF THE
UTAH STATE AGRICULTURAL COLLEGE CAMPUS
LOCATION OF BUILDINGS, DEPARTMENTS AND OFFICES

1. MAIN BUILDING—Office of the President, Office Secretary, Treasurer, Public Relations Office, Post Office, Auditorium, Experiment Station, Registrar’s Office, Summer Session, Alumni, Arts and Sciences, Education, Commerce
2. HOME ECONOMICS AND COMMONS BUILDING—Foods, Child Development, Textiles, Physiology, Cafeteria, Bookstore, Student Offices
3. ENGINEERING BUILDING—Engineering, Irrigation and Drainage, Surveying, Hydraulics, Mechanical Drawing, Architecture, Military
4. WIDTSOE HALL—Chemistry, Physics, Botany
5. ANIMAL INDUSTRY BUILDING—Dairy, Horse, Hog, Sheep, Poultry Husbandry, Horticulture
6. PLANT INDUSTRY BUILDING—Botany, Agronomy and Soils, Extension Division Dormitory
7. LIBRARY—English, History
8. SMART GYMNASIUM—Physical Education for Men and Women
9. PRESIDENT’S HOME
10. EXTENSION DIVISION OFFICES
11. MECHANIC ARTS BUILDING—Woodwork, Aviation, Radio, Machine Work
12. L.D.S INSTITUTE
13. FORESTRY BUILDING—Forestry, Range Management, Wild Life Management
14. GREEN HOUSES—College and Experimental
15. STOCK JUDGING PAVILION
16. DAIRY BARN
17. VETERINARY CLINIC
18. POULTRY BUILDINGS
19. HORSE BARN
20. HOME ECONOMICS PRACTICE COTTAGES
21. AMPHITHEATER
22. STADIUM
23. HOG BARN
24. SHEEP BARN
25. HEATING PLANT
26. STATE HIGHWAY
ALUMNI ASSOCIATION

LLOYD M. THEURER
President, Alumni Association

LLOYD N. JOHNSON
Executive Secretary, Alumni Association

STANDING COMMITTEES

The President of the College is ex-officio a member of each standing committee.

Advanced Standing—Mr. Bell.
Attendance and Scholarship—Professors Henderson, Hill, Dancy, Vance Tingey, Maguire, Major Brown, Miss Lewis, Mr. Van Kampen, Mr. Bell.
Athletic Council—Professors Sorensen, Romney, Caine, Mr. Berntson.
Awards and Honor—Professor Wanlass, Geddes, Dunn, N. W. Christiansen, Myers, Fogelberg.
Campus Improvement—Professors Clyde, Fletcher, Stark, Mr. Parker.
Certification of Teachers—Professor McClellan, Mr. Neuberger, Mr. Bell.
College Assemblies—Professors Pedersen, Moen, Myer.
Credits from Sectarian Institutions—Professor Kepner, Mr. Bell.
Debating—Professors Vickers, Daines, Fuhriman, Mr. Murray.
Entrance—Professors Hirst, Egbert, Mr. Bell.
Graduate Work—Professors Maeser, Greaves, Evans, Willard Gardner, P. E. Peterson, Mrs. Morris, Mr. Bell.
Graduation—Professors L. B. Linford, Cutler, Mr. Bell.
High School Relations—Mr. Pocock, Professors Humpherys, Porter, D. P. Murray, L. H. Linford.
Incomplete Grades—Professor Ricks.
Library—Professors Merrill, Williams, King Hendricks, McLaughlin, Anderson, Kirkpatrick.
Loan Fund—Mr. Berntson.
Personnel—Professors Frandsen, Farnsworth, Lee Christensen.
Radio Programs—Mr. Pocock, Mr. Burgoyne, Professor Porter, Mr. Marble.
Rhodes Scholarship—Professor Maeser.
Recommendations for Employment—Professors Wanlass, Pedersen, Maynard, Clyde, McClellan, Moen, Dunn.

Registration—Professor Ketchum, George Jensen, Mrs. Bate, Mr. Eugene Gardner, Mr. Bell, Mr. Berntson.

Sectioning—Professors Carter, Kyle, Mr. Morgan.

Schedule and Catalogue—Professors Kepner, Wilson, Stevens, Porter, Mr. Bell.

Social Affairs—Professors J. R. Jenson, V. D. Gardner, Caroline Hendricks, Welti, Reynolds, Miss Lewis, Miss Carlson, Mr. Vanderhoff, President of Student Body, President of A. W. S.

Student Body Organization—Professor Sorenson, Miss Heiss, Mr. John Christenson.

Student Employment—Mr. Pocock.

EXPERIMENT STATION STAFF

LOWRY NELSON, Ph. D.
Director

JOSEPH EAMES GREAVES, Ph. D.
Chemist and Bacteriologist

GEORGE BALLIF CAINE, A. M.
Dairy Husbandman

REUBEN LORENZO HILL, Ph. D.
Human Nutritionist

ORSON WINSO ISRAELSEN, Ph. D.
Irrigation and Drainage Engineer

BYRON ALDER, B. S.
Poultry Husbandman

WILLARD GARDNER, Ph. D.
Physicist

*BERT LORIN RICHARDS, Ph. D.
Botanist and Plant Pathologist

WILLIAM WILLIAMS HENDERSON, Ph. D.
Entomologist

W. PRESTON THOMAS, M. S.
Agricultural Economist

ROBERT JAMES EVANS, Ph. D.
Agronomist

*On leave.
EDWARD JACKSON MAYNARD, M. S.
Animal Husbandman

DAVID EDWARD MADSEN, D. V. M.
Animal Pathologist

H. LORAN BLOOD, Ph. D.
Plant Pathologist

GEORGE DEWEY CLYDE, M. S.
Irrigation and Drainage Engineer

A. L. WILSON, Ph. D.
Horticulturist

CHARLES TERRY HIRST, M. S.
Associate Chemist

DON WARREN PITTMAN, M. S.
Associate Agronomist

DAVID STOUT JENNINGS, Ph. D.
Associate Agronomist

FRANK B. WANN, Ph. D.
Associate Plant Physiologist

JOSEPH ARCH GEDDES, Ph. D.
Associate Rural Sociologist

A. C. ESPLIN, B. S.
Associate Animal Husbandman

CHARLES J. SORENSON, M. S.
Associate Entomologist

GEORGE FRANKLIN KNOWLTON, Ph. D.
Associate Entomologist

HARRY H. SMITH, M. S.
Associate Animal Husbandman

FRANCIS M. COE, M. S.
Associate Horticulturist

ALMEDA PERRY BROWN, M. A.
Associate in Home Economics Research

AARON F. BRACKEN, M. S.
Associate Agronomist and Supt. Nephi Dry-land Station

*DELMAR CLIVE TINGEY, M. S.
Associate Agronomist

GEORGE T. BLANCH, M. S.
Associate Agricultural Economist

WALTER U. FUHRIMAN, B. S.
Associate Agricultural Economist

*On leave.
EXTENSION SERVICE STAFF

Laurence A. Stoddart, Ph. D.
Associate in Range Management
H. H. Cutler, M. S.
Assistant Agricultural Economist
George Q. Bateman, B. S.
Assistant Dairy Husbandman and Supt. Dairy Experimental Farm
Kenneth R. Stevens, Ph. D.
Assistant Bacteriologist
Milton Madsen, B. S.
Assistant Animal Husbandman
David A. Burgoyne, B. S.
Secretary to the Director
Russell E. Berntson
Secretary-Treasurer
Edith Hayball, B. S.
Research Assistant
Dorothy W. Klomp
Stenographer

IN COOPERATION WITH U. S. DEPARTMENT OF AGRICULTURE

H. Loran Blood, Ph. D.
Plant Pathologist, Division of Horticultural Crops and Diseases
Bureau of Plant Industry
George Q. Bateman, B. S.
Agent, Bureau of Dairying
Rollo W. Woodward, M. S.
Junior Agronomist, Cereal Investigations, Bureau of Plant Industry
Wesley Keller, M. S.
Agent, Division Forage Crops and Diseases, Bureau of Plant Industry
Dean McAlister, Ph. D.
Agent, Division Forage Crops and Diseases, Bureau of Plant Industry

EXTENSION SERVICE STAFF

William Peterson, B. S.
Director
William White Owens, B. S., M. A.
Assistant Director for Agriculture
*Rena B. Maycock
Assistant Director for Home Economics
Myrtle Davidson, B. S.
Acting State Home Demonstration Leader

*On leave.
James Christian Hogenson, M. S. A.
Extension Agronomist
Byron Alder, B. S.
Extension Poultryman
Carl Frischknecht, M. S.
Assistant Extension Poultryman
Ellen Agren, B. S., M. S.
Extension Specialist in Clothing
David P. Murray, B. S.
State Boys' and Girls' Club Leader
Byron Alder, B. S.
Assistant State Boys' and Girls' Club Leader
Carl Frischknecht, M. S.
Extension Poultryman
Ellen Agren, B. S., M. S.
Extension Specialist in Clothing
David P. Murray, B. S.
State Boys' and Girls' Club Leader
Alma C. Esplin, B. S.
Assistant State Boys' and Girls' Club Leader
Alma C. Esplin, B. S.
Extension Animal Husbandman, Sheep and Wool
Effie Smith Barrows, B. S.
Extension Economist, Home Management
Elna Miller, B. S., M. S.
Extension Nutritionist
E. J. Maynard, B. S., M. S.
Extension Animal Husbandman
George B. Caine, B. S., A. M.
Extension Dairyman
Lyman H. Rich, B. S., M. S.
Extension Dairyman
W. P. Thomas, B. S., M. S.
Extension Economist
O. J. Wheatley, B. S., M. S., Ph. D.
Extension Economist
Wilford D. Porter, B. S., M. S.
Extension Editor
J. Whitney Floyd, B. S.
Extension Forester
A. J. Morris, B. S., M. S.
Extension Specialist in Dairy Manufacturing
Izola Jensen, B. S., M. A.
Home Demonstration Agent at Large
Arvil L. Stark, B. S., M. S., Ph. D.
Extension Horticulturist
Ida R. Mitchell
Clerk
Nolan P. Olson, B. S.
Secretary to the Director
MARY EDITH HANSEN
Stenographer
GOLDEN L. STOKER, B. S., M. S.
Assistant Professor, County Extension Agent, Beaver County
ROBERT H. STEWART, B. S.
Assistant Professor, County Extension Agent, Box Elder County
ELMER GIBSON, B. S.
Assistant County Extension Agent, Box Elder County
ROBERT L. WRIGLEY, B. S.
Assistant Professor, County Extension Agent, Cache County
REUBEN HANSEN, B. S.
Assistant County Extension Agent, Cache County
DELORE NICHOLS, B. S.
Assistant Professor, County Extension Agent, Davis County
MERRILL E. COOK, B. S.
Assistant Professor, County Extension Agent, Emery County
JOSPEH F. PARRISH, B. S.
Assistant Professor, County Extension Agent, Grand County
JOSPEH MUIR, B. S.
Assistant Professor, County Extension Agent, Garfield County
LAMONT E. TUELLER, B. S.
Assistant Professor, County Extension Agent, Iron County
A. E. SMITH, B. S.
Assistant Professor, County Extension Agent, Juab County
GEORGE WHORNHAM, B. S., M. S.
Assistant Professor, County Extension Agent, Millard County
C. R. RICHARDS, B. S.
Assistant Professor, County Extension Agent, Morgan County
LLOYD R. HUNSAKER, B. S.
Assistant Professor, County Extension Agent, Piute County
E. L. GUYMON, B. S., M. S.
Assistant Professor, County Extension Agent, Rich County
A. G. KILBURN, B. S.
Assistant Professor, County Extension Agent, Sanpete County
V. L. MARTINEAU, B. S.
Assistant Professor, County Extension Agent, Salt Lake County
JOHN J. BARNARD, B. S.
Assistant County Extension Agent, Salt Lake County
LEW MAR PRICE, B. S.
Assistant Professor, County Extension Agent, Sevier County
DAVID SHARP, JR., B. S.
Assistant Professor, County Extension Agent, Summit County
C. A. Hymas, B. S.
Assistant Professor, County Extension Agent, Tooele County
S. R. Boswell, B. S.
Assistant Professor, County Extension Agent, Utah County
Clarence D. Ashton, B. S.
Assistant County Extension Agent, Utah County
R. R. Keetch, B. S.
Assistant Professor, County Extension Agent, Uintah County
Anson B. Call, Jr., B. S., M. S.
Assistant Professor, County Extension Agent, Washington County
Francis M. Peterson, B. S.
Assistant Professor, County Extension Agent, Wasatch County
A. L. Christiansen, B. S.
Assistant Professor, County Extension Agent, Weber County
N. M. Taggart, B. S.
Assistant County Extension Agent, Weber County
Hazel Bingham
Assistant Professor, Home Demonstration Extension Agent, Weber County
Ethel Bernettie Lund, B. S.
Assistant Professor, Home Demonstration Extension Agent, Box Elder County
Eleonora Tasso, B. S., M. S.
Assistant Professor, Home Demonstration Extension Agent, Cache County
Helen Pixton, B. S., M. S.
Assistant Professor, Home Demonstration Extension Agent, Davis County
Murcy Nelson, B. S., M. S.
Assistant Professor, Home Demonstration Extension Agent, Summit-Morgan Counties
Ivy L. Hall, B. S.
Assistant Professor, Home Demonstration Extension Agent, Salt Lake County
Dorothy Stewart, B. S.
Assistant Professor, Home Demonstration Extension Agent, Utah County
The Utah State Agricultural College is in Logan, the county seat of Cache county, one of the most prosperous agricultural sections in the State. The city has a thrifty and progressive population of about 12,000; it is quiet, orderly, clean and generally attractive. Logan is on the Yellowstone Highway, the Utah-Idaho Central Electric line, and the Oregon Short Line Railroad.

Situated on a broad hill overlooking the city, one mile east of Main Street, the College commands a view of the entire valley and surrounding mountain ranges. The site of the College was formed by the receding waters of prehistoric Lake Bonneville, which built an enormous delta at the mouth of Logan canyon upon which the College buildings and farms are located. The beauty and geological significance of the location are perhaps unsurpassed. A half mile to the south is Logan river. A mile to the east is a magnificent mountain range with a picturesque canyon. In other directions are towns and farms of Cache County distinctly visible through the clear atmosphere. The valley is a fertile, slightly uneven plain, 4,600 feet above sea level, about twelve by sixty miles in dimensions, almost entirely under cultivation, and surrounded by the Wasatch mountains. It is one of the most attractive and healthful valleys in the West.

POLICY

The Utah State Agricultural College provides, in accordance with the spirit of the law under which it was organized, a liberal, thorough, and practical education. The two extremes in education, empiricism and the purely theoretical, are avoided; for the practical is based upon and united with the thoroughly scientific. In addition to the practical work of the different courses, students are given thorough training in the sciences, mathematics, history, English, art, music, speech, modern languages, and other related subjects. The object is to foster all that makes for right living, good citizenship, and high efficiency.

Under this general policy, the special purpose of the Utah State Agricultural College is to be of service in the upbuilding of the State and the great West to which it belongs. The instruction in agriculture and engineering, in addition to the purely professional
aspects of these fields of study, deals with the special problems relating to the conquest of the great areas of unoccupied lands, the development of engineering structures, the proper use of the water supply, and the kinds of crops or live stock which in Utah may be most profitable; instruction in mechanic arts points out the most promising trades and teaches them so as to meet the needs of the State; instruction in commerce relates to the undeveloped resources and the present commercial conditions of the State, and investigates the principles and methods to be applied in the commercial growth of Utah; instruction in home economics teaches the women right living and economic independence.

The Constitution of Utah establishes the Utah State Agricultural College and the University of Utah as the two State institutions of higher learning in Utah. Each of these institutions is independent in government, although each is a part of the public school system. Each, under the Constitution and the Statutes of Utah and in harmony with the rulings of its governing board, offers undergraduate and graduate work leading to the Bachelor's and Master's degrees. The College, in addition to this high status given it in Utah under the Constitution, is one of the forty-eight institutions in the United States definitely recognized by the Federal Government as the institutions of higher learning in the respective states for the development of the Federal program of education included in the Morrill and Nelson Acts of the Federal Congress.

HISTORY

The Utah State Agricultural College was founded March 8, 1888, when the Legislative Assembly accepted the terms of the national law passed by Congress on July 2, 1862. Under this Act of Congress, and the Enabling Act providing for the admission of Utah to the Union, 200,000 acres of land were granted to the State, from the sale of which there should be established a perpetual fund, the interest to be used in maintaining the College.

Since that time a number of acts have passed Congress appropriating funds to the Institution. In nearly all cases the acts have specified that such funds be used only for experimental or extension work. This financial support which comes from the Federal government is given because of the American belief in the high place of agriculture and home economics and because of a further conception that rural young people have a right to advanced education.
These Federal appropriations, together with the annual income from the land-grant fund, represent the income received from the national government. Since most of these funds must be used, in accordance with the law, for specific purposes, the Institution is dependent on State appropriations for funds with which to provide additional instruction, and for general maintenance. In 1888 an appropriation was made for buildings, and the county of Cache and the city of Logan gave one hundred acres of land on which to build the College. Since that time the State has biennially appropriated funds to erect and maintain most of the buildings described in a later section, besides providing for instruction, experimentation, and extension work. Some buildings have been constructed with Federal aid.

In September, 1890, the Institution was opened for the admission of students. Degree courses were offered in agriculture, domestic art, engineering, mechanic arts, and commerce. A preparatory course, and short courses in agriculture and engineering were also given. Since that time many improvements have been made in the curriculum. Various special, practical, year and winter courses in agriculture, commerce, mechanic arts, and home economics have been added; the standard of the college work has been raised. At the present time the divisions of instruction are established as follows: The Schools of Agriculture, Forestry, Home Economics, Commerce, Engineering and Mechanic Arts, Arts and Sciences, and Education.

In 1913, the Branch Agricultural College at Cedar City was made a branch of the Utah State Agricultural College, and is so maintained.

In 1926, the College was admitted to the accepted list of the Association of American Universities.

In 1929, the State Legislature codified the laws of the State relating to the College, and changed the name to Utah State Agricultural College.

GOVERNMENT

The government of the College is vested in the Board of Trustees and, under its control, in five other administrative bodies—the Deans and Directors’ Council, the College Council, the College Faculty, the Staff of the Experiment Station, and the Staff of the Extension Division. These, in their several capacities, determine the policy and maintain the efficiency of the Institution.

THE BOARD OF TRUSTEES consists of thirteen members. Twelve are appointed by the Governor with the approval of the State
Senate; the thirteenth is the Secretary of State who is ex-officio a member. This Board assumes the legal responsibility of the Institution, cares for its general interests, and directs its course by the enactment of all necessary by-laws and regulations. Vested in it is the power to establish professorships, to employ the instructing force and other officers of the College, and to formulate the general policy of the Institution.

Between sessions, the power of the trustees rests with an executive committee, whose actions are referred to the Board for approval. In addition there are committees that deal with the general interests of the College.

THE DEANS AND DIRECTORS' COUNCIL consists of the President, the Deans of the various schools—Agriculture and Forestry, Home Economics, Arts and Sciences, Education, Engineering, Commerce—the Director of the Summer Session, the Executive Secretary, and the Directors of the Experiment Station and the Extension Service. This body has immediate supervision of instruction and discipline in all the various schools. It constitutes a permanent executive and administrative committee of the College Council and Faculty.

THE COLLEGE COUNCIL consists of the President of the College and all members of the Faculty holding the rank of Professor, Associate Professor, or Assistant Professor. Questions of discipline and policy are decided by this body.

THE COLLEGE FACULTY includes the President, Professors, Associate Professors, Assistant Professors, Ranking Professors, Instructors, and Assistants. It is concerned with ordinary questions of methods and discipline, and with other matters pertaining to the general welfare of the College.

THE EXPERIMENT STATION STAFF consists of the President of the College, the Director of the Station, and the heads of departments and their associates and assistants. The staff is engaged in the investigation of problems peculiar to agriculture and rural welfare in this part of the country. It is further responsible for the circulation, through its various publications and correspondence, of such information as is of practical value to the farming communities.

THE EXTENSION SERVICE STAFF consists of the President of the College, the Director of the Extension Service, and the various Specialists, County Agents, and Home Demonstrators.
THE STUDENTS. The College is maintained at public expense for public good. The students, therefore, are under a peculiar obligation to perform faithfully all their duties to the State, the Institution, and the Community. Most important of these is an active interest in all that concerns the moral and intellectual welfare of the College. Regularity of attendance, faithful attention to studies, and exemplary personal conduct are insisted upon at all times by the administrative bodies of the College.
PHYSICAL PLANT

BUILDINGS

The College now has nearly thirty buildings, all modern, well lighted and heated, and all carefully planned.

The Main Building contains the College auditorium, the administrative offices of the College and the Experiment Station, and the departments of Education, Psychology, Zoology, Music, Art, Geology, Modern Languages, Agricultural Economics, and the School of Commerce.

The New Home Economics and Commons Building, most imposing of the campus buildings, is the social center of the College. Offices and recreational rooms for students and faculty and a beautiful, modern cafeteria add materially to the comfort and culture of students and teachers. And just as admirably, the building fits the needs of the School of Home Economics and the department of Physiology and Public Health.

The Thomas Smart Gymnasium houses the departments of Physical Education for men and for women.

The Extension Service Building contains the offices of the Extension Service Staff.

The Mechanic Arts Building contains the Wood-Working department and the departments of Machine Work, Auto Mechanics, Radio, Electricity, and Forging.

Widtsoe Hall is occupied by the departments of Chemistry, Physics, and Bacteriology.

The Animal Industry Building of three stories is exceptionally well fitted with facilities for the study of dairy manufacturing, hog, horse, poultry, sheep, and dairy husbandry, and veterinary science. The department of Horticulture is located in this building.

The Engineering Building, an excellently arranged three-story brick structure, houses the Departments of Civil Engineering, Irrigation and Drainage, Surveying, Hydraulics, Mechanical Drawing, Architecture, and Household Sanitation.

The Library Building, cultural center of the College, is one of the best of its kind in this region. It is appealing in design and furnishings, and contains a children's library and a beautiful reading room. Classes of the departments of English and History meet on the third floor.

The Plant Industry Building is a four-story brick building, thoroughly modern in arrangement. It houses the departments
of Agronomy, Soils, Botany, and Plant Pathology. An excellent Herbarium is located in this building. The third floor is reserved for the dormitory use of the Extension Service.

The Forestry Building is located on the northwest corner of the campus. It houses the departments of Forestry, Range Management, and Wild Life Management.

Child Development Laboratories. Two buildings, formerly used as residences, have been equipped as laboratories in the rapidly growing department of Child Development.

The Barns contain excellent individuals representing the various breeds of cattle, horses, sheep, and hogs most common in the western section.

The Stock Judging Pavilion makes it possible to do stock judging in all kinds of weather.

The Poultry Plant is thoroughly equipped as a laboratory for class and experimental work in poultry.

The Green Houses are prepared for laboratory instruction in the propagation of horticultural plants, and in the practice of floriculture and vegetable gardening. They are extensively used for experimental work.

The Veterinary Science Building contains offices, a well equipped dispensary, operating room, stalls for patients, and up-to-date fixtures.

Laboratories

The Bacteriological, Chemical, Mineralogical, Physical, Physiological, Zoological and Entomological, Botanical and Plant Pathological, Soil Physics, and Farm Crops Laboratories have an adequate supply of equipment for accurate work.

Art Rooms and Commercial Rooms are supplied with standard equipment.

Library

Marked improvements have been made in the Library in recent years. Serious effort has been made to increase both the book and personnel budgets. There are more than 60,000 volumes in the Library as well as other important material. The Library is the center of the intellectual life of the campus.

Museums

There are several departmental museums on the campus including Geology, Zoology, Agronomy, Forestry and others. Specimen additions
are constantly being made to these museums which are not only interesting to visitors, but are of great value to students of the particular subjects.

STADIUM

The Stadium is located just to the north of the Main Building and it affords a beautiful view of the east mountains and Cache Valley. Athletic contests and open air exercises are made more attractive by the natural beauty and harmonious surroundings of this laboratory of physical education. Practice fields for various sports adjoin the Stadium. Additions are being made to the Stadium this summer which will provide additional showers, locker and dressing rooms, and other conveniences.

CAMPUS AND FARMS

The land occupied by the College embraces over 300 acres. Of this, more than 100 acres constitute the campus, laid out with flower beds, broad stretches of lawn, tennis courts, wide drives and walks, shrubs and trees.

Immediately east of the main building is the quadrangle of about ten acres containing the famous green lawn upon which numerous recreational events are held. Around this lawn, the chief buildings of the College are grouped.

There are several farms and orchards maintained for instructional and experimental work.
# STUDENT EXPENSES

## Resident Students

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<th>Winter and Spring</th>
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\[ \text{Total: } \$70.00 \quad \$53.00 \quad \$40.00 \quad \$39.00 \quad \$36.00 \]

If a resident student wishes to attend all three quarters but pay the fees on a quarter basis the payments are divided as follows: Fall, $40.00; Winter, $17.00; Spring, $13.00; making a total of $70.00.

## Non-Resident Students

<table>
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<th>Three Quarters</th>
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<td>$11.00</td>
<td>$11.00</td>
</tr>
<tr>
<td>Student Body Fee</td>
<td>$15.00</td>
<td>$10.00</td>
<td>$10.00</td>
<td>$9.00</td>
<td>$6.00</td>
</tr>
</tbody>
</table>

\[ \text{Total: } \$95.00 \quad \$78.00 \quad \$65.00 \quad \$64.00 \quad \$61.00 \]

If a non-resident student wishes to attend all three quarters but pay the fees on a quarter basis, the payments are divided as follows: Fall, $65.00; Winter $17.00; Spring, $13.00; making a total of $95.00.

## Special Fees

- **Locker Rental**                                  $1.00
- **Excess registration, per hour**                   1.00
- **Changing Course Fee, each change**                .50
- **Registration as listener in lecture course in which no credit is desired, per subject** 5.00
- **Registration for 6 hours or less, 1 to 3 quarters** 15.00
- **Graduation Fee**                                  5.00
  (Normal, Bachelor, Master)
- **Late registration fee, per day**                   1.00
  (Maximum $5.00)
Transcript of credit .................................................. .50
(Additional transcripts may be had for 25 cents if obtained at same time)

Teacher placement fee ............................................. 1.00

All students taking courses in laboratory and shop work are charged a laboratory fee of 50c per credit hour.

All students registered in Military Science and Tactics are required to pay a $5.00 Military Suit deposit, which is refunded when the suit is returned.

A Class Fee of $1.00 is charged each student at the time of registration.

Graduate students not in residence and wishing to file thesis credit not to exceed 15 hours shall pay a fee of $10.00.

Special examinations may be taken in subjects not registered for, on approval of the Special Examination Committee, and upon payment of 50 cents per credit hour, minimum fee, $2.50.

After the first week of each quarter, changes of registration 50 cents for adding and 50 cents for dropping a subject.

Registration is not completed until the student has presented his fee card at the cashier's window, Secretary's Office, and settled for his fees, and filed his registration cards with the Registrar's office.

All students when paying fees are given official receipts from the Secretary's Office. These receipts must be presented before refunds are allowed. The students, therefore, should exercise care that the receipts are not lost or mislaid.

All fees except registration fee will be refunded to any student withdrawing from school by the end of the second week of the quarter. No refunds are allowed after the second week.

By state law, the President of the Institution may relieve worthy and deserving students from payment of the registration fee, provided that not more than ten per cent of the total student body be relieved of the fee in any one year.

According to the constitution of the Student Body, every regular student must obtain at time of registration a Student Body card which will admit him to all activities controlled by the Student Body organization; athletic events—football, basketball, tennis and track—dramatics and musical entertainments, socials, lectures, etc., and in addition, give him a copy of the annual year book and subscription to the college paper. This system has been found to be a great
saving to the students and a most excellent means of fostering proper interest in student activities.

Since all women students are required to take Physical Education they must provide themselves with gymnasium suits and gymnasium shoes. The cost is about $6.00.

Each student in Foods and Dietetics, Home Nursing and Household Administration 150, must provide herself with the following: Two washable white uniforms, and two white work aprons.

All graduates from the School of Home Economics who desire to qualify as teachers in home economics under the Smith-Hughes Act must spend the required period of residence in the Home Economics Cottage, as indicated in Household Administration 150. The expenses for board and room are $60.00 for the quarter.

Good board and room in a private home costs from $4.00 to $6.00 a week. By renting rooms and boarding themselves, students are able to reduce considerably the cost of room and board.

The College maintains a modern well equipped cafeteria, where students may eat at cost.

Students are held responsible for any injury done by them to the College property.

SELF HELP

A large number of the students of the Utah State Agricultural College earn part of their expenses while in residence. The College itself gives employment to many students, and college officers are glad to be of reasonable assistance to students in finding work.

Young people who expect to earn part of their way through college should first of all, by earnest labor and careful economy, accumulate as large a college expense fund as possible. It is desirable, if possible, that this sum be sufficient to cover the expense of the first year. Correspondence or conference with College officials sometimes reveals some way to earn the additional amount needed. After one year in college, the earnings of the student in vacation and during the college year often enable him to continue his course without interruption.

It is the policy of the College to encourage and aid in every possible way earnest, ambitious young men and women who want an education and an opportunity to help themselves.
SCHOLARSHIPS AND AWARDS

The Johansen Scholarship Fund of $5,000, a gift of the late Mrs. Johana Johansen, provides six scholarships annually, worth in the aggregate from $250 to $300, for help of worthy students of Junior or Senior rank. Applications for this scholarship for the succeeding year must be filed with Dean Wanlass, chairman of the committee on Awards and Honors before April 15.

The 1927 Class Gift to the College yields an annual income sufficient to provide two scholarships of $125 each. Application should be made by Juniors to the Awards and Honors Committee on or before April 15. Applications must be accompanied by an approved outline of a proposed study project to be completed during the Senior year and submitted to the Awards and Honors Committee not later than May 1. Two copies of the completed thesis are to be filed in the College library.

The U. S. A. C. Faculty Women's League has a loan fund for the women students of the college. Loans may range from $50 to $200. Preference is given to Senior women students. Loans are made at any time during the year when money is available.

The Senior Loan Fund, a gift of the class of 1911, and added to by the class of 1922, has helped many students through school.

Rotary Club Senior Loan Fund. The Logan Rotary Club has provided a special loan fund to assist Seniors in meeting their expenses during the last year of their college course. Further information may be obtained from Mr. N. D. Salisbury, First Security Bank, Logan, or Dean Wanlass, chairman of the Awards and Honors Committee.

The College Award is conferred annually upon the male student of the institution who shows evidence of being able in greatest measure to repay the nation the investment which it has made in him, on the basis of the following rating:

(a) The potential vocational or professional efficiency of the student as shown by his scholarly attainment, industry, natural ability and talent (50 points); and

(b) His patriotism, honesty, and good judgment as a student citizen, as an indication of his future attitude as a voter or public servant, combining a progressive spirit with a love of country and a concern for the safety and development of American institutions.
of liberty and justice and his qualities of social leadership, as shown in student affairs, based upon physical and moral cleanliness and strength of character (50 points).

The College Award is conferred annually upon the woman student of the institution who shows evidence in greatest measure of:

(a) Potential vocational or professional efficiency as shown in scholarship, industry, and natural ability (50 points); and

(b) Womanly qualities, development of the social graces, not necessarily social prominence, and attitude of mind (50 points).

**The Rhodes Scholarships.** A number of candidates for the Rhodes Scholarships in Oxford University, England, are selected each year from the State of Utah. The scholarships are of the value of $2,000 a year, and are tenable for three years. Students who wish to apply for them must have some social and athletic distinction as well as high scholarship in mathematics, science or letters. All applicants must also have three years of French, and it is advisable to have Latin, German, and English history, as well as high school mathematics. Full information and application blanks may be secured at the President’s Office or from Professor Sherwin Maeser, chairman of the Rhodes Scholarship Committee. Students who wish to apply for these scholarships are advised to start preparing for them in the Freshman year. They are usually given to Seniors or graduate students.

**The American Legion Scholarship Medal** is awarded each year to the letterman on the football team who maintains the highest scholastic record during the football season, and meets the requirements in Military Science as approved by the R. O. T. C.

**The R. O. T. C. Medal,** a gift of the institution, is awarded each year to the student in Military Science and Tactics who most nearly represents the ideal that the Reserve Officers’ Training Corps is striving to develop, upon the following basis:

(a) Character, 20 points.
(b) Scholarship, 15 points.
(c) College activity, 15 points.
(d) Leadership, 20 points.
(e) Aptitude for and interest in Military Science, 20 points.
(f) Physique and bearing, 10 points.

**The American Legion Military Medal** is given to a letterman who exhibits the most wholesome attitude toward military training during the year in which he earns his letter.
The Phi Upsilon Omicron Scholarship of $25.00 is given annually by the Kappa Chapter of that organization to the freshman girl in the School of Home Economics ranking highest on the following points:

(1) Scholarship.
(2) Participation in student activities.
(3) Service and cooperation.
(4) Leadership.
(5) Moral character.
(6) Judgment and reliability.

In addition, the candidate must be a member of the Home Economics Club.

Alpha Kappa Psi Scholarship Award. Alpha Kappa Psi Fraternity, Alpha Theta Chapter of which is established at the Utah State Agricultural College, awards annually the Alpha Kappa Psi Scholarship Medallion to the male student of the Junior Class in Commerce who possesses the highest scholastic average for three years of work taken in this College.

The Home Economics Medal is to be awarded annually to a senior student in the School of Home Economics on the following basis:

(a) Qualities of womanhood, as represented by health, physical and moral cleanliness, personality, cooperation, and leadership.
(b) Application of home economics principles.
(c) Scholastic attainment.

The Utah State Agricultural College Science Medal, a gift of Professor William Peterson, is given each year to the student writing the best review of recent scientific research in either mathematics, physics, chemistry, geology, zoology, botany or astronomy.

An Annual Scholarship of $25.00 will be awarded by the Chi Omega Fraternity to the girl majoring or minoring in the Social Sciences who gives evidence of superior scholarship, and ability to make a contribution to organized group life; and who writes the best 2000 word essay on a subject to be approved by a committee before the close of the fall quarter and to be finally submitted not later than April 15.

The committee of award shall be appointed by the Chi Omega Fraternity, each year, from the teaching staffs of the departments of Sociology and Economics.

Scholarship A’s in the form of gold pins are given at the
Scholarship and Awards Assembly to the students who have “A” grades for the fall and winter quarter of the current year in addition to the previous spring quarter.

AWARDS OFFERED IN SCHOOL OF AGRICULTURE

The Danforth Foundation Summer Fellowship. This award of $103.00 covering the expenses for two weeks in St. Louis and vicinity, and two weeks of leadership training at the American Youth Foundation Camp on Lake Michigan, Shelby, Michigan, is given each spring to an outstanding member of the junior class in the School of Agriculture. Thirty students from as many colleges are awarded this fellowship.

Application blanks are furnished through the Dean’s Office by the Danforth Foundation and final selection is made by the Danforth Foundation.

The Rolla M. Rich Memorial Scholarship yields each year the interest from a $1000 endowment fund established by Mrs. Emily Mathews Rich, in memory of her son Rolla M. Rich, a former student of the College. This sum is awarded annually to a needy student of the senior college who is a member of both Delta Phi and the Agricultural Club. Selection is made by the President of the College, the Director of the Institute and the Dean of Agriculture with equal emphasis placed on character, scholarship and leadership in agriculture.

The Leadership Challenge Cup is a gift to the College by Kenneth C. Ikeler and is to be awarded each year to a Senior student in Agriculture who has exhibited the greatest measure of constructive organization and leadership in the School of Agriculture through his College course.

The John K. Madsen Challenge Cup is a gift to the College by John K. Madsen, Mt. Pleasant, Utah, and is awarded each year to the student who shows the most proficiency in the judging of sheep.

The Ogden Union Stock Yards Challenge Cup is a gift to the College by the Union Stock Yards Company of Ogden and is to be awarded each year to the student who shows the most proficiency in the judging of beef cattle.

The Hawaiian Steam Ship Company’s Challenge Cup is a gift from the Hawaiian Steam Ship Company and is to be awarded
each year to the student who shows the most proficiency in the judging of wool.

The Salt Lake Union Stock Yards Company Challenge Cup is a gift to the College by the Union Stock Yards Company of Salt Lake City, and is to be awarded each year to the student who shows the greatest proficiency in the judging of hogs.

The John M. Richie Challenge Cup is a gift to the College from John M. Richie of Charleston and is to be awarded each year to the student who exhibits the most proficiency in the judging of horses.

The American Packing Company Challenge Cup is a gift to the College from the American Packing Company of Ogden and is awarded each year to the student who shows the most proficiency in the judging of meat.

Several other awards are given for athletic and other student body activities.

A list of the recipients of various honors will be found at the back of the catalogue.
STUDENT ORGANIZATIONS

GOVERNMENT AND TRADITIONS OF THE STUDENT BODY ORGANIZATION

The Student Body Organization embraces all the students of the Institution. Its prime object is to foster a proper spirit of college loyalty, and to give the students practice in managing public affairs. It also secures dispatch and efficiency, as well as uniformity, in the administration of all matters pertaining to the entire student body, and induces all students to participate in college activities. The organization provides each member with a maximum of proper athletic, theatrical, and social recreation at a minimum expense. This society has control, under faculty direction, of the following student activities:

1. a. Athletics, for men;
   b. Athletics, for women.

   An intramural program, including all seasonal sports for which awards are given.

2. Musicals, including all public performances of the Band, the Orchestra, and Musical Clubs. These organizations present several concerts during the year and each group usually tours some part of the surrounding area.

3. Theatricals. There is great activity in the field of the drama and numerous productions are staged each year by student groups. Students participate in the lighting, staging, directing, and managing as well as the acting. The performances of recent years have been exceptional.

4. Opera. Each year the music department produces an opera. With successful trials at classics such as Rigoletto, Faust, and Il Trovatore, grand opera has become traditional at Utah State. This year Robin Hood will be presented.

5. Debating and Public Speaking. Debating is an extremely popular activity and last year approximately one hundred and fifty debates were held, many of them with teams from other states. Intrastate debates are held in the form of a state legislature and are highly successful. Several public speaking contests are conducted through the year.

6. Student Publications. The students of the College publish a weekly school paper, Student Life, and the College year book, The Buzzer, both of which are distributed to all of the regularly registered students. Some campus organizations also sponsor publications of either literary or informational character.
7. **Lyceum Course.** The lyceum program which brings numerous national and international figures to the College is one of the most important Student Body activities.

**OTHER STUDENT ORGANIZATIONS**

*The Associated Women Students* organization is for the purpose of fostering activity and good fellowship among all women students.

**Fraternities, Professional.** Phi Delta Pi (physical education, women), Alpha Kappa Psi (commerce), Theta Chi (commerce, women).

**Fraternities, Honorary.** Phi Kappa Phi (scholastic co-educational), Alpha Sigma Nu (senior), Theta Alpha Phi (dramatic co-educational), Delta Phi (mission service), Blue Key (upper classmen, service), Alpha Zeta (agriculture, scholastic), Civil Engineers (engineering), Lambda Rho (journalistic), Phi Upsilon Omicron (home economics, scholastic), Scabbard and Blade (military, men), Sponsors (military, women), Pi Gamma Mu (social science), Utozoa (zoology and entomology).

**Fraternities, Social.** Sigma Chi, Pi Kappa Alpha, Phi Kappa Iota, Delta Nu, Sigma Phi Epsilon, Beta Kappa, Lambda Chi.

**Sororities, Social.** Alpha Chi Omega, Chi Omega, Beta Delta, Theta Upsilon.

**Clubs.** Ag Club (agriculture), Empyrean (literary), Home Economics Club (home economics majors), Inter-Collegiate Knights (service), International Relations Club (discussion group), Jesters Club (dramatic), Senior Sponsor (service, women), Spur (service, women), Foresters (forestry majors), Utah State Barbs (unaffiliated students), 4-H Club (social), History (co-educational).

**STUDENT HEALTH SERVICE**

The College is interested in the physical welfare of its students. Services of a doctor and a full time registered nurse are available free of charge to the students. Each new student upon entering the College receives a thorough medical examination, and whenever necessary, students are reexamined and advised regarding their physical condition.

**SPECIAL CARE OF YOUNG WOMEN**

Each sorority house is supervised by a competent and able house...
mother who concerns herself with the welfare of the girls who are living at the house. The house mother is directly responsible to the Dean of Women who in turn is responsible for the conduct of women students and supervises their living quarters.

ALUMNI ASSOCIATION

EXECUTIVE COMMITTEE, 1936-37. President, Lloyd M. Theurer '28; L. R. Humpherys '12, Boyd H. Pulley '33, Alta O. Crockett '30, R. L. Judd '09, J. W. Kirkbride '19, ex-officio; Lloyd N. Johnson, Executive Secretary.

GENERAL REQUIREMENTS

ADMISSION

FRESHMEN: Entrance to the Freshman class is based upon graduation from an accredited high school, or upon the presentation of 15 approved high school units of work, or by examination of those students who have had special training not obtained in high school. Prospective students are urged to send a record of their credits to the Registrar at least two weeks before the opening of school, and in any case to bring them on the day of registration. Students who expect to become candidates for any degrees or diplomas from any of the Schools of the College should include among the units presented for entrance 10 units in the following five groups: English, Mathematics, Social Science, Natural Science, and Modern Languages, to be distributed as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Three Units</td>
</tr>
<tr>
<td>Algebra</td>
<td>One Unit</td>
</tr>
<tr>
<td>Geometry</td>
<td>One Unit</td>
</tr>
<tr>
<td>Social Science</td>
<td>One Unit</td>
</tr>
<tr>
<td>Natural Science (requiring laboratory work)</td>
<td>One Unit</td>
</tr>
<tr>
<td>Elected (from the above groups and Modern Languages)</td>
<td>Three Units</td>
</tr>
</tbody>
</table>

Students may not receive more than Sophomore standing until the above requirements have been met.

When a deficiency exists; that is, when a student has 15 units of high school work but lacks one or more units specified above, he will be required to complete nine quarter hours of college work for each unit in which he is deficient, in addition to the regular group requirements in that field.

A student who has less than 15 units of high school work cannot enter unless he is beyond high school age; in which case he must register as a vocational student (see below).

Physical education and Military Drill will not be accepted in the fifteen approved units.

VOCATIONAL STUDENTS: Persons 19 years of age, or over, who have less than 15 units of high school work and who have not been in attendance at any high school within one year preceding the time of application for admission to the Utah State Agricultural College, may, at the discretion of the Entrance Committee, be admitted as vocational students. Such persons are not candidates for a degree,
and have no collegiate rating. They may register for any courses which their previous training or experience will enable them to carry successfully, but only after consultation with the instructors concerned, and their written approval.

If the applicant has been in attendance at a high school within one year preceding the time of application for admission to the Utah State Agricultural College, his application will not be considered unless it is accompanied by a statement from the principal of the high school attended, to the effect that the applicant is a person worthy of admission to the College, and that in his opinion, the applicant could be better served at the Utah State Agricultural College than at the high school concerned.

Such persons may receive college standing, and become candidates for a degree:

1. By using the credits obtained while vocational students to satisfy college entrance requirements. In such cases 9 quarter hours will be taken for each deficient high school unit.

2. By passing written entrance examinations. These examinations will be offered the third day of each quarter. This examination will be under the direction of the College Entrance Committee and will consist of mental tests, subject achievement tests and tests in the fundamental tool subjects. These examinations shall be administered in such a fashion as to select only the more promising students.

No credits obtained prior to the quarter in which college standing was established can be used toward a degree.

Transfers from Other Colleges. (Advanced Standing): The College does not grant credit for excess high school work. Advanced standing for work of satisfactory grade done in some other accredited college, after the completion of 15 units of high school work, may be granted by the Committee on Advanced Standing, provided the student presents satisfactory evidence that the work offered is equivalent to the work for which he wishes to substitute it. Transcripts submitted for evaluation become the property of the Institution, and will not be returned. Advanced standing credits, while they may be acceptable toward a degree, will not be included on a transcript of college credits until after the degree has been conferred. Transcripts should be sent to the Registrar two weeks in advance of registration. It is necessary to have them at the time of registration, in order to arrange the course of study properly.

Quarter Credits (Definition): A quarter hour credit is the
credit given for one hour of lecture or three hours of laboratory work each week for 12 weeks.

Class Standing: Forty-five hours of approved college work, in addition to the prescribed entrance requirements, are required for Sophomore rank; 90 hours and Senior College standing (see page 51) for Junior rank; and 130 hours and Senior College standing for Senior rank. The foregoing requirements are to be exclusive of the required courses in Physical Education or Military Science.

Registration Dates: The Fall quarter opens on Monday, September 28. Freshmen will register on Monday, September 28, and other students will register on Tuesday, September 29.

The registration of all students for the Winter quarter will be on Monday, January 4; for the Spring quarter, on Monday, March 22; and for the Summer session, on Monday, June 7.

Students registering at the Utah State Agricultural College for the first time should report first to the Entrance Committee, Room 131, Main Building.

Late Registration: Registrations after the last date given above for each quarter are considered late. A fee of one dollar per day will be charged for those who register late, with a maximum fee of five dollars. In case the registration cannot be completed by the prescribed day, owing to some delay caused by the College or its officers, an exemption may be obtained upon application to the Registrar on the regular day of registration. The amount of work for which any student will be allowed to register will be reduced by one and one-half credit hours for each week or fraction thereof that a student is late in registering.

Normal Registration: Fifteen hours, exclusive of the one hour of required Physical Education or Military Science, is the normal registration for any one quarter. A student may, however, with the consent of the Dean or Adviser, register for seventeen hours.

Excess Registration: Registrations in excess of 17 hours, exclusive of the one hour of required Physical Education or Military Science, can be granted only by the Attendance and Scholarship Committee upon petition and the payment of a fee of $1.00 per quarter hour of excess credit. The necessary forms may be obtained at the Registrar's Office. Excess credit is added to the student's registration by the Registrar's Office after the petition is granted. The registration is construed to include any Extension, Correspondence, or other work carried by the student for credit during the period of
the school year in question. This rule does not apply to students taking a prescribed course requiring excess registration as in the School of Engineering.

If by oversight the registration cards are allowed to be filed with excess credit, the registration will be reduced to the allowed limit as soon as the error is detected.

No student will receive credit for work which is not included on his registration card, which must be filed in the Registrar's Office before the end of the quarter. Students who wish to attend regularly any class for which they are not registered, must obtain a written permit from the Dean of the School. No credit will be allowed for such attendance.

**Low Scholarship and Probation:** Students who have not maintained an average grade of C or better, students failing to obtain passing grades in 12 or more hours of work, and students who fail to do satisfactory work in Military Science and Tactics during the preceding quarter are automatically placed in the low scholarship group.

Students in the low scholarship group may not participate in student activities other than regular class work. Students in the low scholarship group may be placed on probation for poor scholarship.

Students on probation who violate the terms of their probation are subject to immediate suspension from the College.

When in doubt regarding any of the regulations affecting them, students on probation should consult with the Attendance and Scholarship Committee. This committee alone has the authority to waive or modify the terms of probation.

Students in the low scholarship group may not register for more than 15 hours, exclusive of Physical Education or Military Science.

**Incomplete Work:** Students are required to complete, by the end of the quarter, all courses for which they have registered. This includes Correspondence courses for which the student may be registered on the residence registration fees. Incomplete grades can be granted by an instructor only when permission is granted by the Committee on Incomplete Grades before the close of the quarter. The necessary petition forms may be obtained at the Registrar's Office.

Incomplete work must be finished, and a passing grade given in the course, within one year of the close of the quarter, otherwise the grade is interpreted to mean failure.
DIVISIONS OF THE COLLEGIATE WORK

The collegiate work of the institution is divided into two divisions: Junior College and Senior College. Courses numbered from 1 to 99, inclusive, are Junior College courses. Those listed from 100 to 199, inclusive, are Senior College courses. All courses with number 200 and over are graduate courses.

Qualified students may enter courses in any quarter, unless a statement to the contrary appears in the description of the courses. Junior College students will not be allowed to enter Senior College courses except upon approval of the Dean or Adviser, and the instructor of the course.

THE JUNIOR COLLEGE

The Junior College comprises the work of the Freshman and Sophomore years. The main purposes of this division are to provide a broad and integrated background in the principal fields of human knowledge, and to fulfill the prerequisites for the major work upon which he will concentrate in the upper division.

Provisions are made in several departments of the College for the issuance of Certificates of Completion for two years of work as prescribed by such departments.

Students who expect to become candidates for the Bachelor's degree should plan their courses with great care through consultation with their Deans or Faculty Advisers, in order to insure the proper foundation for their advanced work. Failure to do this may necessitate an extra year to complete the work for the desired degree.

Beginning with the Freshman class entering in the Fall of 1934, students must satisfy the following requirements, in order to complete the Junior College work:

1. Completely satisfy the entrance requirements (page 41).
2. Complete 96 credit hours of work (including Military Science and Physical Education).
3. Prepare a foundation of at least 15 hours for the field of specialized study in the Senior College.
4. Satisfy the Group, Military Science, and Physical Education requirements as follows:

   GROUPS: Forty-five hours of work must be taken from the following prescribed courses, and distributed in the five groups listed below.
## LANGUAGE ARTS GROUP—10 HOURS
(English 10 is required of all students)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>Eng. 10</td>
</tr>
<tr>
<td>Fundamentals of Speech</td>
<td>Speech 1</td>
</tr>
<tr>
<td>Courses in General Literature of Junior College Grade</td>
<td></td>
</tr>
<tr>
<td>Modern Language (French or German)</td>
<td></td>
</tr>
</tbody>
</table>

## EXACT AND PHYSICAL SCIENCES GROUP—10 HOURS
(Not more than 5 hours in any department)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introductory Chemistry</td>
<td>Chem. 1</td>
</tr>
<tr>
<td>(Chem. 10 or 3)</td>
<td></td>
</tr>
<tr>
<td>Introductory Physics</td>
<td>Phys. 3</td>
</tr>
<tr>
<td>(Phys. 6, 7, 20, 21, or 22)</td>
<td></td>
</tr>
<tr>
<td>Physical Geology</td>
<td>Geol. 3</td>
</tr>
<tr>
<td>Algebra</td>
<td>Math. 15</td>
</tr>
<tr>
<td>(Math. 34 or 35)</td>
<td></td>
</tr>
</tbody>
</table>

## SOCIAL SCIENCE GROUP—10 HOURS
(Not more than 5 hours in any department may be used to fill the group)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Economics</td>
<td>Econ. 51</td>
</tr>
<tr>
<td>Principles of Sociology</td>
<td>Soc. 70</td>
</tr>
<tr>
<td>*Principles of Agricultural Economics</td>
<td>Ag. Econ. 53</td>
</tr>
<tr>
<td>General Political Science</td>
<td>Pol. Sci. 51</td>
</tr>
<tr>
<td>Elementary Psychology</td>
<td>Psyc. 3</td>
</tr>
<tr>
<td>World Civilization</td>
<td>Hist. 4</td>
</tr>
<tr>
<td>Modern European History</td>
<td>Hist. 3</td>
</tr>
<tr>
<td>Modern U. S. History</td>
<td>Hist. 15</td>
</tr>
<tr>
<td>*Rural Sociology</td>
<td>Soc. 10</td>
</tr>
</tbody>
</table>

* For students in the School of Agriculture only.

## BIOLOGICAL SCIENCE GROUP—10 HOURS
(Not more than 5 hours in any department)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of Zoology</td>
<td>Zoo. 1</td>
</tr>
<tr>
<td>(Zoo. 3 and 4)</td>
<td></td>
</tr>
<tr>
<td>Elementary Botany</td>
<td>Bot. 1</td>
</tr>
<tr>
<td>(Bot. 21 and 22)</td>
<td></td>
</tr>
<tr>
<td>Anatomy and Physiology</td>
<td>Physio. 4</td>
</tr>
</tbody>
</table>
General Bacteriology ........................... Bact. 1 ........................ 5 hours
Principles of Nutrition ........................... Foods 5 ........................ 5 hours

ARTS APPRECIATION GROUP—5 HOURS
(Not more than 3 hours in any department)

Music Appreciation ........................... Music 1 ........................ 3 hours
or Music 80 or 81 ........................ 2 hours
Art Appreciation ........................... Art 3, 22, 26 or 33 ........................ 3 hours
Drama Appreciation ........................... Speech 60 ........................ 3 hours
Orientation in Physical Education ........................... P. E. 1 ........................ 2 hours
Elements of Landscape Gardening ........................... Hort. 3 ........................ 3 hours

Courses listed in parentheses are the ones which may be substituted for the regularly listed course. In no case can more credit toward filling a group, than is allowed above, be obtained in one department. The prescribed courses for filling the groups, as well as the courses which may be substituted for them, are listed at the heads of the departmental lists of courses.

In departments where there is a prescribed course of study such as in Engineering, Pre-medical work, Forestry, and Smith-Hughes Teacher Training courses, the completion of such courses shall substitute for the above requirements provided the student remains in that field: Students in Mechanic Arts have special requirements listed in description of work of the School of Engineering (page 67).

PHYSICAL EDUCATION: Six quarters of work in Physical Education activity classes are required of all women students, and also of all men students who do not take the required courses in Military Science (see Military Science and Tactics).
THE SENIOR COLLEGE

On and after the Fall of 1936, only such students as have completed the Junior College requirements as listed in the foregoing paragraphs may be registered in the Senior College, except that some concessions may be granted in satisfying the group requirements during the year 1936-37.

Graduates of standard normal schools and junior colleges and students from other colleges who present at least 90 hours of college work, exclusive of the courses in Physical Education, required at the institution from which they are transferring, may be registered in the Senior College, even though they lack some of the group requirements of the Junior College, provided they register so as to remove these deficiencies within two quarters of the time of registration.

MAJOR SUBJECT: The student should select a major subject upon entering, or early the first year, but in no case later than entrance in the Senior College. The Dean will assign the student to the professor in charge of this major who will register the student during his Junior and Senior years, and act as his Adviser.

The Major Department has the authority to prescribe not less than 30, and not more than 50 hours of work in the major subject (exclusive of any courses which may have been used to satisfy Junior College requirements in any of the groups). The Major Department and the Dean shall also prescribe such other related courses as may be considered desirable, provided always that the students' free electives may not be reduced below 36 hours.

MINOR SUBJECT: The student is permitted to choose his own minor. The minor shall consist of 18 credit hours either in one department or in two departments closely related in nature of subject matter, provided that if the minor is in more than one department it must have the approval of the Dean and the Major Professor.

OLD GROUP REQUIREMENTS

Candidates for the Bachelor's degree in the spring of 1937 must satisfy the old group requirements, which consist of 54 hours distributed as follows:

LANGUAGE GROUP: 18 hours. (English, Modern Languages or Speech). Must include English 10, 11, unless excused by the English Department.

SOCIAL SCIENCE GROUP: 12 hours. (History, Economics, Political Science, Sociology, Agricultural Economics).
BIOLOGICAL SCIENCE GROUP: 12 hours. (Botany, Zoology, Entomology, Public Health, Bacteriology, Physiology).

EXACT SCIENCE GROUP: 12 hours. (Chemistry, Physics, Mathematics, Geology, except Geology 5; Accounting 100, 102, 103, when preceded or paralleled by Mathematics 15 or 34).

The Physical Education and Military Science regulations of the Junior College, and the major and minor requirements of the Senior College, remain unchanged.

GRADUATION

The College offers Certificates of Completion for two years of applied work in certain departments, Three-year Normal Diplomas in the School of Education; the degrees of Bachelor of Science and Master of Science in all of the Schools of the College, and gives work to fulfill the requirements of the State Board of Education for the Professional High School Certificate.

IMPORTANT: The College reserves the right to change at any time the requirements for graduation, and every candidate for a certificate, a diploma, or a degree shall be held to compliance with such changes, as far as the uncompleted part of his course is affected.

Students who do not graduate in the class with which they entered are held to the requirements, including entrance, of the class with which they graduate.

REQUIREMENTS FOR THE TWO-YEAR CERTIFICATE

The Schools of Agriculture and of Home Economics offer two-year, non-degree courses in practical studies leading to a certificate of completion, for those who wish to fit themselves better for their vocation and for life, and who cannot spare the time for the regular four-year course leading to the B. S. degree. While these short courses are designed to develop a broader understanding of the sciences underlying these fields and to lay the foundations for good citizenship, they offer a considerable range of selection of practical courses of both the Junior and Senior College grade.

The courses are arranged so that the student may at a later date complete the four-year course with a minimum loss of time.

The general requirements for this Certificate are:

1. Satisfy the entrance requirements (page 44).
REQUIREMENTS FOR GRADUATION

2. Completion of 96 quarter hours of work, which includes the required work in Physical Education or Military Science (page 54).

3. The completion of a Major of 30 hours in one or more closely related departments of the School in which the Certificate is granted.

4. The completion of a Minor of 15 hours closely related or basic to the Major-field. This need not be in the same school.

5. Twenty-four hours in the basic groups as follows: Language, 9, which shall include English 10; Exact Science, 5; Biological Science, 5; and Social Science, 5.

6. Twenty-one hours of elective work.

Junior College credit only may be obtained for work taken during the short course, even though some Senior College courses be taken.

For additional information, see descriptions of work in the School concerned.

REQUIREMENTS FOR THE THREE-YEAR NORMAL DIPLOMA

Candidates for the Normal Diploma must meet all entrance requirements (page 44) and must present 135 quarter hours of college work, exclusive of the requirements in Military Science and Physical Education (page 54). The candidates for the diploma in the spring of 1937 and thereafter, must complete the new Junior College requirements (page 49), and in addition English 105 must be completed.

All candidates must fill a special group of 10 hours comprising Art 51, Music 30 and 31, and English 24.

It is suggested that Psychology 3 be taken in the first year, English 10, and Physiology 14 in the second year, and Education 104, 105, 106, 111, 121 and English 105 in the third year. It is advisable to fill the group requirements, as far as possible, during the first two years.

Students with special experience or training in certain of the required fields may have some of the requirements waived.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE

The College confers the degree of Bachelor of Science in Agriculture, Forestry, Arts and Sciences, Agricultural Engineering, Civil Engineering, Commerce and Business Administration, Home Economics, Education, or Mechanic Arts upon students who meet the requirements specified herewith:
Before a student can become a candidate for a baccalaureate degree, the abstract of his record in the College must show: first, that he has satisfied the entrance requirements as prescribed for the class with which he expects to be graduated; second, that the collegiate work for which he has credit, his conditional and other pending credits, the completion of which is reasonably assured, and the work for which he is registered or is planning to register, together satisfy the requirements for graduation including Physical Education and Military Science as prescribed for his class.

Students who are planning to graduate at the next commencement should apply for candidacy not later than the fourth week of the fall quarter. The Graduation Committee will then check over the records and admit to candidacy all students whose records show that the conditions specified above have been fully met. Students who have not fully met the conditions as specified will be officially notified of their deficiencies and withheld from candidacy until such time as the deficiencies have been removed.

SUMMARY OF REQUIREMENTS FOR GRADUATION

For students who will graduate in the spring of 1937 the following requirements must be met after satisfying the requirements for admission (page 44):

1. Six quarters work in Physical Education by men and women, provided that candidates who are officially excused from Physical Education present one credit of other work for each quarter that they have been excused.

2. Six quarters of work in Military Science for men unless officially excused from this requirement. Men who take the work in Military Science are excused from the Physical Education requirement mentioned in paragraph one (1) above.

3. One hundred eighty credits of collegiate work, exclusive of the required hours in Physical Education or Military Science.

4. Fifty-four hours of Senior College work taken after the candidate has presented at least ninety college credits, in addition to the required courses in Physical education or their substitutes.

5. The completion of a major, a minor, and related work as outlined under Senior College (see page 51).

6. The completion of required work in the four basic groups, as listed under the Old Group Requirements (page 51).

Paragraphs 5 and 6 above do not apply to students who are
pursuing a prescribed course of study such as Engineering, Mechanic Arts, Pre-medical work, Forestry, and Smith-Hughes Teacher Training courses.

7. Of the 186 hours required for graduation at least 102 must have been earned in resident courses in some accredited collegiate institution. Resident courses are defined as courses taught on the campus, as a part of the regular teaching load of the instructor giving the class, and taught as listed in the catalogue or schedule bulletin. Non-resident credits include credits earned through correspondence courses, extension courses, and special examinations. Of the 84 allowable non-resident credits limitations have been placed on the three groups as follows: Maximum by correspondence 37 quarter hours; maximum by extension 74½ quarter hours; maximum by special examinations 18½ quarter hours.

8. Candidates must have been in residence at the Utah State Agricultural College during three full quarters. During this period the candidate must have obtained at least 45 full term resident credits. The last 45 credits presented for the degree must have been earned in the College, and of these 45, at least 30 must have been earned in residence. The residence requirement may be satisfied by residence Summer School work.

9. An average grade of "C" or higher; credits of "D" grade not to exceed one-fifth of those used toward graduation; and no credit for courses having a grade lower than "D".

10. Written application to graduate, filed with the Graduation Committee before January 15, containing information requested. A special fee of one dollar will be charged those applying later than that date.

11. Recommendation for graduation in writing by:
   (a) The professor in charge of the major subject.
   (b) The Dean of the school in which the major work is done, and
   (c) The Committee on Graduation.

12. The candidates must be of good moral character and must have discharged all college fees.

13. Attendance in person at the Commencement and Baccalaureate exercises at which the candidate expects to secure the degree, unless excused in writing by the Graduation Committee for very urgent reasons.

For candidates for the Bachelor's Degree in the Spring of 1938, or thereafter, the above requirements will be changed as follows: Paragraph 6 will read: The completion of the requirements of the
Junior College as outlined on page 49, and the completion of English 11. Paragraph 4 will read: Fifty-four hours of Senior College work taken after the candidate has been granted Senior College standing.

REQUIREMENTS FOR THE HIGH SCHOOL TEACHER'S CERTIFICATE

Students satisfying the following requirements in addition to a standard Bachelor of Science degree will be recommended by the College for the Professional High School Certificate given by the State Board of Education.

The candidate must present 27 hours of professional educational subjects, which shall include Psychology 102, and Education 111, 115, 117, 121, 129 or their equivalents; the Candidates Biological Science group must include Physiology 108 and the Social Science group shall include 10 hours in Ethics or Sociology, or 5 hours in these subjects and 5 hours in Political Science or Economics.

Graduates of Standard Normal courses, or those who have had one or more years of successful teaching experience, may have some of these requirements waived. Consult the Dean of the School of Education in regard to this matter.

REQUIREMENTS FOR THE MASTER'S DEGREE

Registration of all graduate students shall be made by the chairman of the Committee on Graduate Work.

The degree of Master of Science may be granted on the completion of the following requirements:

The candidate must have been in actual residence at the College three full quarters after receiving the standard Bachelor's degree (or after having met the requirements for this degree), and must obtain forty-five (45) full time resident credits of which at least twenty (20) must be of graduate grade.

To be admitted to candidacy for the Master's degree the student must have his course of study approved on or before the first Friday of the Winter Quarter, or at least five months preceding the date on which he expects to receive the degree, by the committee on graduate work, the professor in charge of his major subject and the Dean of the School in which his major subject is taken.

A thesis covering the work done in the major department (from 9 to 15 credits) must be prepared by May 1, and must be approved and accepted by a committee of five, which is appointed by the pro-
fessor who directs the research. At least two copies of the thesis must be filed with the college librarian.

The candidate must successfully pass an oral examination (not public), which will be given under the direction of the committee on graduate work by the professor in charge of his major subject, the dean of the School in which his major work is taken, his thesis committee, and two professors to be selected by the committee on graduate work.

No examinations will be given after May 20 for candidates who are to graduate in June.

Graduate students should not register for more than 15 credit hours. Students who have established records of high scholarship may be permitted to register for additional credits (not to exceed 17 per quarter) by the Chairman of the Committee on Graduate Work.

GRADUATION AT THE CLOSE OF THE SUMMER SESSION

Any student who can satisfy the requirements for graduation by the close of the Summer Session may be presented to the college council in May. Such students are listed with the class of the following year and receive their public graduation at the following Commencement. The graduation of such students, however, will be certified to by proper authorities of the College as soon as their work is completed.
DIVISIONS OF THE COLLEGE

The work of the College falls into three distinct divisions: first, the College Proper, giving instruction on the home campus of the College; second, the Research Division, having for its object the discovery of new truth or the new application of established truth, for the advancement of life; third, the Extension Division, which carries instruction to the people who can not come to the College Campus.

To accomplish this work the following administrative divisions exist:

I. The College Proper.
   The Schools of Agriculture and Forestry.
   The School of Arts and Sciences.
   The School of Commerce.
   The School of Education.
   The School of Engineering.
   The School of Home Economics.
   The Summer Session.

II. Research.
   Experiment Station.

III. Extension.
   The Extension Service.

The instructional and investigational forces with the equipment necessary to carry out the work of the above divisions are organized into departments of co-ordinate authority, each of which represents a somewhat definite field of knowledge. All officers of instruction or experimentation belong to one or another of these departments. One professor, designated head, carries the administrative responsibility of the department.
SCHOOLS OF AGRICULTURE AND FORESTRY
E. J. MAYNARD, Dean
School of Agriculture

Today, agriculture's newest problems challenge the best thought and initiative of the nation. A basic training in crop and husbandry practices and a sound knowledge of the scientific principles of agricultural economics are essential for those who want a hand in the development of a progressive agricultural program for the future.

The Utah State Agricultural College is well equipped to teach both practical and scientific agriculture; to train men in the efficient management of crops and livestock on farms and ranches; for technical positions with State and Federal Departments of Agriculture and for many other positions of responsibility in investigational, extension and commercial work.

The College farm, dairy manufacturing plant, experimental livestock feeding plants, plant breeding plots, gardens, orchards and technical equipment offer an excellent opportunity for the combination of theoretical study and practical experience. Outstanding representatives of those principal livestock and poultry breeds best adapted to Utah conditions afford a "standard of perfection" in desirable type and form for the student judge.

Western agriculture needs clear thinkers and energetic leaders to solve present day problems and achieve success in its many fields of endeavor, and this school is equipped and prepared for their necessary training.

In the School of Agriculture, students may major in the following departments: Agricultural Economics, Agronomy, Animal Husbandry, Botany and Plant Pathology, Dairy Husbandry, Dairy Manufacturing, Entomology, Horticulture, Poultry Husbandry, Veterinary Science, and General Agriculture. For prescribed major in General Agriculture see the Dean of the School.

For the requirements for admission, certification, and graduation see pages 44 to 56.

OUTLINE OF JUNIOR COLLEGE REQUIREMENTS FOR FOUR-YEAR COURSE LEADING TO THE B. S. DEGREE IN AGRICULTURE

During the first two years in College the student in agriculture
should accomplish his basic science work and also obtain a general view of the field of agriculture through completion of the prescribed orientation courses. This will facilitate the wise selection of major and minor work on entering the senior college.

The work of the first two years is similar for all departments in this school. Courses listed in the general outline below are required for all students during Freshman and Sophomore years.

**Required of Students Seeking the B. S. Degree in Agriculture**

<table>
<thead>
<tr>
<th>FRESHMAN</th>
<th>SOPHOMORE</th>
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<tbody>
<tr>
<td><strong>F. W. S.</strong></td>
<td><strong>F. W. S.</strong></td>
</tr>
<tr>
<td>Math. 15*</td>
<td>Chem. 10, 11, 12*</td>
</tr>
<tr>
<td>Botany 21, 22</td>
<td>Economics 51</td>
</tr>
<tr>
<td>Zoology 1</td>
<td>Ag. Econ. 53</td>
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<tr>
<td>Physics 3</td>
<td>English 11</td>
</tr>
<tr>
<td>English 10</td>
<td>Agronomy 6</td>
</tr>
<tr>
<td>Rural Soc. 10</td>
<td>Agri. Eng. 12A</td>
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</tbody>
</table>

*Students desiring a complete foundation in Mathematics for agriculture will take Math. 15, 16 and 75. In this case Math. 15 should be taken in the fall quarter.

**Students may take Chem. 3, 4 and 5 in place of 10, 11 and 12 with approval of Chemistry Department.**

Basic courses listed above required of all four-year students in School of Agriculture except by special arrangement with Dean of School.

**Orientation Course in Agriculture**

Six orientation courses in agriculture are also required during the Freshman and Sophomore years, including Animal Husbandry 1, Agronomy 1, and four of the following five courses: Dairy 1, Poultry 1, Vet. Science 10, Hort. 1, Hort. 4. Not more than two orientation courses may be taken in any one quarter. All seven orientation courses required with General Agriculture major.

**Short Course in Agriculture**

The School of Agriculture offers a two-year non-degree course in practical agriculture leading to a Certificate of Completion. This short course makes available all regular non-prerequisite production and marketing courses in the School of Agriculture to those students who cannot arrange to take the full four-year course.

The orientation course in any department is considered a prerequisite for other courses in that department. The extensive facilities of the School of Agriculture including laboratories, experimental plots,
livestock and agricultural equipment will be made available to students who register for this course.

Courses open to short course students in the various departments of the Schools of Agriculture and Forestry are indicated by an asterisk (*).

For requirements for admission, and the Certificate of Completion see pages 44 to 57.

School of Forestry

P. M. Dunn, In Charge

The fortunate geographical location of this School of Forestry, the opportunity for self help for qualified men and the great need for better management of the forest, range and game resources, provide a happy combination of circumstances and opportunities for the proper training in handling wild land problems.

Naturally vegetated lands in Utah comprise more than 90 per cent of the total state area. The Cache National Forest is within two miles of School, the Bear River Migratory Bird Refuge within 40 miles, vast areas of range lands providing both grazing and soil conservation problems, all offer unlimited study projects. Herds of elk and deer approach the campus and may be seen from the classroom windows.

The comparative newness of the fields of forestry, range, wildlife, soil conservation and forest recreation, and the unquestioned need for their correlated use and proper management, present excellent opportunities for those desiring to participate in these fields of public service. The purpose stressed is the legitimate handling of our wild lands so that they may be a continuing benefit for present and future generations of citizens.

The curricula of this school is designed to train men for private, government or state work in (1) technical Forest Management, (2) technical Range Management, and (3) technical Wildlife Management. The Forestry majors may choose at the beginning of the senior year, either to specialize in Forest Management or Forest Utilization. The Range majors may choose in the junior year to specialize either in Range Management or Soil Conservation. Special instruction is offered in the fields of Forest Radio and Forest Recreation.

The course of study constitutes four years training for each of the three majors and calls for the completion of the course as prescribed.

The School of Forestry has purchased or leased 3,000 acres of forest and range land approximately 25 miles from the campus within
the Cache National Forest, where Summer Camp facilities have already been established. Summer field instruction will be required for graduation in addition to the regular 12 quarters of course work. Also, at least one season of field experience with the Forest Service or some comparable agency will be expected of all students.

The establishment in connection with the School of Forestry of one of the nine federal Wildlife Research stations will aid in the teaching of the wildlife management curriculum, especially in the direction of research of graduate students. This is a cooperative project with the College, the Utah Fish and Game Commission, and the U. S. Biological Survey. Dr. D. I. Rasmussen, Associate Biologist, is in charge.

In cooperation with the Utah Extension Service and the U. S. Department of Agriculture, a forest tree planting program has been operating since 1930, by means of which more than 300,000 small trees have been distributed. The presence of the forest tree nursery situated on the campus, furnishes a considerable amount of work as well as an excellent laboratory for students of the school.

BASIC COURSES

<table>
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<tr>
<th>*FRESHMAN Courses</th>
<th>F.</th>
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<tr>
<td>Botany 21, 22, 23</td>
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<td>Math. 15, 16</td>
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<tr>
<td>Physics 6, 7</td>
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<td>5</td>
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<tr>
<td>Forestry 1</td>
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<tr>
<td>Geology 11</td>
<td>5</td>
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<tr>
<td>A. H. 4</td>
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<td></td>
<td>3</td>
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<tr>
<td>English 2</td>
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<td></td>
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<tr>
<td>English 5</td>
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<tr>
<td>Speech 3</td>
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<td>3</td>
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<tr>
<td>S. S. 86, 87</td>
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<td>1</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>17</td>
<td>17</td>
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</table>

*Freshman Range Majors omit Physics Spring Quarter, add Agronomy 1.
*Freshman Wildlife Majors omit physics Spring Quarter.

<table>
<thead>
<tr>
<th>**SOPHOMORE Courses</th>
<th>F.</th>
<th>W.</th>
<th>S.</th>
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<tbody>
<tr>
<td>Chemistry 10, 11, 12</td>
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<tr>
<td>English 10</td>
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<td>5</td>
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<tr>
<td>Agr. 6</td>
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<tr>
<td>Agr. 7</td>
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<tr>
<td>C. E. 60</td>
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<td>C. E. 83</td>
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<tr>
<td>Agr. Eng. 1, 2</td>
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</tr>
<tr>
<td>Botany 30</td>
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</tr>
<tr>
<td>Forestry 12, 13</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Economics 51</td>
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<td>5</td>
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<tr>
<td>S. S. 86, 87</td>
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<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>18</td>
<td>18</td>
<td>18</td>
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</tbody>
</table>

**Sophomore Wildlife Majors take Zoo. 3 Fall or Winter quarter and Zoo. 4 winter or spring quarter, and Eng. 10 or Eng. 110 Junior year.
**Sophomore Soil Conservation Majors take A. H. 10 winter quarter; Econ. 51 spring quarter and omit For. 13.
SUMMER CAMP

For the current year, field instruction will be given at a regular summer camp, starting September 1 and continuing for four weeks. This camp will be required for all graduates; and it will be arranged so that it will be taken at the completion of the sophomore year. Eight credits will be given. Tuition and board will be charged to the enrollees.

SCHOOL OF ARTS AND SCIENCES

N. A. PEDERSEN, Dean

Since its founding the Utah State Agricultural College has offered strong courses in the Sciences and also in the Arts, to carry out the technical work of the Schools of Agriculture and Forestry, Home Economics, Commerce, Education, and Engineering, and to assure to these students a liberal education and training for efficient citizenship.

An efficient instructing force and complete modern equipment have been provided in the natural and physical sciences, as well as in English, Speech, Mathematics, History, and Languages. This makes it possible to satisfy the growing demand for strong baccalaureate courses affording a broad general education in the earlier years, and admitting of specialization later. Such courses, constituting the School of Arts and Science and, paralleling the other degree courses of the College, lead to the degree of Bachelor of Science.

The School of Arts and Science includes the departments of Bacteriology and Biochemistry, Chemistry, English, Speech, Geology, History, Mathematics, Modern Languages and Latin, Physics, Physiology, Public Health and Hygiene, and Zoology and Entomology.

Students taking Pre-medical work should register in the School of Arts and Science and see Dr. Maeser for the required courses.

For the requirements for admission, certification, and graduation see pages 44 to 56.

SCHOOL OF COMMERCE

W. L. WANLASS, Dean

The purpose of the School of Commerce is to give opportunity for liberal education with special emphasis upon the commercial and industrial phases of life. Persons who complete the commercial courses are prepared to assume leadership and responsibility in business and in various industries and professions. In order to meet the growing demands and to keep pace with recent tendencies in business education,
students may major in accounting, business administration, merchandising, secretarial science, economics, political science, sociology, agricultural economics and marketing.

For the professions of law and medicine the commercial courses afford excellent preparation. Graduates are prepared for positions as teachers in commercial schools. Many desirable positions as industrial managers are open to those who are qualified by training and experience. In the field of retail and wholesale merchandising are unlimited opportunities.

Special attention is called to the many opportunities for service in sociological and governmental work. (See Training for Government Service.) The Departments of Political Science and Sociology offer basic and professional courses in these fields.

In the School of Commerce, students may major in the following subjects: Accounting, Business Administration, Merchandising, Secretarial Science, Economics, Political Science, Sociology, Agricultural Economics and Marketing.

For requirements for admission, certification, and graduation see pages 44 to 56.

Note: All students in the School of Commerce are urged to take Textiles and Clothing 15 and Principles of Nutrition 5.

TRAINING FOR GOVERNMENT SERVICE

The Federal Government during recent years has employed increasing numbers of College-trained men and women who are qualified for service in its various departments. In all probability this expansion of government activity will continue for several years. In suggesting the following courses the School of Commerce has attempted to indicate lines of study which will be helpful in preparing for government service. With slight modification these courses will serve equally well to qualify the student for commercial positions outside the field of government service, as the basic requirements in both fields are similar.

After completing these basic courses in satisfying graduation requirements and after qualifying for a government position by passing a civil service examination, the government frequently provides courses of intensive training, covering a period of from forty-five to sixty days, in which the applicant is given special instruction in the routine and duties of the particular governmental division to which he has been appointed.

SUGGESTED COURSES

I. ACCOUNTING: Accounting 1, 2, 30, 101, 102, 103, 104, 111, 120, 121, 127.
II. LAND ECONOMICS: Economics 4, 51, 52; Agronomy 6; Political Science 51; Business Administration 141; Agricultural Engineering 1, 12; Geology 3, 5.

In addition the student should satisfy the requirements for a major in Agricultural Economics.

III. MARKETING: Economics 4, 51, 52; Mathematics 15, 16, 60, 75.

Agricultural Economics:
The student should satisfy the requirement for a major in this department.

In addition a thorough preparation should be made in the special fields in which it is desired to work such as wool, dairying, etc.

IV. CONSULAR AND DIPLOMATIC SERVICE: Political Science 11, 12, 13, 51, 102, 103, 104, 105, 106, 107; Foreign Language, German, French, or Spanish, depending upon the location desired; English 10, 11, 31; Economics 51, 52, 140.

V. GENERAL ADMINISTRATIVE TRAINING:

It is felt that anyone contemplating government service should have an intimate knowledge of the workings of our government and its relationship to industry. To supply that need the following courses are suggested: Political Science 51, 120, 128.

VI. STATISTICS: Mathematics 34 and 35 or 15 and 16, 60, 75; Economics 4, 51, 52, 131.

VII. SECRETARIAL SCIENCE:

<table>
<thead>
<tr>
<th>First Year</th>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stenography 75, 76, or 78.</td>
<td>Advanced Stenography 80, 81, 82.</td>
</tr>
<tr>
<td>Typewriting 86, 87, 88, or 89, 90, 91.</td>
<td>Typewriting 89, 90, 91.</td>
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<td>Calculator Operation 93, 94.</td>
<td>English 11.</td>
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<tr>
<td>English 10.</td>
<td>Business Administration 25, 54 or 55.</td>
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<tr>
<td>Secretarial Science 30.</td>
<td>Economics 51, 52.</td>
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<tr>
<td>Mathematics 15.</td>
<td>Political Science 11, 12, 13.</td>
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<tr>
<td>Accounting 1 and 2.</td>
<td>Art 32.</td>
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<td>Art 3.</td>
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<td>Psychology 3.</td>
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Third Year

Secretarial Science 83, 84, 85, 175.
Exact Science.
Biological Science.
Sociology 70.
Accounting 100.
Speech 5.
Psychology 1Q1.

Fourth Year

Secretarial Science 176, 178.
Business Administration 152, 153 or 161, 162, and 136.
English 105.

VIII. SOCIOLOGY:

For Case Work:
Psychology 101, 103, 110.
Child Development 140, 150.
Sociology 4, 70, 140, 172, 173, 176, 185, 203.

For Social Research:
Mathematics 15 or 34 and 75.
Sociology 70, 202, 204.
Thirty hours of factual courses in the Department.
Field Work under supervision.

SCHOOL OF EDUCATION

C. E. McClellan, Acting Dean

The School of Education at the Utah State Agricultural College was authorized by enactment of the State Legislature in 1927. Its major function is to provide the professional courses in Psychology and Education required for the various certificates and diplomas authorized by the State Board of Education.

Supplementing the various courses in theory and method are facilities for demonstration and practice teaching. On the kindergarten and elementary school level, these activities are conducted in the Whittier School, which is operated under the auspices of the School of Education. On the secondary school level, practice teaching is conducted in the secondary schools of Logan City under the direct supervision of the teacher training director of the College.

The School of Education comprises the departments of Education, Psychology, Art, Music, and Physical Education. Candidates for the Normal Diplomas and candidates for the Bachelor's degree in Education, Art, Music, and Physical Education register in this school.

The Bachelor of Science degree with a major in Education is designed primarily for those students desiring to meet requirements
for administrative and supervisory credentials. Other students will find it advisable to take their Bachelor's degree in the particular school in which their major work is chosen. Arrangements have been made with the different Schools of the College to provide the candidates for their respective degrees with the necessary professional courses to qualify them to teach in these fields.

For the requirements for admission, certification, and graduation see pages 44 to 56.

SCHOOL OF ENGINEERING

GEORGE D. CLYDE, Acting Dean

It is the aim of this school to give the students a broad foundation in the fundamental principles of Engineering, together with sufficient knowledge of professional practice to enable them to apply these principles.

The School consists of four major divisions: Civil Engineering, Agricultural Engineering, Mechanic Arts, and Military Science, the first three of which offer courses leading to a degree of Bachelor of Science in their special fields. Civil Engineering students may choose their major in Irrigation and Drainage, Highways, Structural Design, or Sanitation, by arranging certain optional courses with the Dean. Agricultural Engineering students may specialize in Irrigation and Drainage, Farm Machinery and Farm Power, or Farm Structures, by choosing the electives in these fields.

ADMISSION

See statement of entrance requirements of the College on page 44. Prospective engineering students are advised that they will be somewhat handicapped if they do not present for entrance one and one-half units of algebra and one unit of geometry.

REQUIREMENTS FOR GRADUATION IN ENGINEERING

Candidates for the Bachelor of Science Degree in Civil Engineering or in Agricultural Engineering must complete any one of the prescribed courses listed on the following pages, together with two years of Military Science and two years of Physical Education unless officially excused from either or both. Each candidate for a degree in Engineering must prepare a satisfactory thesis on a problem to be assigned by the department in which he elects his major. See C. E. 198.

The degree of Master of Science will be awarded upon completion
of any one of the optional courses listed below, and additional work as outlined on page 56 under the general requirements for the Master's Degree.

**PRESCRIBED COURSES IN CIVIL ENGINEERING**

The Freshman, Sophomore and Junior years are common to all C. E. Courses, and the Freshman C. E. Course constitutes also the Freshman A. E. Course.

### FRESHMAN

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**TOTALS**

|       | 16  | 17  | 16  |

### SOPHOMORE

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**TOTALS**

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### JUNIOR

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**TOTALS**

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### SENIOR—IRRIGATION MAJOR

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**TOTALS**

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## Prescribed Courses in Civil Engineering

### Senior—Highway Major

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**Totals** 17 19 16

### Senior—Structural Major

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<td>C. E. 181</td>
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**Totals** 18 19 16

## Prescribed Courses in Agricultural Engineering

### Freshman Year

Courses common to all engineering Courses.

### Sophomore Year

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<td>Ag. Econ. 51, 53</td>
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<td>Agron. 101</td>
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**Totals** 18 18 19

### Junior Year

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**Totals** 16 18 16

### Senior Year

<table>
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<td>Electives</td>
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**Totals** 17 16 17
MECHANIC ARTS

This division offers a four-year course leading to the degree of Bachelor of Science in Mechanic Arts, with the object of training auto mechanics and garage foremen, auto electricians, machine shop foremen and High School shop teachers. It lays an Engineering and Mechanical foundation for building and contracting. Two years' trade courses in Machine Work, Forging, Woodwork, Auto Mechanics, and Auto Ignition are provided for those who wish to become proficient tradesmen in these lines.

The shops are modern and well equipped, and ample floor space is provided.

REQUIREMENTS FOR GRADUATION

Candidates for the degree Bachelor of Science in Mechanic Arts must meet in full all college entrance requirements and present 180 quarter hours of college work as outlined below, exclusive of the required courses in Physical Education or Military Science. This degree may be taken with a major in Auto Mechanics, Forging, Machine Work, Radio, Aviation, Automotive Electricity, and Woodwork.

THE FOUR BASIC GROUPS

The candidate must present the following number of quarter hours of work in each of the basic groups: Language Group, 12 hours, (must include English 10, 11); Social Science Group, 10 hours; Biological Science Group, 10 hours; Exact Science Group, 18 hours; Special Group, 18 hours; Special Technical Group, 30 hours.

MAJOR AND MINOR

A major of 30 hours and a minor of 18 hours are required. For further explanation of these see page 51. The Mechanic Arts courses from which the Major, Minor, and Special Technical groups must be selected are announced under Courses of Instruction.
The School of Home Economics is organized for study in the fields essential to successful home life in modern society. The activities of the present day household include the promotion of the health and comfort of its members through proper food, clothing and shelter, the fostering of satisfactory family relationships and the functioning of the family group as an important part of the community.

The courses in this School are arranged in three major fields as follows: Child Development and Parental Education; Foods and Nutrition; and Textiles and Clothing. Students desiring to prepare for specialization may major in any one of these fields. Consult major department writeup for requirements.

In addition to the major and minor requirements all students must take at least 15 hours of work in other phases of Home Economics before graduation. These 15 hours may be included in the special group or be used toward the minor requirements. This specialized training leads to the vocations of: Commercial demonstration and salesmanship; journalism; radio broadcasting; nursery school teaching; hospital dieticianships; cafeteria and tea room management; scientific research and social service work.

All students contemplating high school teaching in Utah or neighboring States should register for the "Smith-Hughes" course. This is a carefully planned sequence of subjects extending over four years and leading to a Bachelor of Science Degree with high school and Smith-Hughes certification. This course gives the broadest preparation for teaching in either high school or extension service and is also the best preparation for intelligent home making.

Many service courses in Home Economics are offered for the benefit of students who are registered in other schools of the College. These are:

Textiles 1                 Clothing Construction.
Foods 5                   Principles of Nutrition.
Foods 8                   Meal Preparation for Men.
Foods 9                   Meal Preparation and Serving.
Home Economics 10          Survey in Home Economics.
Textiles 15               Clothing Appreciation and Selection (For Men).
Home Economics 25          Care of the Sick.
Home Economics 50          Consumer Education.
Child Development          Child Management.
Child Development 125 — Mothercraft.
Home Economics 149 — Household Management.
Home Economics 150 — Residence in the Home Economics Cottage.
Foods 180 — Institutional Cookery.

**SUGGESTED COURSE FOR A TEACHING MAJOR IN HOME ECONOMICS (Smith-Hughes)**

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<tr>
<th>JUNIOR YEAR</th>
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<tr>
<td>History 4 or 15</td>
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<td>College Grammar</td>
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<tr>
<td>Psychology 101, 102</td>
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<td>Science of Ed. 111</td>
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<tr>
<td>H. E. 149</td>
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<td>Drama Apprec. 60</td>
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<td>Foods 106</td>
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<td>Sociology 140</td>
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<tr>
<td>Clothing 115, 125</td>
<td>3</td>
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<td></td>
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<tr>
<td>Art 123</td>
<td>5</td>
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<td></td>
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</tr>
<tr>
<td>Education 119</td>
<td>3</td>
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<tr>
<td>Electives</td>
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<tr>
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<tr>
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<td>*Practice Teach. 122</td>
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<td>*Cottage</td>
<td>5</td>
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<tr>
<td>*Child Develop. 135</td>
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<tr>
<td>Clothing 160, 161</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>*Sociology 171</td>
<td>3</td>
<td></td>
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<tr>
<td>Foods 180</td>
<td>3</td>
<td></td>
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<tr>
<td>Public Health</td>
<td>5</td>
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<tr>
<td>Electives</td>
<td>7</td>
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*These courses may be alternated*
SUMMARY OF REQUIREMENTS FOR A TEACHING MAJOR IN HOME ECONOMICS
(Smith-Hughes Course)

Group and Certification Requirements:
- Art Group ........................................ 17 hours
- Exact Science .................................. 20 hours
- Language ....................................... 18 hours
- Social Science .................................. 18 hours
- Biological Science ........................... 15 hours
- Total 88 hours

Education Requirements:
- Psychology 101, 102 ............................. 6 hours
- Education 111, 119, 120, 121, 122, 129 ........ 23 hours
- Total 29 hours

*Home Economics Requirements:
- Child Development 60, 125, 135 .............. 9 hours
- Clothing 10, 11, 115, 125, 160, 161 ........ 16 hours
- Foods and Nutrition 5, 20, 21, 106, 142, 180 .... 23 hours
- General H. E. 10, 25, 50, 149, 150 ........... 17 hours
- Total 65 hours

Physical Ed. Requirements ....................... 6 hours
- Total 66 hours
- 188 hours

TWO-YEAR TERMINAL COURSE

A two-year terminal course in Home Economics is offered to accommodate those young women who wish a well balanced and practical course in home-making but who cannot take the four-year course leading to a degree. A certificate will be awarded upon the successful completion of the two years’ work.

SUGGESTED REGISTRATION FOR THE TWO-YEAR TERMINAL COURSE

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>COURSES</th>
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<tr>
<td>Art 1 and 3</td>
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<td>Textiles 1 and 5</td>
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<tr>
<td>Botany</td>
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<td>C. D. 60</td>
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<td>Sociology 70</td>
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<td>Child Dev. 125</td>
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<tr>
<td>Music 80</td>
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<td>H. A. 149</td>
<td>4</td>
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<tr>
<td>Physics 2</td>
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<td>Sociology 171</td>
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*The 65 hours in Home Economics courses replace the major and minor requirements.
<table>
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<td>Foods</td>
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<td>Speech</td>
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<tr>
<td>Horticulture</td>
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<td>P. E.</td>
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<tr>
<td>Nutrition</td>
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<td>Consumer Edu.</td>
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<td>English 14</td>
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<td>P. E.</td>
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<td>SUMMARIZATION OF REQUIREMENTS FOR TWO-YEAR SHORT COURSE</td>
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<td>Botany and Physiology</td>
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<td>English 10, 13, 36</td>
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<tr>
<td>Speech</td>
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<td>Economics</td>
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<td>Foods</td>
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<td>Clothing</td>
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<tr>
<td>Home Ec. (General)</td>
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<td>Music</td>
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<tr>
<td>Horticulture</td>
<td>3</td>
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<tr>
<td>P. E.</td>
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</tbody>
</table>

**THE SUMMER SESSION**

For over twenty-five years the College has conducted Summer Sessions as an important part of its curriculum. Since 1924 the curriculum has been materially enlarged and enriched and a very efficient lecture course established. The purpose of this large educational undertaking is to bring to Logan, with its delightful summer climate and its many recreational features, a number of the leading educators of the nation, and build, in the intermountain west, a summer school of wide influence.

During the summer sessions nearly all of the departments of the College are represented, the courses of instruction being arranged to meet the particular needs of summer students.

The courses offered in Education, Psychology, and related departments make it possible for the students to meet nearly all of the requirements for Utah certification in School Administration and Supervision for High Schools, Junior High Schools, and Grammar Schools; also the subjects offered will meet most of the requirements for certification in surrounding states.
The departments of Botany, Geology, and Zoology are emphasized because of the location of the School. Cache Valley, Logan Canyon, and nearby Bear Lake afford unparalleled opportunities for the study of plant and animal life and geological formations, while Bear River Bay near Brigham City, only thirty-five miles from the College campus, affords possibly as fine an opportunity as can be found anywhere in America for the study of water fowl and fish life.

Students desiring to make up certification requirements or prepare for advanced standing are given all the assistance possible. The entire equipment of the Institution is available, and every care is taken to preserve the standard and the spirit of the College.

GRADUATE CREDIT

Summer session students are allowed six years in which to satisfy requirements for the Master's degree. This makes it possible to secure this degree without giving up present teaching employment. Those who expect to register for work leading to this degree should submit their credits to the Dean of the Faculty several weeks in advance of registration and indicate the subject in which they wish to major. This will make it possible to have the course of study approved at the time of registration.

AGRICULTURAL EXPERIMENT STATION

The Agricultural Experiment Station, established in 1889, is a major division of the College. It is charged with the responsibility of conducting research in Utah under provisions of the Hatch, Adams, Purnell and Bankhead-Jones Acts of Congress, and of various acts of the Utah State Legislature.

Most members of the Experiment Station Staff are also members of the teaching Faculty of the College; some of them also divide their time with the Extension Service of the College. A few members of the Station Staff devote their entire time to research.

The main offices of the Agricultural Experiment Station are on the College campus, on the first floor of the south wing of the Main Building. Most of the research laboratories used by the Experiment Station are also on the campus, distributed as necessary among the
various College buildings. Other laboratories and experimental farms are located in other parts of the state.

The research laboratories have a three-fold importance in the institution: First, they make it possible for the teaching faculty to fortify instruction with the results of original research; second, they afford to advanced students an opportunity to keep in touch with research methods and facilities; and third, they offer some employment to students qualified to act as research assistants or laboratory aids. Between fifty and one hundred students, thus employed, are on Station payrolls each month of the school year. A few find employment in certain laboratories during the summer months.

The library of the Agricultural Experiment Station is quite complete insofar as current research requirements are concerned: this library, under certain restrictions, is available to advanced students in the various departments of the College.

Major lines of research now in progress include projects in the departments of Agricultural Economics, Agronomy and Soils, Animal Husbandry (including Dairy and Poultry Husbandry and Veterinary Science), Chemistry and Bacteriology, Entomology, Geology, Home Economics and Human Nutrition, Horticulture, Irrigation and Drainage, Physics, Plant Pathology and Physiology, Range Management, and Rural Sociology.

THE EXTENSION SERVICE

The Smith-Lever Act, passed by Congress in 1914, created the Extension Service, which is a cooperative service representing the United States Department of Agriculture and the Utah State Agricultural College.

In 1915, under sections 5290 to 5296, the Utah legislature accepted the provisions of the Smith-Lever Act which provides: "That cooperative agricultural extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise; and this work shall be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and the state agricultural college or colleges receiving the benefits of this act."

The National administrative staff which has charge of the work
THE EXTENSION SERVICE

for the nation, is at Washington, D. C., and the Utah state organization is located at the Utah State Agricultural College as a division of the Institution. The state organization includes a director, two assistant directors, supervisors and subject-matter specialists, and the county staff consists of one or more county agents in each county that fulfill prescribed requirements necessary to secure the services of an agent.

The Extension Service is financed by appropriations made by the Federal Government and the state government. The counties in which agents are employed appropriate travel and expenses for the respective agents.

Briefly enumerated, the objectives of Extension work are:

1. To increase the net income of the farmer through more efficient production and marketing and the better use of capital and credit.
2. To promote better homes and a more satisfactory standard of living on the farm.
3. To develop rural leaders, through short courses and individual direction.
4. To promote the mental, social, cultural, recreational, and community life of rural people.
5. To implant a love of rural life in farm boys and girls. This is accomplished largely through the program of the 4-H clubs.
6. To acquaint the public with the importance of agriculture in the national life.
7. To enlarge the vision of rural people and the nation on rural matters.
8. To improve the educational and social life of rural people.
9. To help in a program that will add security to the rural home.
10. To give assistance in the marketing problems affecting farm production.

The Extension Service works preferably with existing rural organizations as a means of reaching the largest possible number of people. Individuals may receive attention, however, upon personal requests. Assistance is given to men, women, boys and girls in problems of the farm and home. Information on problems that are of common interest to groups is given in project form, and followed up progressively until satisfactory solutions are found and approved practices established. Information is also disseminated by demonstrations,
lectures, film strips, motion pictures, new articles, radio, and illustrations. Materials for much of the scientific data imparted by the Extension workers are supplied by the Experiment Stations. The State Specialists work with the County Agricultural and Home Demonstration agents in assembling information and determining methods of solution. Voluntary project leaders chosen from local communities are trained by Specialists and County Agents to assist in organizing and leading project groups.

The Extension Service cooperates with the Farm Bureau, the State Department of Agriculture, all agricultural commodity organizations and other federal agencies.

The list of projects carried by the Utah Extension Service Staff throughout the state, follows:


The Extension Service has definite responsibility in connection with the Agricultural Conservation Administration program and in the Federal Credit program as it may affect the financing of the farm operations in the state.

**CORRESPONDENCE-STUDY**

The Utah State Agricultural College was one of the first educational institutions of the inter-mountain region to establish a Correspondence-study department. Correspondence-study furnishes an excellent opportunity for systematic instruction to students of high school or of college grade; the same is true also of the teacher, the professional or business man, the club woman, the project leader in extension work—to all who cannot leave home.

Students must be nineteen years of age, or submit fifteen units of high school work, or be graduates of a high school for admission to Correspondence-study courses of college grade.

One-fifth of the credits necessary for a degree may be earned through this department.
Courses offered:


2. Practical studies designed to advance men and women in a given occupation.

3. Preparatory, or high school studies, for those who have been unable to complete their high school courses and who wish to satisfy the entrance requirements of the College; also for those who wish to fit themselves for careers in which the equivalent of a high school education is necessary.

In isolated communities, there are many who cannot obtain a good high school education because of the expense involved in leaving home. There are also those even in favored communities who, on account of the necessity of bread winning, are unable to leave their employment for nine or ten months of the year. Both of these classes may now receive a high school education.

A special catalogue of Correspondence-study courses will be mailed on request.

**DEPARTMENTS OF INSTRUCTION**

(Arranged alphabetically)

- Agricultural Economics and Marketing
- Agricultural Engineering
  - a. Rural Architecture
  - b. Farm Machinery and Farm Motors
- Agronomy and Soils
- Animal Husbandry
- Art
- Auto Mechanics
- Bacteriology and Biochemistry
- Botany and Plant Pathology
- Business Administration
  - a. Accounting
  - b. Business Administration
  - c. Merchandising
- Chemistry
- Child Development and Parental Education
- Civil Engineering
  - a. Applied Mechanics and Design
  - b. Highways
  - c. Irrigation and Drainage
  - d. Mechanical Drawing
  - e. Surveying
- Dairy Husbandry and Manufacturing
COURSES OF INSTRUCTION

AGRICULTURAL ECONOMICS AND MARKETING

(Administered jointly by the Schools of Agriculture and Commerce)

W. P. Thomas, Professor; W. U. Fuhriman, George T. Blanch, Associate Professors; H. H. Cutler, Assistant Professor.

Agricultural Economics 53 may be used by students in the School of Agriculture in filling the Social Science Group.

Students majoring in the Department of Agricultural Economics and Marketing may be graduated from either the School of Agriculture or the School of Commerce. The choice of school in which to register should be determined by the school in which the student intends to do his minor work.

A major in this Department must include the following courses: Economics 51, 155, 107A, and 107B; Accounting 101 and 102; Mathematics 15, 16, and 75; Agricultural Economics 53, 70, 102, 105, 113, and 120; and two Seminar courses.

Those graduating from the School of Agriculture must satisfy requirements for graduation from that School in addition to agricultural courses prescribed by the major professor; those graduating from the
School of Commerce must, in addition to satisfying the requirements for graduation from that School, include certain basic agricultural courses to be prescribed by the major professor.

53. PRINCIPLES OF AGRICULTURAL ECONOMICS. A general study of the more important economic principles, forces and institutions affecting agricultural income, production, finance, prices, labor, land utilization, tenancy, tariff, etc.; the inter-relation of these factors; and the relation of agriculture to other industries. Prerequisite, Economics 51 or equivalent. Five credits. Fall, Daily 8; Winter, Daily 9 and 10; Spring, Daily 9.

70. FARM MANAGEMENT. The keeping and analysis of farm accounts. This course deals with the keeping, use, interpretation, and analysis of farm accounts and records. The meaning of various measures of farmers' financial success, the methods of computing the common efficiency factors, etc., will be considered. A fee of $1.00 will be charged for materials supplied. No textbook need be purchased. Three credits. Fall, T. Th. 9, Wed. 1.

102. PRINCIPLES OF FARM MANAGEMENT. An analysis of the principles and problems of farm organization and management. A study of the problems of choosing, buying, organizing, and managing the various types of farms. Discussion of proper size, balance, diversity, and the relationship between the various enterprises. Prerequisite, Economics 51. A fee of $1.00 will be charged for materials supplied. No textbook need be purchased. Three credits. Winter, M. W. F. 8.

104. ECONOMIC DEVELOPMENT OF AGRICULTURE. A historical analysis of agriculture through the various stages of its economic development with special reference to the United States. Three credits. (Given 1937-38).
105. **Agriculture Finance.** A study of agricultural credit with regard to requirements, facilities, instruments, and methods of financing agriculture. This involves an analysis of our present financial organization and its relation to agriculture. Special attention will be given to the agencies authorized by the Federal Government to provide financial aid and credit to farmers and farmers' organizations. Prerequisites, Economics 51. Three credits. Fall, M. W. F. 11.

**Cutler**

106. **Land Economics.** Principles underlying the utilization, valuation, tenure, and conservation of our land resources available for crops, pastures, and forests. Prerequisite, Economics 51. A fee of $1.00 will be charged for materials supplied. No textbook need be purchased. Three credits. Winter, M. W. F. 11.

**Blanch**

107. **Land Utilization.** This course will include land classification, land policies, land use planning, and an analysis of land programs which are now developing in the United States. It is advisable that Land Economics 106 precede this course. A fee of $1.00 will be charged for materials supplied. No textbook need be purchased. Five credits. Spring, Daily 10.

**Thomas**

112. **Cooperative Marketing Laboratory.** To accompany Cooperative Marketing 113. For students who desire more work in the business analysis of cooperatives than can be given in lectures. Two credits. Fall, T. 2-4.

**Fuhriman**

113. **Cooperative Marketing.** This course deals with the fundamental principles of cooperative marketing of agricultural products, the legal status of cooperation, and the growth and development of cooperative marketing in the United States as a whole. Emphasis will be given to the development of cooperative marketing in Utah and to the present problems of the cooperatives of the state. Three credits. Fall, M. W. F. 8.

**Fuhriman**

114. **Marketing Fruits and Vegetables.** Trends in production, consumption, and marketing fruits and vegetables in the United States as a whole and in Utah, together with special problems of production, local and foreign competition, quality of products, and
transportation factors. Grading, inspection, and marketing methods will be given consideration. Three credits. (Given 1937-38)

**Fuhriman**

116. **MARKETING LIVESTOCK AND LIVESTOCK PRODUCTS.** The production and marketing factors as they relate to the marketing of livestock and livestock products with special reference to Utah's condition. Three credits. Spring, M. W. F. 11.

**Fuhriman**

120. **AGRICULTURAL PRICES.** Relationship between production and prices of agricultural products; trends in prices of agricultural commodities in comparison with prices of non-agricultural products, and cycles in their relation to agriculture. State and national agricultural outlook as it applies to Utah will be given special consideration. The aim of the course is to make application of principles in prices, production and marketing to an agricultural program for the individual and the group. Prerequisite, Economics 51. A fee of $1.00 will be charged for materials supplied. No textbook need be purchased. Three credits. Winter, M. W. F. 10.

**Thomas**

121. **PRICE ANALYSIS.** A more detailed course in price analysis than is given in 120. Emphasis will be given to the application and interpretation of various statistical measures used in an analysis of price and other economic data. Prerequisites, Agricultural Economics 120 and Math. 75. Four credits. Winter, M. T. W. F. 9.

**Blanch**

171. **FARM BUSINESS ANALYSIS.** Designed to provide training and analysis of financial statements of farmers and cooperative associations. Three credits. Spring, M. W. F. 2-4.

**Cutler**

191. **ADVANCED FARM MANAGEMENT.** A detailed farm management analysis, including methods of making surveys, collecting, tabulating, organizing, and analyzing data and a study of the application of results toward the improvement of the farm business. The student will be expected to do some actual field work and to analyze the farm management data in the laboratory. Prerequisite, Agricultural Economics 102. A fee of $1.00 will be charged for materials supplied. No textbook need be purchased. Five credits. Spring, M. W. F. 8. Lab. T. Th. 2-5.
201. Public Problems of Agriculture. A general course designed to familiarize the student with the economic implications of some of the outstanding problems confronting agriculture today. Two credits. Winter, Wed. 2-4.


205. Seminar in Agricultural Finance. Two credits. Fall, Tues. 2-4.

210. Research in Agricultural Economics. Four credits. Winter, T. Th. 2-5; Spring, T. Th. 8. Lab to be arranged.

213. Seminar in Marketing. Two credits. Spring, Wed. 4-6.


AGRICULTURAL ENGINEERING

O. W. Israelson, Geo. G. Clyde, Professors; A. H. Powell, L. R. Humphreys, H. R. Kepner, Associate Professors; S. R. Egbert, Assistant Professor.

AE 1, 2. Agricultural Surveying. For students of Forestry and Agriculture. Practice in handling of surveying instruments, leveling, and traversing. The surveying of forest roads. Public Land surveys and the retracing of section lines. Four credits each quarter. Fall and Spring, M. W. 2-5; T. Th. 2-5.

AE 3. Agricultural Drawing. The use and care of instruments and orthographic projection. Farm structures. Two credits. Time arranged.

AE 6. Farm Structures. The arrangement, design and construction of barns, stables, poultry houses, silos and other farm structures. Three credits. Winter. Time arranged.

Humphreys

AE 9. Concrete Construction for Agricultural Purposes. Various mixtures of cement and their uses; the use of concrete in making barns, water troughs, posts, etc. Three credits. Spring, time and credit arranged.

AE 11. House Construction. Various methods of constructions, the frame, two brick, three brick, stucco, cement block and stuccoed hollowed tile; cost and economy of each; interior finishing. Five credits. Winter, time arranged.

AE 12. Irrigation and Drainage Practice. Water measurements, effects of soil and plants on time and frequency of irrigation, duty of water, design of farm ditches and preparation for farm drainage. These courses may be used as a major or minor in the Department of Agronomy. Lab., Th. 2-5. Four credits. Spring, M. W. F. 3.

Staff

AE 12A. Irrigation Principles and Practices. A study of factors underlying efficient and economic use of water in irrigation. Emphasis is given irrigation methods and their relation to soils and irrigation efficiencies; the plant and irrigation; and irrigation water supply and its physical control. Brief consideration is given social and administrative aspects of irrigation. Major research problems in irrigation, and the irrigation of standard crops are stressed. Three credits. Spring, M. W. F. 10.

Israelsen

AE 13. Farm Motors. This course will cover the care, adjustment and lubrication of the automobile, tractor, the stationary gas engine and the home lighting and water systems, the care of this equipment when not in use, and precautions to be taken when preparing it for operation. It will also include bearings and bearing adjustment, babbitting and fitting of babbitted bearings, soldering and fundamental principles of power transmission by the use of belting and pulleys, care of belts and speed calculations. Three credits. Fall, T. Th. 2-5.

Powell

AE 14. Farm Shop Repair Work. This course is especially
arranged for agricultural students. The application of forging opera­tions to repairs on the farm. The repairing of the following farm implements will be included in the course: the plow, wagon, harrow, hay rake, mowing machine, binder, header, etc.; making and tempering punches and cold chisels; sharpening and tempering harrow teeth, picks, etc. Two credits. Fall or Spring, time arranged.

Egbert

AE 15. Farm Machinery. A complete assembling, adjusting, care and repair of the various types of farm implements and farm machinery. Three credits. Spring, T. Th. 2-5.

Powell

AE 16. Gasoline Tractor Operation and Repairing. The overhauling of the tractor, including babbitting of bearings, fitting of new parts and operation of tractor. Three credits. Fall, M. W. F. 2-5; Spring, T. Th. 10-12.

Powell

AE 102. Tractor Repair and Operation. An advanced course for men wishing to specialize in tractor service work. It includes field work, operating problems, trouble shooting and repairs. Three credits. Fall, time arranged.

Powell

AE 201. Research in Irrigation and Drainage. Specially prepared under-graduate, or graduate students in civil or agricultural engineering may elect a problem in irrigation or drainage for investigation, subject to the approval of the professor in charge. Such investigations may be conducted at the College or elsewhere. The studies may be used as a basis for a Thesis to meet in part the requirements for an advanced degree. Any quarter. Credits and hours arranged.

Clyde or Israelsen

AGRONOMY AND SOILS

R. J. Evans, D. W. Pittman, D. S. Jennings, Professors;
A. F. Bracken, D. C. Tingey, Associate Professors.


Evans and Tingey
5. IDENTIFICATION AND JUDGING OF FARM CROPS. General Classification, identification, displaying, judging and testing of farm crops and seeds. Two credits. Fall, Th. 9. Lab. M. 2-5. 

Evans


Pittman

7. SOILS LABORATORY. A brief general laboratory course in soils. Must be accompanied or preceded by Agronomy 6. One credit. Fall, Th. 2-5. Winter (for foresters), T. 10-12 or any day 3-5. Spring T. 2-5.

Pittman

101. CEREAL CROPS. The history, cultivation, production, and marketing of cereal crops. Three credits. Winter, T. Th. 9, Lab. T. 2-5.

Bracken

102. ROOT AND MISCELLANEOUS CROPS. Sugar beets, potatoes, mangels, turnips, other root crops, and beans; cultural methods, market types, and commercial possibilities are studied in detail. Three credits. Fall. M. W. F. 9.

Tingey

103. FORAGE CROPS. Alfalfa, clovers, grasses and other forage; methods of handling hay; meadow and pasture management, and soiling crops are discussed. Three credits. Spring, M. W. 9, Lab. W. 2-5.

Evans

104. WEEDS, SEEDS AND GRADING. Grading—grading of field crops, seed certification, identification and control of weeds. Three credits. Fall, Th. 1, Lab. W. 2-5, and one Lab. arranged.

Tingey

105. SEED ANALYSIS AND TESTING. Impurities of farm and garden seeds; methods of analysis and testing; the inspection and marketing of seeds. Not given except on application of two or more students. Any quarter. Two or more credits. Two or more laboratory periods a week. Time arranged.

Tingey
106. General Soils (Sr.). Review of the entire field of soil study, for those senior college students from other institutions who have had no previous work in soils, but need senior college credit for the work. Class meets with Agronomy 6, but extra outside work is required to bring the work to senior college standard. Four credits.

Pittman


Pittman

108. Soil Management. The composition, nature, and management of soils of arid regions; special attention to water relations, erosion control, alkali, rotations and other problems in the management of arid soils. Prerequisites, Agronomy 6 and either Geology or Bacteriology 1, preferably both. Three credits. Fall, T. 1, and Th. 10, Lab., M. or T. 2-5.

Pittman


Evans


Pittman

111, 112, 113. Seminar. Current agronomic literature; agricultural problems; assigned topics. Required of all seniors in Agronomy; open also to juniors. One to two credits Fall and Winter quarters. Time arranged.

Evans

114. History of Agriculture. Development of agriculture, with emphasis on practical and scientific phases; the successive steps by which modern agriculture has attained its present status. Three credits. Not given 1936-37.

Bracken

Tingey

116. Dry Farming. Principles of dry farming from practical and scientific standpoints; a survey of agricultural work in the Great Plains and the Mountain regions; an analysis of the possibilities in typical climatic areas and on important soil types. Selecting and organizing a dry farm unit. Advanced students may obtain additional credit for extra work. Three credits. Winter, M. W. F. 8.

Bracken

117. Geography of Agriculture. A brief review of the fundamental principles of climatic controls. The principal agricultural regions of the world will be studied from the standpoint of their topography, climate, soils, population, and other industries, as related to agriculture. Three credits. Fall, M. W. F. 10.

Evans

119. Crop Products. Nature, importance, and uses of various crop products; their physical and chemical nature, their effects on the market value of the crop; and their place in agricultural technology. Related soil problems are also discussed. Three credits. Winter, M. W. F. 9.

Bracken

122. Soil Survey. Soil classification, the influence of environmental factors on soil profile development. Interpretation of the soil survey and land classification, and the methods and technique of soil mapping are covered in this course. Three credits. Registration only by arrangement with the Department. Fall and Winter, M. W. F. 9.

Jennings

123. Soil Survey Practice. Field work with organized field parties operating in the state is required. Registration open only to majors in Agronomy and Soils, except by special arrangement with the instructor and Head of the Department. Time arranged. Two credits.

Jennings

124. Advanced Crop Judging and Grading. This course is intended to qualify men for participation in Inter-collegiate judging and grading contests and to qualify students for High School agricultural teaching work in this line. Two credits. Spring, M. 2-5, and one Lab. arranged.

Evans and Tingey
The following graduate courses can be taken only by arrangement with the Department. In all cases time is to be arranged.

207. Soil Technology. An advanced course in soil technology for students who wish fundamental work in soil science. Prerequisites—Agronomy 6, 108, and 110. Two or more credits. 

Pittman

209. Advanced Plant Breeding. The science and practice of plant breeding. Original papers and lectures. Three lectures, one or more Labs. Three to six credits.

Evans

212. Graduate Seminar. Current scientific papers and topics in Agronomy. One to three credits. Any quarter.

Evans

215. Research Methods in Plant Production. Analysis of research methods; reviews of the scientific literature. Open to approved senior college students. Two or more credits.

Evans and Tingey

218. Special Problems or Advanced Laboratory. Students desiring to do advanced laboratory work, or to make a special study of any particular problem will make a complete study of available literature on this problem under supervision of the instructor, and write a thesis. One or more credits.

Staff

230. Research and Thesis. Organizing and prosecuting a thesis, or a research problem without thesis. Two or more credits each quarter.

Staff

222. Advanced Soil Survey. The work in this course will include more advanced work than that given in course 122. Two or more credits.

Jennings
COURSE OF STUDY FOR AGRONOMY MAJORS WHO PLAN TO ENTER THE TECHNICAL FIELD

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<th>FRESHMAN</th>
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<td>Courses</td>
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<td>English 10</td>
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<td>Math. 15 and 16</td>
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<td>Rural Sociology</td>
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<td>Electives</td>
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| JUNIOR |  |  |  |
| Courses | F. W. S. | Agronomy 108 | 3 |
| Agronomy 102, 101, 103 | 3 3 3 |
| German or French | 5 5 5 |
| Agronomy 116 | 3 |
| Electives | 1 6 9 |  |  |

| SOPHOMORE |  |  |  |
| Courses | F. W. S. | Total | 17 17 17 |
| English 11 | 4 |  |  |
| Chem. 3, 4 and 5 or 10, 11 and 12 | 5 5 5 |
| Econ. 51 and Ag. Econ. 53 | 3 5 5 |
| Ag. Eng. 12A | 3 |  |  |
| Agronomy 6 | 4 |  |  |
| Bacteriology 1 | 5 |  |  |
| Geology 3 | 5 |  |  |
| Electives | 3 2 |  |  |

| SENIOR |  |  |  |
| Courses | F. W. S. | Agronomy 122, 123 | 5 |
| Agronomy 104, 109 | 3 3 |
| Agronomy 115 | 2 2 |
| Electives | 2 4 12 |  |  |


Students desiring to enter County Agent work or Agricultural Teaching in High Schools should follow the general outline for the School of Agriculture for the first two years, and then consult the Department staff for their Senior college work.
ANIMAL HUSBANDRY

E. J. Maynard, George B. Caine, Professors; Harry H. Smith, Associate Professor; A. C. Esplin, Assistant Professor; Milton Madsen, Bert L. Dryden, Assistants.

The Department of Animal Husbandry offers instruction in the selection, breeding, feeding, management, and marketing of cattle, horses, sheep, and swine, and in the production and grading of wool.

The following courses should be taken by students who major in Animal Husbandry: 1, 5, 10, 100, 105, and two of (110, 115, 120, 125, 130) 140, 150, 155, 160, D. H. 109 or 110 and A. H. Seminar 180, 181 or 182. Courses in Dairy Husbandry, Dairy Manufacturing, Poultry Husbandry, and Veterinary Science may be used to strong advantage in the major. Accounting, Agronomy and Soils, Agricultural Economics and Marketing, Bacteriology, Botany, Commercial Law, Entomology, Farm Mechanics, Geology, Horticulture, Irrigation, Mathematics, Organic Chemistry, Physics, and Range are among the supporting courses most strongly recommended for majors in Animal Husbandry.

*1. General Animal Husbandry. The fundamentals of animal husbandry as applied to Utah conditions. Numbers and location of livestock, principal breeds of cattle, sheep, swine and horses. Simple breeding and feeding problems as well as general livestock management studies and judging of commercial animals. For all students of agriculture and a prerequisite for Animal Husbandry 110, 115, 120 and 125. Three credits. Fall or Winter, T. Th. 2; Lab. Fall, T. or Th. 1-3; Winter T 3-5.

Smith and Madsen

4. General Livestock Production (For Forestry and Range Students). The practical selection and judging of commercial and breed types of horses, cattle and sheep. Three credits. Winter, T. Th. 9, Lab. M. 1-3; Spring, M. W. 1, Lab. F. 2-4.

Smith

*5. Principles and Practices of Judging Livestock. This is a course designed for students who wish to register for Animal Husbandry 160 and become candidates for the Livestock Judging team the following fall. Two credits. Spring, W. F. 2-5.

Smith

*10. Feeds and Feeding. The principles of feeding and how animals digest and utilize feed. The balancing of rations and the
feeding of horses, cattle, sheep, and hogs for economical production. Five credits. Fall, Daily 10; Winter, Daily 8; Spring, Daily 10.

Maynard, Smith and Madsen

*100. Breed Types of Livestock. The origin, history, characteristics, and selection of the economic breeds of horses, cattle, sheep, and swine. Five credits. Spring, Daily 8.

Smith and Caine

*105. Classifying and Grading Market Livestock. The commercial classes and grades of market cattle, sheep and hogs. Students will compile market quotations and will classify and evaluate animals for market. Prerequisite, A. H. 1 or 100. Three credits. Spring, M. W. 2 and Lab. W. 3-5.

Smith

*110. Beef Cattle Production. The selection, feeding, and marketing of range and feeder cattle, and the management of the breeding herd of beef cattle. This course includes a trip to Ogden and Salt Lake Stock Yards for study purposes. Three credits. Fall, M. W. F. 9.

Smith

*115. Horse Husbandry. A study of market types and the breeding, feeding, handling and selling of draft and light horses. Two credits. Spring, T. Th. 9.

Caine

*120. Swine Management. The management of the breeding herd of hogs, feeding for market, and fitting for show. The relation of the industry to dairy cattle farming. Two credits. Winter, M. W. 11.

Smith

*125. Sheep Husbandry. A study of the methods of producing sheep for meat and wool under range and farm conditions. Also a study of sheep husbandry of the leading sheep producing countries of the world. Special emphasis is placed upon sheep and wool production upon the ranches and the farm. The farm sheep include small commercial herds, pure bred herds, and winter lamb feeding. Three credits. Winter and Spring, M. W. F. 9.

Madsen and Esplin

WOOL COURSES

*130. Wool Study. History of sheep and wool production. A study of the classifications and grades of wool, shrinkage and market
reports. Study of the relationship of quality in raw wool to quality in manufactured products. Winter, 3 credits. T. Th. 1; Lab. T. or Th. 2-5.

Esplin, Madsen

135. Wool Grading and Scouring. Study of methods of handling packing and storage of wool. Marketing methods will be studied. Visits will be made to shearing plants, grading stations, and woolen mills. Prerequisites A. H. 130. M. W. F. 2. Spring, 3 credits.

Esplin, Madsen

137. Wool Technology. Study of physical and chemical characteristics of wool. Prerequisite A. H. 130. Winter and Spring, T. and Th. 1. 2 credits.

Madsen

125. General Sheep Husbandry. A study of the methods of producing sheep and wool under farm conditions. Special emphasis will be placed upon breeds of sheep, their characteristics and adaptations. Lamb feeding as a farm enterprise will be emphasized. Winter and Spring, 3 credits. M. W. F. 9.

Esplin, Madsen

138. Range Sheep Management. A study of the problems and practices of range herd management. Types of sheep adapted to the desert ranges and types adapted to Summer ranges and Winter feeding. Results of Range studies at the United States Sheep Experiment Stations. Winter and Spring, M. T. W. F. 10. 4 credits.

Esplin, Madsen

139. Purebred Sheep. A study of purebred sheep. Problems of growing rams; of registration by several breed associations. 1 Lab. 1 Lecture. Winter. 2 hours. Sat. 2.

Esplin, Madsen

Sheep Fitting and Shearing. Fitting sheep for show will include practices of Rambouillet, Hampshire and Corriedale sheep. Shearing by blades and machine will be compared. Spring, 1-3 hours. Lab. arranged.

*140. Fitting and Showing Livestock. Proper methods for fitting and training livestock for show. Clipping, washing, curling, waving, carding, blocking and trimming as these practices are indicated for the various classes of livestock in the show ring. One to three credits. Spring, arranged.

Caine, Smith, Madsen and Dryden

155. **ANIMAL BREEDING.** The principles and practices of livestock improvement. A study of heredity, variation, selection, breed analysis, and herd synthesis, inbreeding, outcrossing, and cross breeding. Prerequisite, Zoology 112 (Genetics). Four credits. Spring, M. T. W. Th. 9; Winter M. T. W. Th. 10. Smith

*160. **LIVESTOCK JUDGING.** The comparative judging of breeding and market horses, cattle, sheep, and swine to prepare students for officiating at livestock shows. Herds away from the college will also be studied for the purpose of selecting a livestock judging team. Four credits. Fall, M. W. F. 2-5. Smith

165. **ADVANCED LIVESTOCK JUDGING.** This course designed to give special training to students in order to fit them for participation in judging contests at the larger shows. Four credits. Fall, M. W. F. 2-5. Smith and Maynard

*180-181-182. **ANIMAL HUSBANDRY SEMINAR.** Reports and discussion of current literature and research in Animal Husbandry, by students and faculty members. One credit each quarter. M. 1. Smith and Esplin

200. **GRADUATE RESEARCH.** Students working towards a graduate degree in Animal Husbandry are required to conduct research in some branch of the subject. Any quarter. Time and credit arranged. Staff

203. **SCIENTIFIC MEAT STUDIES.** A study in the cutting and curing of meats; for senior college and graduate students. It em­and their relationship to nutritional qualities. Prerequisite, Organic Chemistry. Winter. Time and credit arranged. Smith

*Open to short course students*

205. Special Problems. This is a survey of the research conducted in the breeding or feeding of livestock. Prerequisite, Animal Husbandry 150 and 155. Three credits. Spring, arranged.

207. Animal Experimentation. The organization of livestock experiments. Any quarter. Time and credit arranged.


Suggested Course of Study for Majors in Animal Husbandry in the School of Agriculture

Students who plan to major in Animal Husbandry should take Animal Husbandry 5 and 10 during their first two years in addition to the regular courses prescribed for all students in the School of Agriculture.

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<th>Junior Year Courses</th>
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<td>Speech 1</td>
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<td>Bacteriology 111</td>
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ART

CALVIN FLETCHER, Professor; H. R. REYNOLDS, Assistant Professor; EVERETT THORPE, Instructor.

Art 3, 22, 26, or 33 will count in the Arts Appreciation Group.

Students majoring in Art with a view to teaching in High Schools should have an acceptable knowledge of drawing, painting, modelling and two crafts. Also Art 1, 2, 31, 32, 33, 122, 123, 124, 125, 126, 151 and 10 or 113 (4 hours).

Majors other than teaching majors must show special proficiency in some field of fine arts or crafts and must submit an approved grouping about this field.

Teaching minors should present 32, 33, 123, 126, 151 and show some ability in drawing and design.

Three year normals specializing in the art field are recommended to elect Art 4, 5, 6, 7, 10 and must have 51, 52 and 53.

Students wishing to spend all their time in the department as in regular art schools may do so by consulting with the Professor in charge. Training for artists, sculptors, illustrators, commercial artists and decorators is provided thus. This work does not lead to the degree.

1. ELEMENTARY DESIGN AND NATURE APPRECIATION. Expression in terms of design of the natural and artificial forms found in one's environment. Three credits. Fall, T. Th. 8, M. 1, or M. W. F. 9, or M. W. F. 2.

Fletcher, Reynolds and Thorpe

2. DESIGN AND COLOR. Principles of design as applied in color, form, and pattern in the common things about us. Prerequisite, Art 1. Three credits. Winter, T. Th. 8, M. 1, or M. W. F. 9, or M. W. F. 2.

Fletcher, Reynolds and Thorpe

3. ART APPRECIATION. Designed to give an understanding of the principles underlying architecture, landscape gardening, interior decoration, sculpture, painting, the art of the book, pottery and other things met in every day life today, which increase enjoyment through the sense of sight. Three credits. Fall, M. W. F. 8, Winter, M. W. F. 8 and 11; Spring, M. W. F. 8 and T. Th. 8, M. 1.

Fletcher and Reynolds
31. COMMERCIAL ART AND POSTERS. Design in advertising, display, lettering, etc. Three credits. Time M. W. F. 2. Spring, Thorpe

32. COLOR. Color as used in stage lighting, painting, design, and every day life. Its physical, psychological and artistic phases are correlated. Designed for the business man, layman, dramatic artists, art teachers, and artists alike. Three credits. Spring, M. W. F. 10, Reynolds

34. ART FOR YOUNG CHILDREN. Designed to meet the needs of child development specialists, mothers in the home, kindergarten and first grade teachers. Normals should register for 51, 52 and 53 as this course is not adequate to their needs. Two credits. Winter T. Th. 1, Fletcher

51. DRAWING FOR ELEMENTARY GRADES. Methods of teaching drawing, painting, etc., in the grade schools. How to make art contribute to the social aesthetic and creative needs of the child. Should be taken by all normals who expect to teach art in the grades. Three credits. Spring, M. W. F. 11, Fletcher

52. DESIGN FOR ELEMENTARY GRADES. Methods of teaching design and color in the grades. Should be taken by normals who expect to teach art in the grades. Three credits. Fall, M. W. F. 11, Reynolds

53. HANDWORK FOR ELEMENTARY GRADES. Designed to equip normals to teach in various forms of creative handwork in the elementary grades. Three credits. Winter, M. W. F. 11, Reynolds

22, 122. HOME PLANNING, CONSTRUCTION AND DESIGN. House design, garden design, house planning, building construction, heating, lighting, plumbing, etc. How to select the type of house and properly supervise the construction and equipment of the home. Adapted to the needs of all home builders. Special assignments required for 122 credit. Three credits. Not given 1936-37, Fletcher

123. INTERIOR DECORATION. Period styles, selection of furniture, draperies, rugs, pottery and all furnishings for the home. How
to group and assemble these to create a beautiful room. Art 1, 2, 3, and 22 or 122 should precede this course if possible. Four lectures and one laboratory. Five credits. Spring, Daily 9.

124. Perspective. The principles of cylindrical, parallel, oblique and modernistic perspective as used in the arts will be covered. Three credits. Fall, M. W. F. 10.

125. Anatomy and Figure Drawing. Study of art forms in the human figure by means of artistic anatomy and creative expression by the use of the human figure. Three credits. Not given 1936-37.

26, 126. History and Appreciation of Architecture. The characteristics of the great styles of building and their evolution and the development of a taste for good architecture. Adapted alike to the layman, homemaker or teacher. Three credits. Winter, M. W. F. 10.

33, 133. History and Appreciation of Painting. Designed for the layman desiring to extend his knowledge of the work of great painters as well as for teachers and artists. Three credits. Spring, M. W. F. 11.

151. Art Education for High Schools. What to teach and how to present it. Drawing, painting, design, crafts and theory are all considered. Prerequisite, a basic knowledge of drawing and design. This course is prerequisite to practice teaching in Junior or Senior High School Art. Three credits. Fall M. W. F. 9.

STUDIO COURSES

Conducted as individual laboratory work and all courses given simultaneously. Three hours' work each week required for each credit. Two, three or more credits may be taken each quarter in each subject listed. Students must file their arrangement of time with the professor in charge, during the first week of their attendance.

One or more examples of student's work may be retained during the succeeding year for exhibition and advanced students may be called upon to exhibit their work from time to time.
Sketch classes will be organized for outdoor work on Wednesday, 2 to 5 p.m., during the fall and spring quarters. Additional landscape work may be done by arranging definite time schedules with the instructor. Sketching is recommended to painting, drawing and illustration students.

4. **Freehand Drawing.** Any type for artists, illustrators, geologists, scientists, architects, teachers may be taken up. Room 56 M. Models Pose M. T. Th. Fall and Spring; Winter M. W. F. 2-5. 

**Fletcher**

5. **Elementary Painting.** Oil, water color pastel, fresco or tempera 56 M., 2-5 daily except Friday in Fall and Spring.

**Fletcher**

6. **Sculpture—Direct Stone Cutting, Modelling.** Antique, pose, animals, composition, casting in plaster and cement. Small models may be cast in metal. 55 M.

**Fletcher**

7. **Illustration.** Elementary illustration and processes for newspapers, books, magazines, also fashion illustrating and commercial work. 54 M. Time 2-5. M. T. W. Th. or 9-12 daily.

**Fletcher and Thorpe**

8. **Embroidery Design.** For colored, white, applique, lace, etc. Room 54 M. 2-5 daily except Fri.

**Fletcher**

9. **Historic Ornament.** Egyptian, Assyrian, Greek, French, Renaissance and Modern styles. 2-5 daily except S. M. T. 54 M.

**Fletcher**

10. **Elementary Show Card.** Elementary lettering, show card and sign writing. Daily 9-12, 53 M., and daily except Friday 2-5, 53 M.

**Fletcher and Thorpe**

11. **Pottery.** Elementary, including building, turning, glazing, firing, etc.

**Reynolds**

12. **China Painting.** Elementary painting processes. Pre-requisite, Art 1, 2, or equivalent. Not given to less than six students. M. T. Th. 2-5. Room 54 M.

**Fletcher**

13. **Copper Work.** Exercises in sawing, raising, repousse and riveting. Daily except Friday 2-5. 52 M.

**Reynolds**
14. **Leather Work.** Elementary etching, dyeing, cutting and tooling of mats, purses, card cases, bags, etc. Open daily except Friday 2-5. 52 M.

*Reynolds*

15. **Basketry.** Weaving in reed, raffia and grass. Open daily except Fri. 52 M.

*Reynolds*

16. **Enameling and Jesso.** Work on wood, ivory, polychrome, etc. Open daily except Friday 2-5. 52 M.

*Reynolds*

17. **Textile Decoration.** Stenciling, batik, block printing, etc. Open daily except Fri. 2-5. 52 M.

*Reynolds*

20. **Puppetry.** Designing and making puppets; construction of puppet stage. Two or more credits. Winter, M. W. 2-5. 52 M.

*Reynolds*

104. **Advanced Drawing.** Life from draped figure, animal drawing, landscape forms, scientific technique or composition. Daily except Friday 2-5. 56 M.

*Fletcher*

105. **Advanced Painting.** Oil, water color or pastel, fresco or tempera. Daily 2-5. 56 M.

*Fletcher*

106. **Advanced Sculpture.** Composition, animal or life modelling, stone and wood carving. Daily 2-5. 55 M.

*Fletcher*

107. **Advanced Illustration.** Newspaper, magazine, costume and decorative illustration, illumination, poster work or cartooning. Opportunity is also given to take scientific illustration. Students will elect one line at a time. 9-12 daily. 53 M. or 2-5 daily except Friday.

*Fletcher and Thorpe*

108. **Advanced Wood Ornamentation.** Carving, inlay, marquetry, jesso, picture framing and gilding. Daily except Friday 2-5. 54 M.

*Fletcher*

109. **Fancy Lettering and Illumination.** Pin lettering and
decoration for memorials, documents, Xmas greetings, place cards, etc. Daily except Fri. 2-5. 52 M.

110. ADVANCED LETTERING AND SIGNS. Show card, gold, window signs, road signs and other technical sign processes may be taken up. 9-12 daily M. T. W. Th. 2-5. 53 M.

111. PROFESSIONAL DESIGN. Choice of one of the following lines:
A. Textile and Wallpaper Design.
B. Stage Design.
C. Interior Decoration.
D. Furniture Design.
E. Costume Design; Prerequisites, Textiles 105 and 115. Daily except Friday 2-5. 54 M.

112. ADVANCED CHINA PAINTING. Advanced processes, incrusted work, enamelling, lustre, paste, etc. Daily except Fri. 2-5. 54 M.

113. ADVANCED ART METALRY. Any technical phases of silver or copper smithing may be taken up. Daily except Fri. 52 M.

114. ADVANCED LEATHER WORK. Daily except Fri. 2-5. 52 M.

115. GRAPHIC ART. Etching, wood block, monotypes. Daily except Fri. 2-5. 54 M.

116. JEWELRY. Sawing, wire work, filigree, stone setting, enameling, soldering will be treated in connection with making of brooches, rings, lavallieres, pins, chains, etc. Daily except Fri. 2-5. 52 M.

117. ADVANCED TEXTILE DECORATION. Advanced work in batik, dyeing, stenciling, blockprinting and painting. Daily except Friday 2-5. 52 M.
204. **Advanced Drawing.** Time arranged. 54 M.  
Fletcher

205. **Advanced Painting.** Time arranged.  
Fletcher

206. **Advanced Sculpture.** Time arranged.  
Fletcher

211. **Professional Design.** Time arranged.  
Fletcher

Courses numbered above 200 are open to graduates only.

**Auto Mechanics and Welding**

All courses taught by A. H. Powell, *Associate Professor*

**MA 1. Principles of Automobile Construction and Operation.** A course for beginners. This course is a thorough study of the design and construction and function of the various units and parts of the automobile, with special reference to gas engine principles and the mechanism involved. The course or its equivalent must be taken by all students who wish to specialize in any branch of automobile work. Three credits. Fall, M. W. F. 8-10.

**MA 2. Principles of Automobile Construction and Operation.** A continuation of Auto Mechanics 1. It also deals with the dismounting and the assembling of the automobile. Three credits. Winter, 8-10. M. W. F.

**MA 3. Automobile Care and Maintenance (Special).** For winter students only. This course is designed especially for winter course or short term students who wish to learn enough about the care and operation of the automobile to enable them to make their own minor repairs and adjustments. Oils, lubrication, valve grinding, bearing cutting, fitting of piston rings, etc., will be taken up, along with many other problems that the average owner has to be familiar with if he is going to do his own repairing and care for his car properly. Three credits. Winter 10-12. T. Th.

**Note:** Mechanic Arts 4, 101, and 102, are advanced courses. They must be taken by all students who intend to specialize in garage management, garage practice, teaching, or repairing. The course will cover the detailed theory, operation, advantages in design and construction of all modern makes of car, and automobile equipment and appliances. Methods of systematic location of trouble, dismantling,
repairing, and assembling. Modern shop methods, tools and equipment. Prerequisites, Mechanic Arts 1 and 2, or their equivalent.

MA 4. AUTOMOBILE REPAIR. Three credits. Fall, M. W. F. 10-12; Winter, T. Th. 2-5; Spring, M. W. F. 8-10.

MA 5. AUTOMOBILE CARE, ADJUSTMENT AND LUBRICATION. For automobile owners and others desiring a course that will enable them to do their own service work on automobiles, to enable them to operate the car in the most efficient way and to reduce to a minimum the cost of operation. It will include all phases of lubrication, carburetion, brake adjustment, tappet adjustment and correct general principles of operation. Two credits. Fall, M. W. F. 8; Winter, T. Th. 10.

MA 21. OXY-ACETYLENE AND ELECTRIC WELDING. A study of the oxy-acetylene welding process, equipment, gases, properties of the various metals, etc. Practice in the welding of cast iron, steel, aluminum, and other metals is given, also the proper methods of pre-heating and the preparation of cylinder blocks and other castings that are to be welded in the latter part of the course. A special fee of $25.00 is required for all students taking this course. Three credits. Winter, T. Th. 8-10.


MA 80. DIESEL ENGINES. A study of the principles and design of diesel engines used in trucks, tractors and stationary power plants. The application and adaptability to various types of work; its operation and limitations, adjustments and repair, a study of the mechanism of all types of diesel power. Three credits. Fall or Winter, T. Th. 10-12.


MA 103. GASOLINE ENGINE, CARBURETION, AND CARBURETOR. Internal combustion, engine fuels, and a thorough treatise on the principles of carburetion, the construction of carburetors and their relationship to successful gas engine operation. Practice in repairing, overhauling and adjusting of carburetors, thorough study of the modern
devises and improvements on new models will be taken up. Prerequisite MA 4. Three credits. Fall or Spring, T. Th. 8-10.

MA 104. Farm Machinery Research. The economic application of power and machinery to farm crop production, and costs of operations. Four credits. Fall or Spring, time arranged.

MA 112B. Alternating Current Machinery. Servicing, repairing, and overhauling alternating current equipment, motors, generators, compensators and relays, power plant care and operation, repairing windings and rew windings of alternating current motors, and switchboard wiring. Prerequisite, MA 112 or equivalent. Three credits. Spring, M. W. F. 10-12.

BACTERIOLOGY AND BIOCHEMISTRY

J. E. Greaves, Professor; Kenneth R. Stevens, Assistant Professor.

Bacteriology 1 will count in the New Biological Science Group. Students majoring in the Department of Bacteriology must complete Physics 21, 22, Math. 46, Chemistry 122, Bacteriology 1, 2, 100, 104, 106, 107, 109, 110 and 111.

1. General Bacteriology. This course deals with the biology and significance of bacteria. The following are considered: The development of bacteriology; the morphology and physiology of bacteria; bacteria in air, food, and water, and the role they play in the arts, industries and the production of diseases. Where possible this course should be accompanied by Bacteriology 2. Five credits. Fall, Daily 9 and 2; Winter, Daily 9 and 10; Spring, Daily 9.

Greaves and Stevens

2. General Bacteriology Laboratory. It is desirable that this course accompany Bacteriology 1. Two credits. Fall or Winter, T. Th. 8-11 or 2-5; Spring, T. Th. 2-5.

Greaves and Stevens

100. Industrial Microbiology. This course deals with the part played by microorganisms in the arts and industries. Prerequisites, Bacteriology 1, 2, and Chem. 12 or 122. Three or five credits. Winter, M. W. F. 11, Lab. T. Th. 2-5.

Stevens

101. Soil Bacteriology. Bacteria are considered in relation to soil fertility. Graduate students should arrange with the professor
in charge for graduate credit, and register for 201. Prerequisites, Bacteriology 1, 2, and Chem. 12 or 122. Three credits. Fall M. W. F. 10.

103. Soil Bacteriology. Methods used in bacteriological investigations. Should accompany Bacteriology 101. Prerequisites, Bacteriology 1, 2, and Chem. 103. Fall. Time and credit arranged.

104. Dairy Bacteriology. The bacteria of milk, butter and cheese, and their relation to disease. Prerequisite, Bacteriology 1 and 2. Three or five credits. Fall, M. W. F. 8, Lab. T. Th. 2-5.

106. Pathogenic Bacteriology. The pathogenic bacteria are considered in relation to disease, and the subject of immunity is stressed. Prerequisites, Bacteriology 1 and 2. Three or five credits. Spring, M. W. F. 11, Lab. T. Th. 2-5.

107. Determinative Bacteriology. Opportunity is given for individual work in isolating, identifying and classifying bacteria. Prerequisites, Bacteriology 1 and 2. Two credits. Winter and Spring, T. Th. 2-5.

108. Microbiology of Food. This course deals with the desirable and undesirable activities of microorganisms in foods. Prerequisites, Bacteriology 1, 2, and Chem. 12 or 122. Two credits. Spring. Time arranged. (Not given 1936-37)

109, 110. Advanced Bacteriology. A course dealing with special phases of Bacteriology. Prerequisites, Bacteriology 1, 2, and Chemistry 12 or 122. Two credits each quarter. Fall and Winter T. Th. 8.

111. Biochemistry. The transformation going on in the plant and animal. Prerequisites, Chemistry 12 or 122. Five credits. Spring, Daily 10.

112. Biochemistry. A laboratory course which may accompany
Bacteriology 111. Prerequisites, Bacteriology 111 and Chemistry 103. Two credits. Spring, W. F. 2-5.

113, 114, 115. ADVANCED BIOCHEMISTRY. A study of the chemical transformations going on in the animal body. The class will be conducted much as a seminar. Graduate students should arrange with the professor in charge for graduate credit, and register for 213, 214, 215. Two credits each quarter. T. Th. 1.

Greaves

116. SANITARY ANALYSIS. Methods used by the sanitary inspector in examining water, milk and other foods. Prerequisites, Chemistry 103 and Bacteriology 1 and 2. Any quarter. Time and credit arranged.

Greaves and Stevens

207. RESEARCH. The laboratory and library facilities are especially equipped for advanced students in bacteriological and biochemical investigations in agriculture, household science, the industries, sanitary science and veterinary science. One to five credits. Any quarter, time arranged.

Greaves and Stevens

217, 218, 219. SEMINAR. May be taken by properly prepared undergraduates by registering for 117, 118, 119. Any quarter. Time and credit arranged.

Greaves and Stevens

BOTANY AND PLANT PATHOLOGY

*B. L. Richards, Professor; F. B. Wann, Associate Professor; Bassett Maguire, Assistant Professor; J. W. McKay, Assistant Professor; H. L. Blood, Agent U. S. Department of Agriculture.

Botany 1 will count in the New Biological Science Group. May be replaced by Botany 21 and 22.

Botany 21, 22, 23, 30, 116, 119, 120, 130, 150, 234, and 240, or equivalent required for students majoring in Botany.

Botany 21, 22, 23, 116, 120, 122, 130, 131, 133, 150, 234, and 240 or equivalent, required for students majoring in Plant Pathology.

1. ELEMENTARY BOTANY. An introduction to the more important biological principles as exemplified by plants. The nature of

*On leave.
protoplasm, the structure and physiological activities of plants, the
relation of plants to the environment and to human needs will be
treated. Credit in this course cannot be used as a prerequisite for
any course in Botany or Plant Pathology. Not open to regular students
in Agriculture. Five credits. Fall or Winter. Daily 10; Lab. T. 10-12.

21, 22, 23. GENERAL BOTANY. A general course in plant
biology dealing with the structure, nutrition, growth, reproduction, and
relationships of plants. Continuous through three quarters. Considera-
tion will be given successively to: anatomy and function of the flower-
ing plants; comparative study of representatives of the plant kingdom
from an evolutionary point of view; inheritance; and recognition
of important vascular plant families. Three credits each quarter.
Lec. T. Th. 8 or 10. Lab. M. W. or F. 8-11, or daily 2-5.

25. PLANT MORPHOLOGY. Life histories and structural rela-
tionship of plants representative of the four big groups. The course
is so organized as to give a broad view of the processes of evolution.
Prerequisite, Botany 21, 22, 23, 30. Three lectures, two Labs. Five
credits. Spring, time arranged.

30. TAXONOMY OF VASCULAR PLANTS. A fundamental course
dealing with the kinds, relationships, and classification of the vascular
plants chiefly of this region. Prerequisites, Botany 21, 22, 23, or
equivalent. Four credits. Spring, T. Th. 9; Lab., M. W. 2-5, T. Th.
2-5.

102. ADVANCED TAXONOMY. A continuation of course 30. Any
quarter or summer by special arrangement. Time and credit arranged.

108. AGROSTOLOGY. A taxonomic study of native and imported
grasses of the Western ranges. Special attention given to species playing
an important part in grazing and soil binding. Winter. Four credits.
Lec. T. Th. 9, Lab. T. Th. 2-5.

116. MICRO-TECHNIQUE. Methods of killing and preserving
botanical specimens and the preparation of permanent sections of plant
material. Designed especially for teachers of Botany and research
118. **Plant Cytology.** Anatomy and physiology of the cell with reference to cytogenetic applications. Two lectures, two Labs. Four credits. Spring, arranged. To alternate with Botany 119. (Not given 1936-37)

119. **Plant Genetics.** Basic laws underlying variation and heredity in plants. Special attention is given to the fundamental relationship of cytology to plant genetics. Attention is also given to modern advances in cytogenetical technique involving hybridization methods and x-ray treatment of plant cells. Prerequisite, Botany 21, 22, 23. Three lectures, one lab. Spring. Four credits. M. W. F. 11, Lab. W. 2-5.

120. **Elementary Plant Physiology.** A course dealing with fundamental principles of absorption, mineral nutrition, food manufacture, metabolism, translocation, and growth. Prerequisite Botany 21, 22, 23. Should be preceded or accompanied by organic chemistry. Five credits. Spring M. W. F. 9; Lab. T. Th. 9-12. T. Th. 2-5.

121. **Water Relations of Native Plants.** Consideration of rooting habits, sap concentration, transpiration and water requirements of native plants in relation to distribution and adaptation to the environment. Three credits. Winter. Arranged.


124. **Plant Chemistry.** Chemical reactions and transformation underlying the vital processes in plants. Alternates with Botany 122. Winter. Three credits. Arranged. (Not given 1936-37.)

126. **Plant Ecology.** Distribution and structure of plants as affected by environment. Prerequisite, Botany 21, 22, 23, 30, and 120. Four credits. Fall, M. W. 9; Lab., M. W. 2-5.
*130. **Principles of Plant Pathology.** Fundamental principles underlying diseases in plants. The types of diseases and methods of study are such as will give the student a comprehensive view of the subject of plant pathology. Prerequisite, Botany 21, 22, 23. Three credits. (Not given 1936-37) Richards

*131. **Truck Crop Diseases.** Diseases of vegetable crops with special emphasis on the factors underlying their cause, development, and control. Prerequisite, Botany 130. Three to five credits. Winter. (Not given 1936-37) Richards

*133. **Field Crop Diseases.** Diseases of cereal and forage crops. Prerequisite, Botany 130. To alternate with Botany 131. Three to five credits. Winter W. 11; Lab. M. F. 2-4. (Not given 1936-37) Richards

*135. **Orchards Crop Diseases.** Diseases of orchard and small fruits. Prerequisite, Botany 130. To alternate with Botany 140. Three credits. Winter Th. 10; Lab. T. Th. 2-5. (Not given 1936-37) Richards

140. **Forest Crop Diseases.** Study of nature, cause and control of diseases, and decay of forest trees and woods. Prerequisite, Botany 130 and 150. Winter. Three credits. To alternate with Botany 135. (Not given 1936-37) Richards

150. **Mycology.** Morphological and taxonomic relations of fungi with emphasis on economic forms. Prerequisites, Botany 21, 22, 23. Three credits. Fall Th. 11; Lab. T. Th. 2-5. (Not given 1936-37) Richards

160, 161, 162. **Laboratory Methods.** Open to qualified senior or graduate students majoring in Botany. Two credits each quarter. Time arranged. Staff

170. **Limnology.** Physical factors and flora and fauna of fresh water. Special attention to factors influencing fish numbers, fish foods, and methods of study. Field trips. Four credits. Spring T. Th. 8; Lab. T. Th. 2-5. Maguire

*Open to short course students.
221. Pathological Technique. Special methods as applied to Plant Pathology, physiology, and related subjects. Students may register for courses 221, and 222 only by special permission. Three or five credits. Winter. (Not given 1936-37)

Staff

222. Photographic Technique. Fundamental principles of photography as applied to advanced work in biology and plant pathology. Special attention is given to micro-photography and lantern slide production. One lecture, two Labs. Three credits. Winter, arranged. (Not given 1936-37)

Richards

234, 235, 236. Special Problems. Open to qualified students majoring in taxonomy, plant physiology, or plant pathology. Two to four credits. Time arranged.

Staff


Staff

250. Research. Open to all qualified senior college students in Taxonomy, Physiology, and Pathology. Any quarter. Time and credit arranged.

Staff

BUSINESS ADMINISTRATION
(Including Accounting and Merchandising)

P. E. Peterson, W. L. Wanlass, Professors; V. D. Gardner, M. D. Ketchum, Associate Professors; Thelma Fogelberg, Assistant Professor; L. Mark Neuberger, Instructor.

Accounting 101, 102, 103 may be used to satisfy in part the old group requirements in Exact Science if preceded or paralleled by Mathematics 15 or 34. No other courses in accounting may be so used.

Students majoring in the Department of Business Administration and Accounting may concentrate in the fields of Accounting, Finance, Management, Merchandising, and Secretarial Science. In addition to the recommended basic work in the first two years the student is advised to complete the courses listed in the following table according to his field of concentration. (Students majoring in the field of Secretarial Science should register under the advice of the Department head.)

(To be included either in the major or special group)
Fields of Concentration

ACCOUNTING:
Accounting 101, 102, 103, 104, 111, 120, 121, 122, 127; Economics 131, 206; Political Science 104, 105, 106, 107, 108; Business Administration 75, 130, 135, 146, 163, 164.

FINANCE:
Business Administration 25, 28, 40, 75, 130, 135, 136, 141, 146, 149; Economics 131, 165, 167, 168, 206; Political Science 104, 105, 106, 107, 108; Accounting 101, 102, 103, 111.

MANAGEMENT:
Business Administration 25, 28, 75, 130, 133, 135, 136, 137, 149, 152, 153, 161, 162, 163, 164; Accounting 101, 102, 103, 111; Economics 131, 145, 206; Political Science 104, 105, 106.

MERCHANDISING:
Business Administration 25, 28, 75, 135, 136, 152, 153, 157, 158, 161, 152, 130, 149, 163, 164; Accounting 101, 102, 103, 111; Economics 131, 145, 206; Political Science 104, 105, 106, 107, 108.

SECRETARIAL SCIENCE:
See outlined Course of Study in Secretarial Science.

ACCOUNTING

Accounting 1, 2. Introductory Accounting. The purpose of this course is to present the basic principles of accounting and to furnish working material in the form of questions, problems, and practice sets which require the application of the theory advanced. Principles learned here will be useful as a basis for further study of accounting and as an aid in the understanding and control of the more common problems of business. Technique will be strongly emphasized. Five credits each quarter. 1 Fall or Winter and 2 Spring, M. W. F. 11; Lab. T. Th. 2-5.

Gardner

30. INTRODUCTION TO GOVERNMENTAL ACCOUNTING. A study of basic principles underlying the treatment of public or governmental accounts. Typical matters to be discussed are: Funds, The Budget, Revenues and Appropriations, Trust Funds, Property Accounts and Financial Reports for Governments. The course should be of particular interest to prospective employees and officers of governmental
subdivisions and to prospective public accountants. Three credits.  
(Not given 1936-37)  

_Gardner_

101, 102, 103. **Problems in Accounting Principles.** This is a course in fundamentals and brings to the classroom some of the vividness of the real problems as they arise in business. A critical understanding of accounting as it serves the executive is the aim of the course. Required of all majors in Business Administration and Accounting. Graduate credit may be allowed upon the completion of some additional work. Three credits for each quarter. Fall, Winter and Spring, M. W. F. 9.

_Peterson_

104. C. P. A. Problems. A selection of typical problems taken from the examination questions of the various State Boards of Accountancy and the American Institute of Accountants. This is an essential course for students majoring in accounting. Five credits. (Not given 1936-37)

_Gardner_

108. **Accounting for Non-Commercial Students.** A brief course in Accounting necessary to meet the needs of students in the School of Engineering, School of Agriculture, and other non-Commercial students. Three credits. Winter, M. W. F. 10.

_Peterson_

111. **Industrial Cost Accounting.** A detailed study of the principles of cost accounting as applied to manufacturing industry, with particular stress upon methods of burden distribution and interpretation of cost statistics. Lectures with assigned problems and cases. Fall. Five credits. Daily 8.

_Gardner_

120. **Auditing Principles and Practices.** A study of auditing principles and techniques. Opportunity will be given to engage in a limited amount of actual practice. Lecture and laboratory. Four credits. Fall, T. Th. 9; Lab. M. W. 2-5.

_Peterson_

121. **Auditing Practice.** A laboratory course in which a complete set of working papers will be prepared including a finished audit report. Four credits. Winter, Lec. T. Th. 9; Lab. M. W. 2-5.

_Peterson_
122. PROBLEMS IN AUDITING. A case course. Prerequisites, Auditing 120, 121. Spring. Four credits. T. Th. 9; Lab. M. W. 2-5.

124. ACCOUNTING SEMINAR. Two credits. M. W. 1. Winter. Peterson

125. ACCOUNTING RESEARCH. Credit will be granted according to work done. Peterson

127. INCOME TAX ACCOUNTING. A study will be made of the important provisions of the Federal and State Income Tax laws. Practical problems in Income Tax Accounting will be considered. Fall. Five credits. Daily Gardner

BUSINESS ADMINISTRATION

25. INTRODUCTORY BUSINESS ADMINISTRATION. An introductory course in the fundamentals of business administration. It is intended that this course shall furnish the students with a background for the study of the more complex problems of business. Not open to freshmen. Lectures and reports. Five credits. Fall, daily 10. Peterson

26. APPLICATION OF ENGINEERING TO BUSINESS. Engineering applications of heating, lighting, ventilation, power, transportation as they affect the business executives in solving their problems of economy. Fall. Two credits. (Not given 1936-37) Kepner

27. MATERIAL HANDLING, PLANT LAYOUTS, BLUE PRINT READING. Survey of material handling equipment, office and factory layouts, reading common blue prints, fundamentals of orthographic projection, simple drawings. Winter. Two credits. (Not given 1936-37) Kepner

28. BUSINESS FINANCE. This course treats of the structure of the corporate enterprise; providing for a new company; expansion of existing companies; recapitalization and reorganization of the corporation. Financial and operating ratios will be discussed. Proper financial plans and methods of marketing securities will also be considered. Open to qualified Sophomores. Prerequisites, Economics 51, 52, or equivalent, and Accounting 1 and 2. Five credits. Winter, daily 10. Gardner

31. (Art 31.) COMMERCIAL ART AND POSTERS. Design in
advertising display, lettering, etc. Three credits. Any quarter. Time as for Art Studio.

Thorpe


Reynolds

40. **Mathematical Theory of Investment and Life Insurance.** (Math. 60). (Not given 1936-37)

54. **Business Psychology.** A study of (1) psychological facts and principles applicable to the business functions of production, marketing, finance and labor and personnel, and (2) psychological methods of attack upon business problems. Three credits. (Not given 1936-37)

Ketchum

55. **Personnel Administration.** A critical analysis of the problems of labor management which confront the manager of a business enterprise and of policies and methods of dealing effectively with these problems. Five credits. Winter, daily 10.

Ketchum

10, 110. (Art 10, 110). **Show Card and Sign Writing.** Any quarter. Time and credit arranged.

Fletcher

75. **Elementary Statistical Methods.** (See Math. 75.)

130. **Problems in Investment.** With concrete cases used as a basis of discussion the varying investment needs of different classes of people will be studied in the first part of the course. In the second part, attention will be given to different types of investment houses; while in the third, types of investment securities will be analyzed. Five credits. (Not given 1936-37)

Peterson

131. **Business Statistics.** (See Econ. 131.)

Gardner

133. **Industrial Management Problems.** Selected cases will be taken up for study and report. Problems in industrial location; on choice of site; on buildings and layouts; on selection, purchase,
and arrangement of equipment; on purchasing and stores; on organization; on industrial research; on labor relations, and on problems in managerial control. Prerequisite, Business Administration 25. Three credits. (Not given 1936-37)


136. Business and Professional Ethics. After a general survey of the science of ethics special consideration will be given to those principles of professional conduct which are rapidly being introduced into modern business. The work of trade associations and professional organizations will be critically analyzed. Two credits. (Not given 1936-37)

137. Management Seminar. A course for seniors and specially approved juniors in which current developments in the field will be considered in lectures and reports. Two credits. Not given 1936-37)

141. Real Estate and Insurance. The technique of real estate appraisal, transfer, legal restrictions, and the forms and papers used in real estate transactions. The various types of life and property insurance policies and their uses. Three credits. Winter, M. W. F. 9.

146. Risk and Risk-Bearing. This course deals with risks, why they exist, their influence on economic activity, who are subject to risks and the various ways of dealing with risks. The risks of the investor, worker, consumer, and business manager are treated, involving the study of speculation, research, forecasting, business judgment, the prices paid for risk-bearing services as insurance, and a critical appraisal of our present risk-bearing organization. Five credits. Spring, daily 10.

149. Business Policy. This is a co-ordinating course aimed to develop perspective and judgment and facility in solving business problems. Problems will be discussed in production, distribution, personnel, finance, control, legal and ethical aspects of business. Required of all majors in Business Administration. Five credits. Spring, Daily 8.
152, 153. Problems in Merchandising. The aim of this course is to present by means of carefully selected cases the manager's merchandising problems. Methods of marketing merchandise; selection of channels of distribution for consumers and industrial goods; sales organization and control; advertising and sales promotion; stock-turn, price policies. Five credits each quarter. (Not given 1936-37)

Peterson

157. Principles of Advertising. A study of advertising as a device in facilitating the distribution of commodities. The course includes a study of the structure of advertisements, the appeals used in the preparation of advertisements for different products, the choice of media, and the work of advertising departments and agencies. Prerequisites, Economics 51, 52. Three credits. Spring, M. W. F. 9.

Ketchum

158. Marketing Management. A consideration of the problems which confront the modern sales executive and the development of techniques which have been found useful in their solution. Prerequisites, Economics 51, 52 and Agricultural Economics 62. Three credits. Fall, M. W. F. 9.

Ketchum

161, 162. Problems in Retail Distribution. This course is designed to meet the needs of students who wish to gain an understanding of the marketing field from the viewpoint of the retail distributor. The problems given major attention are: accounting and statistics, types of retail institutions, store location, store layout and merchandise classification, sales policies, service policies, merchandising, pricing, brand policies, relation with merchandise sources and organization and administrative policies. The case method. Five credits each quarter. Winter and Spring. M. T. W. F. 11.

Peterson

163. Problems in Retail Store Management. This course logically follows course 162. A case course. The point of view of management is stressed. Problems in merchandise control, buying, advertising, display, sales promotion, personnel, plant operation, organization for store operation, accounting, credit, finance and general store management. Five credits. (Not given 1936-37)

Peterson

164. Problems in Retail Store Management and Account-
CHEMISTRY

R. L. HILL, SHERWIN MAESER, Professors; C. T. HIRST, Associate Professor.

Chemistry 1 will count in the New Exact Science Group. May be replaced by Chemistry 3 or 10.

Courses 102, 103, 104, 105, 106, 123, 160; Mathematics 98; and Physics 20, 21, 22 are required for a major in chemistry.

1. INTRODUCTORY CHEMISTRY. An informational course in beginning college chemistry designed for students who have not had high school chemistry and who desire a brief applied survey of the field of inorganic chemistry. This course cannot be used as a prerequisite for organic chemistry. Students with credits in high school chemistry will not be given credit in this course. Five credits. Spring, daily 10.

Maeser

3, 4, 5. INORGANIC CHEMISTRY. A complete course in inorganic chemistry, including a beginning in qualitative analysis. Prerequisite, high school chemistry or physics, or college physics. This course is designed specially for Chemistry or Physics majors and for Premedics. Students in Agriculture and Home Economics should register in Chemistry 10, 11, and 12. Three lectures and two Labs. Five credits each quarter. M. W. F. 8; Lab. M. W. or T. Th. 2-5.

Maeser

10, 11, 12. GENERAL CHEMISTRY. A year's course in chemistry for students majoring in Agriculture, Home Economics, Engineering, etc. This course will emphasize the fundamental principles of inorganic and organic chemistry. Both the lecture and the Lab. will be adapted to the needs of students in Agriculture and Home Economics. Prerequisites, high school chemistry or physics, or college physics. One section of Chemistry 10 and 11 will be repeated Winter and Spring quarters. Five credits each quarter. Chem. 10. Fall, M. W. F. 10 or 11 or 2; Labs. M. W. 8-11 or 9-12; or T. Th. 9-12 or T. Th. or M. W. 2-5, or Fri. 2-5, Sat. 9-12; Winter, M. W. F. 9; Lab. T. Th. 2-5 or F. 2-5, Sat. 8-11. Chem 11. Winter, M. W. F. (Same
as Chem. 10 Fall.) Spring. (Same as Chem. 10 Winter.) Chem. 12. Spring, M. W. F. 11 or 2; Lab. T. Th. 8-11 or 9-12 or T. Th. or M. W. 2-5.

_Hill and Hirst_

14, 15. **Qualitative Analysis.** A course in the theory and practice of inorganic qualitative analysis. Prerequisite, Chemistry 4. Three credits each quarter. Winter and Spring, T. Th. F. 2-5.

_Hirst_

102, 103. **Quantitative Analysis.** A course in the fundamental principles of gravimetric and volumetric analysis. Prerequisite, Chemistry 5 or 15. Three credits each quarter. Winter and Spring, T. Th. 2-5.

_Hirst_

104, 105, 106. **Physical Chemistry.** Including atomic, kinetic, and electron theories, gaseous, liquid and solid state; solutions and thermodynamics. Prerequisites, Physics 20, 21, 22; Chemistry 5; Mathematics 98. Three credits each quarter. T. Th. 9, F. 12.

_Maeser_

109, 110, 111. **Physical Chemistry Laboratory.** To accompany Chemistry 104, 105 and 106. One credit each quarter. F. 2-5.

_Maeser_

107. **Dairy Chemistry.** The chemistry of milk and milk products, including tests for adulterants, preservatives, and the routine quantitative methods of the analysis of dairy products. Prerequisite, Chemistry 12 or 122. Four credits. M. T. W. Th. 9. Spring.

_Hill_


_Hill_

116. **Inorganic Preparations.** An advanced laboratory course in practical laboratory methods of synthetic inorganic chemistry. Prerequisites, Chemistry 5 or 15, and 103. Any quarter. Time and credit arranged.

_Maeser_

120 or 220. **Special Courses in Quantitative Analysis.** Advanced courses in the analysis of Water, Food, Soil, Urine, and Gas. Prerequisite, Chemistry 103. Winter or Spring. Time and credit arranged.

_Hirst_
121, 122, 123. **Organic Chemistry.** Fundamental principles of Organic Chemistry. The aliphatic and aromatic hydrocarbons and their derivatives, including a study of the more important theories and reactions employed in organic chemistry. The laboratory work in the spring quarter will be an advanced course in organic synthesis. Three lectures and two Labs. The lecture in the Spring quarter is largely on chemical theories and reactions. Students desiring a ten hour course may register for 121, and 122, without 123. Prerequisite, Chemistry 5.

Students desiring to register for the laboratory or lecture separately in Chem. 123 should register for 123a 3 hour credit for lecture and 123b. Credit proportional to registration for laboratory. Five credits each quarter. T. Th. 10, W. 1; Lab. M. W. 2-5.

**Hill**

130. **Colloidal Chemistry.** A course in the chemistry of Colloids and their relationship to the vital processes in plant and animal life. Fall, M. W. F. 9. Three credits. Prerequisites, Chemistry 5 and 122 or equivalent. Room W201.

**Maeser**

131. **Colloidal Chemistry Laboratory.** To accompany course 130. One three hour period a week. One credit. Fri. 2-5.

**Maeser**

160 or 260. **Chemistry Seminar.** Required of all seniors majoring in Chemistry. Two credits. (Any quarter.) Th. 7:30.

**Maeser**

180 or 280. **Research.** Senior or graduate students majoring in Chemistry may elect research in any branch of the subject. Any quarter. Time and credit arranged.

**Staff**

**CHILD DEVELOPMENT AND PARENTAL EDUCATION**

**Elsa Bate, Charlotte Dancy, Assistant Professors; Valera Guyman Holman, Frances Parrish Barlow, Assistants. (Professors Moen, Fletcher, Frandsen, Henderson, Pederson, Peterson, Reynolds, Carlisle, Welti, Hendricks and Morris cooperate in giving courses in this Department.)**

Students who elect Child Development and Parental Education as their major are required to complete the following courses: Child
Development 35, 55, 60, 125, 135, 140 and 190. Selections to complete their Major may be made from the other courses listed, according to the needs and interests of the student.

8. STORY TELLING. The story as an education factor; analysis and classification of typical stories with reference to each period of the child's development. Study of sources; adaptation of material; and actual practice in story telling. The work is designed to meet the needs of student, teacher, librarian, and parent. Five Credits. Fall, daily 9.  

Myers

24. CHILDREN'S LITERATURE. Introduction to the prose and poetry of childhood and adolescence. The course should be helpful to teachers and parents. A dollar and a half library fee is required. Three credits. Fall and Winter, M. W. F. 8.  

Pedersen

34. ART FOR YOUNG CHILDREN. Designed to meet the needs of child development specialists, mothers in the home, and kindergarten and first grade teachers. Simple handiwork, color, design, and drawing expression will be considered as an educational and recreational activity in the life of the child. Two credits. Winter, T. Th. 1.  

Fletcher

35. NUTRITIONAL GROWTH AND DEVELOPMENT OF CHILDREN. A study of the growth and development of infants and children as influenced by nutrition. The food requirements of children from infancy to school age are considered together with problems in child feeding. Lecture course with field trips. Three credits. Fall, M. W. F. 8. Prerequisite, Foods 5 or equivalent.  

Morris

36. MEAL PREPARATION FOR PRESCHOOL CHILDREN. A laboratory course in menu planning and in the preparation and serving of foods for pre-school children. See Foods 36. Two credits. Spring, Daily 11. (Not taught 1936-37)

38. MUSIC FOR YOUNG CHILDREN. A study of music appreciation for little children, chiefly through participation in song singing and bodily response to various rhythms. The procedure of rote song teaching, the careful selection of song material, other music for listening lessons, and care of the child voice. One hour credit. Fall, T. 11.  

Welti

55. CHILDREN'S CLOTHING. A study of styles, material and
decoration suitable for different ages of children. Construction emphasizing comfort, beauty, convenience and self-help for the rapidly growing child. Prerequisites, Clothing 10, 11, and 50, or 20. Two credits. Winter, T. Th. 3-5; Spring, M. W. 1-3; T. Th. 8-10.

60. Child Management. Open to all girls in the college wishing to acquire a knowledge of and a degree of skill in the guidance of young children. This course should be helpful to prospective homemakers and to elementary school teachers. Laboratory in the nursery school arranged. Three credits. Any quarter, M. W. F. 2.

Bate

71. Social Problems of the Family. In this course the relation of the family with outside groups, agencies, and institutions are stressed. Attention is also paid to the inter-relation between the different members of the family. Home life is treated as a changing, developing, basic organization which should be in constant reciprocal relation with outside agencies. Three credits. Winter, M. W. F. 2; Spring, M. W. F. 11.

Hendricks

103. Psychology of Adolescence. Open to students who have had Psychology 101 or equivalent. A study of the behavior of adolescents. Three credits. Fall, M. W. F. 11.

Peterson


Frandsen

111. Heredity and Eugenics. A non-technical study of the more evident behavior of the germ cells in reproduction and the simpler principles underlying the inheritance of traits. Consideration is given to the eugenic value of human races, inferior and superior families, sexual selection and marriage, birthrate, immigration and other principles having eugenic significance. Four credits each quarter, M. T. W. Th. 1.

112. Principles of Genetics. A technical study of the cytophysical and experimental bases underlying heredity and variation. This course is a fundamental requirement for all students of plant breeding, animal breeding, or human heredity. It considers qualitative and quantitative traits, factor independence, interaction, linkage relations,
gene and somatic mutations, sex determination and modification and related subjects. Students taking this course must have had course 111 or some good general course in Biology. Graduate credit allowed. Five credits. Fall and Spring, daily 10.

Henderson

125. Mothercraft. This course includes a study of the anatomy and physiology and of the reproductive system, preparation for motherhood, and the physical care of mother and child from the prenatal period to the end of the first year of the child’s life. Prerequisite, Physiology. Three credits each quarter, M. W. F. 11.

Dancy


Bate

140. Special Problems in Child Development. Open to qualified students majoring in Child Development upon consultation with instructor. Time and credit arranged.

Staff

150. Environmental Factors of Child Life. Home conditions are dealt with briefly in this course in natural and adopted homes. The principal emphasis is on community influences and pressures which assist in the development of the personality. Field trips will supplement lectures as a means of coming into contact with societies, organized agencies, and institutions. Three credits. Spring, M. W. F. 9.

170. Juvenile Delinquency. A study of juvenile offenders. The causes of delinquency are considered with the purpose of arriving at intelligent remedies. Various methods of home, social, and institutional treatment are studied; parental cooperation, personal supervision allied with probation and parole, institutional treatment, etc. Three credits. Spring, M. W. F. 11.

Hendricks

190. Seminar in Child Development. 1 or 2 credits. Winter, W. 3-5.

Bate
For closely related courses, credit for which is applicable on a Child Development Major, see P. E. 81, Rhythms and Dramatic Games; Music 30 and 31, Public School Music; Art 51, Drawing for Elementary Grades; Art 53, Handwork for Elementary Grades; Psychology of Family Life 104.

CIVIL ENGINEERING

O. W. Israelsen, George D. Clyde, Professors; Aaron Newey, H. R. Kepner, Associate Professors; V. H. Tingeey, Assistant Professor.

APPLIED MECHANICS AND DESIGN

CE 1, 2. MATERIALS OF ENGINEERING. The chemistry of steel, the alloys, etc., and their special use in machine parts; strengths, composition and proper use of wood, plaster, glass, glue, paint, brick, cement, sand and gravel. Mechanical analysis curves, water-cement ratio, cement and concrete testing. Fall and Spring Quarters. Three credits each quarter. 1. Fall, T. Th. 10; Lab. F. 9-11; 2. Spring, T. Th. 10; Lab. M. or W. 2-5.

Newey


Kepner

CE 103. APPLIED MECHANICS AND STRENGTH OF MATERIALS. The simple machine, reactions, moments, and shears; the design of beams and columns. (See also Physics 152.) Five credits. Fall, M. W. F. 8; Lab. T. Th. 2-5.

Clyde

CE 106. REINFORCED CONCRETE. The fundamental principles of reinforced concrete design. Slabs, beams, girders, and columns. Five credits. Winter, M. W. F. 8; Lab. T. Th. 2-5.

Clyde

CE 107. EXCAVATION AND FOUNDATIONS. Soils mechanics, excavation, spread footings, piles, cofferdams, open and pneumatic caissons. Prerequisite CE 109 and 106. One credit. Fall, Th. 10.

Kepner
CE 109. **STRUCTURAL THEORY.** Reactions and stresses, graphic statics, roof and bridge trusses, long span bridges, lateral and portal bracing. (Prerequisite, CE 101, 103.) Five credits. Spring, M. T. W. F. 11 (Lab. W. 2-5.)

CE 110. **ADVANCED STRUCTURAL THEORY.** Slope and deflection by various methods, rigid frames, wind stresses in tall buildings, statically indeterminate trusses, secondary stresses. (Prerequisite CE 109.) Four credits. Fall, M. T. W. F. 11.

CE 113. **STRUCTURAL DESIGN.** Design of timber, steel, and masonry structures. Emphasis is placed on the fundamental principles of designing members of steel and timber frame works and application of methods of reinforced concrete design to bridges, walls and other masonry structures. (Prerequisite CE 106, 109.) Eight credits. Fall, Daily 9; Lab. T. Th. F. 2-5.


CE 202. **GRADUATE STRUCTURAL THEORY.** A brief review of the common methods of structural analysis followed by the study of such structures as suspension bridges, space frameworks, steel arches, or other structures of especial interest to the student. Prerequisite CE 110. Four credits. Time arranged.

CE 203. **GRADUATE STRUCTURAL DESIGN.** Design and cost estimates of timber, steel and masonry structures. Prerequisite, CE 114. Four credits. Time arranged.

**HIGHWAYS**

CE 120. **HIGHWAY CONSTRUCTION AND DESIGN.** Location, grade, drainage, resistance to traction, road materials, construction methods and cost, road and pavement design. Five credits. Fall, M. T. Th. F. 9; Lab. W. 2-5.
CE 121. **HIGHWAY ADMINISTRATION.** State, County and City highway departments, highway and local improvements laws, traffic regulations, taxation, and methods of financing country roads and city pavements. Three credits. Winter, M. W. F. 11.

CE 125. **TRANSPORTATION.** Development of highway transportation, comparison of methods of transport of passengers and commodities by highway, railway, and waterway. Organized and operated Rural Motor express lines, freight lines, and bus lines, etc. Three credits. Fall, M. W. F. 10.

**IRRIGATION AND DRAINAGE**

CE 141. **HYDRAULICS.** Laws of liquids in motion and at rest; flow in natural and artificial channels and elementary principles of water power development. Five credits. Winter, M. W. F. 11; Lab. M. W. 2-5.

*Clyde*


*Clyde*


*Israelsen*

CE 146, 147. **DESIGN OF IRRIGATION SYSTEMS.** Sources of water supply, diversion works, canal alignment and cross section, flumes, drops, and spillways. Prerequisites, CE 141 and CE 101, 102, 103. Five credits each quarter. Fall, M. T. W. 8; Lab. M .W. 2-5; Winter, M. T. W. 9, M. W. 2-5.

*Israelsen*

CE 148. **HYDROELECTRIC DESIGN.** Principles of design of hydraulic machinery used in the generation of power. Dams, penstocks,
surge tanks, pipe lines, and plant layouts. Five credits. Spring, M. T. W. 8; Lab. M. W. 2-5.

Israelsen

CE 149. Irrigation Institutions and Management. Laws governing the acquirement, adjudication, and distribution of water rights, irrigation and drainage enterprises, valuation of water rights, delivery of water to irrigators, annual water charges, operation and maintenance organizations, and costs. Five credits. Fall, daily 10.

Clyde

CE 241, 242. Research in Irrigation and Drainage. Specialy prepared undergraduates or graduate students may elect a problem in irrigation or drainage for investigation, subject to the approval of the professor in charge. Such investigations may be conducted at the College or elsewhere. The studies may be used as a basis for a thesis to meet in part the requirements for an advanced degree. Any quarter. Time and credit arranged.

Israelsen or Clyde

ENGINEERING DRAWING

Drawing rooms are open from 8:00 a. m. to 5:00 p. m. daily. Supervised instruction given from 2:00 to 5:00 p. m. A student may register for any number of credits. Three hours per week are required for one credit. All classes conducted simultaneously in Room 307, Engineering Building.

All courses in Drawing to be given by Professor Kepner.

CE 60. Engineering Drawing for Foresters. Use of instruments, lettering, applied geometry, elements of orthographic projection and pictorial drawing. One credit. Fall. Time arranged.

CE 61. Engineering Drawing. Use of instruments, lettering, applied geometry, orthographic projection, and pictorial representation. Three credits. Fall, W. 3; Lab. M. 3-5, T. Th. 8-10.


CE 63. Descriptive Geometry. Principal, auxiliary, and oblique views, lines, planes, developments, intersections, warped surface, mining problems. Three credits. Spring, T. Th. F. 2-5.

CE 71. Map Reading and Topographical Drawing. Topographical lettering, symbols, enlargement and reduction of maps, con-
struction of topographical models. Three credits. Any quarter, time arranged.

CE 75. Architectural Drawing. Principles of perspective, shades and shadows, building details and architectural symbols. A complete set of drawings for a small dwelling house is made. Three credits. Any quarter, time arranged.

SURVEYING

CE 81. Plane Surveying. Use of tape, transit, level, compass, etc., in field problems and traverses. Differential and profile leveling, plotting, care of instruments used by engineers. Four credits. Fall, T. Th. 2; Lab. T. Th. 9-11, F. 11-1.

CE 82. Plane Surveying. Topographical surveying, hydrographic surveying and some rural and city surveying. Prerequisite, Trigonometry. Four credits. Spring, M. W. 11 or 1; Lab. T. Th. 9-11, F. 1-3.

CE 83. Mapping and Office Practice. Practice in the mapping of the various kinds of surveys that may be encountered by the engineer. Two credits. Winter, arranged.

CE 181. Railroad and Highway Curves and Earthwork. Instructions and practice in railroad and highway curves, transition curves, and earthwork computations. Prerequisites, CE 81, 82. Five credits. Spring, M. W. F. 9, T. Th. 2-5.

GENERAL


CE 196. Heat and Power Machinery. Steam generation;
fuels and combustion; construction and operation of boilers; elementary thermodynamics. Types, details, and tests of steam engines and gas engines. Measurement of power. See also Physics 118. Three credits. Spring, M. W. F. 10.

Gardner

CE 197. ELECTRIC MACHINERY. Principles of continuous and alternating current generators and motors; transmission and distribution; air compressors. See also Physics 112. Three credits. Winter, M. W. F. 8.

Linford

CE 198, 199. UNDERGRADUATE THESIS. Senior year, one credit each quarter. Fall and Winter, time arranged.

Staff

DAIRY HUSBANDRY AND MANUFACTURING

GEORGE B. CAINE, Professor; A. J. MORRIS, Associate Professor.

Students majoring in Dairy Husbandry must complete the following major courses for graduation. Dairy 1, 5, and 6; Animal Husbandry 1, 10, 150, 155, as well as all courses listed in the Department of Dairy Husbandry. Chemistry 107 and Bacteriology 104 will also be required. Courses in Botany, Crops, Accounting, Advertising, English and Mechanics should be followed carefully to fill other groups.

1. GENERAL DAIRY. Designed for students who desire a short, general course in dairying. Especially taught for students majoring in other departments of the School of Agriculture, for Smith-Hughes students and for prospective county agents. The following will receive consideration: history and present status of the dairy industry, the Babcock test for milk and cream, the manufacture of some dairy products; kinds, uses and care of farm utensils, best and most sanitary methods of handling milk, methods of starting dairy herds, breeds of cattle, cow testing associations and testing circles, bull associations, advanced registry, boys’ and girls’ clubs and herd records. Three credits. Fall or Winter, T. Th. 9; Lab. Th. 2-5.

Caine and Morris

2. DAIRY FARMING. A general course in dairy production designed for all students in the School of Agriculture wanting further training in this phase of dairying. A study of the basis for successful dairy farming and the important economic factors in the production

Caine


Caine


Caine


Caine

*111. Dairy Cattle Judging. A study of the types of the various breeds of dairy cattle. Visits to important herds. Valuation of dairy cattle. Prerequisite, Animal Husbandry 1 and 100, or Dairy Husbandry 12. Two credits. Spring, T. Th. 2-5.

Caine

115. Seminar. Discussion and reports of current literature. Any quarter. Time and credit arranged.

Staff

150. Special Problems. A course for students wishing to study certain specialized phases of the dairy industry. Reading of recent research literature and a certain amount of individual investigational work required. This course requires a thesis. Students majoring in Dairying are required to carry at least six hours of this course during their senior year. Any quarter. Time and credit arranged.

Staff

*Open to students in the short course.
216. RESEARCH. Original research work on problems in the dairy industry. Graduate students only. Any quarter. Time and credit arranged.

DAIRY MANUFACTURING

A prescribed course is set up for students majoring in Dairy Manufacturing. Students should study this course rather carefully and adhere to it as closely as possible. It is expected that students spend at least six months in a commercial dairy manufacturing establishment before graduation. It is strongly recommended that more than six months be spent in dairies if possible. This can usually be arranged by securing summer work through the department. Very good cooperation exists between the department and the commercial dairies, and frequent trips are made to them during this course of study.

4. DAIRY MECHANICS. A study of the selection, construction and operation of dairy equipment, steam boilers and refrigeration systems. Four credits. (Not given 1936-37)

5. JUDGING DAIRY PRODUCTS. Methods and practice in judging and grading dairy products for market quality and show. Two credits. Spring, M. 1; Lab. M. 2-5.

6. MARKET MILK. Modern sanitary methods of producing, processing and marketing milk and cream for city supply. Three credits. Fall, T. Th. 8; Lab. T. 2-5.

*7. DAIRY PRACTICE. A course for short course students only. Practice in plant operation will be emphasized. Any quarter. Time and credit arranged.

*101. MANUFACTURE OF ICE CREAM AND ICES. Purchase of raw materials. Chemical and physical structure of an ice cream mix and its relation to the finished product. Standardizing, processing and freezing of standard commercial ice creams, sherbets and ices. Five credits. Spring, M. T. W. Th. 10; Lab. T. 2-5.

Quality and composition control will be emphasized. Five credits. Fall, M. T. W. Th. 10; Lab. W. 2-5.

*103. Manufacture of Cheese. A study of the factors involved in the manufacture of cheese. Cheddar, Colby, cottage cheese and casein are manufactured and studied in detail. Five credits. (Not given 1936-37)


105. Management and Operation of Dairy Manufacturing Plants. Forms of organization of dairy manufacturing enterprises. Personal problems, advertising, selling, managerial use of accounting records and other principles underlying successful management and operation are considered. All operations of the creamery are conducted by this class. The manufacturing work is divided into nine departments and a student is placed in charge of each department for one month, at the end of which time he is rotated to a new one until he has had experience in every department. A business and operation report is made by each student at the end of each month. The class is limited to 11 students, each of whom must pass a physical examination, be of Senior College standing and have above an average of "C" grade for his Junior College work. Application for admittance must be made in writing. Two credits each quarter. Three quarters. One lecture, one Lab. Time arranged.

*106. Varieties of Cheese. A study of the history, importance and manufacture of some of the most common varieties of cheese found on the American markets besides those of the Cheddar group. Five credits. Winter, M. T. W. Th. 8; Lab. W. 2-5.

151. Dairy Technology. Testing and analysis of milk and the products made from it. Introductory dairy research will be emphasized. Six credits. Three quarters. Fall and Winter, M. 1; Lab. M. 2-5; Spring, W. 8; Lab. Th. 2-5.

*Open to students in the short course.
Economics 51 will count in the New Social Science Group.

Students majoring in this Department should include the following senior college courses in either the major or special group. Economics 107A-B, 125, 131, 135, 140, 155, 165, 167, 180, 181, 182, and 205; Agricultural Economics 113; Accounting 101 and 102; Political Science 105, 106, 107, 108, 116, 117, and 120.

1. General Social Science. A freshman course designed as an introduction to the field of the social sciences. Modern economic, political and social institutions and problems will be considered historically, critically, and scientifically. Five credits. Fall, daily 8.

4. Economic Resources of the United States. An analysis of the resources and industries of the United States, with emphasis upon their regional distribution. Effects of the physical and geographic environment upon population and the social system. Particular attention is paid to these forces bringing about changes in our economic structure. Three credits. Fall, M. W. F. 11; Winter, M. 1, T. Th. 9.

5. Economic Resources of the World. A review of the natural and economic resources of the world by continents. The natural and human aspects of geography will be emphasized. Three credits. Spring, M. 1, T. Th. 9.

10. Geography of Utah. (Geology 5) Review of different physiographic provinces and land and water relationships. Geographic distribution and economic importance of water power, timber and mineral resources, and the manner in which they have influenced the settlement and industry of the state. This course does not count in the Social Science group. Five credits. Winter. (Not given 1936-37)

25. Economic Development of Western Europe. A survey of the development of economic institutions and systems in those countries of Europe which have contributed most to and are most intimately connected with the economic life of the United States. Comparison and contrast between European and American economic
institutions. The development of trade relationships between Europe and the United States. The procedures and practices involved in the conduct of European-American trade. Three credits. (Not given 1936-37)

30. Economic Development of the United States. This course indicates the dominance of economic forces in history. A critical study of the evolution and progress of American agriculture, industry, commerce, transportation, banking, labor organizations, etc., from the Colonial period to the present time, ending with a survey of existing institutions. Three credits. Spring, M. W. F. 11.

51. General Economics. An introductory course covering the entire field of Economics. After a brief survey of man's economic development, a careful study is made of those fundamental principles upon which modern economic life is based. Attention is also given to such subjects as money, credit, banking and labor problems. Five credits. Fall, daily 8, 9, 10, 2; Winter, daily 8, 9, 10, 3; Spring, daily 8, 9, 10, 2.

52. Advanced General Economics. This course is especially designed for students of the School of Commerce and others who desire a more thorough grounding in Economics. A more intensive study of economic laws will be made with special reference to their application to present economic problems. Required as a prerequisite to all senior college courses in the School of Commerce except in Agricultural Economics and Marketing. Prerequisite, Economics 51. (Not open to Freshmen.) Five credits. Fall, daily 9, 10; Winter, daily 10; Spring, daily 9, 10.

107 A-B. Advanced Economic Theory. A critical analysis of present day economic theories of value, distribution, and related subjects. This course must be taken by all students majoring in the departments of Business Administration, Agricultural Economics, and Economics. Prerequisites Economics 51, 52. Six credits. Winter and Spring, M. W. F. 10.

125. Labor Economics. A study of the development, government, governmental problems, policies and relations of labor organizations. The course will include a study of labor legislation, the
main divisions of which relate to the legal minimum wage, women
and child labor and the various phases of social insurance against the
hazards of unemployment, sickness, and old age. Five credits. Winter,
daily 8.

**Murray**

131. **Business Statistics.** Application of statistical methods
to problems of business with attention to graphs, analysis of time
series, interpretation of index numbers and the statistics of particular
industries and business in general. Prerequisites, Math. 75, Economics
51 and 52. This course may be used for a major in Bus. Adm. Five
credits. Winter, T. W. Th. F. 8; Lab. M. 2-5.

**Gardner**

135. **Transportation Economics.** Emphasis is placed chiefly
on railroad transportation in the United States. Some attention will
be given to highways transportation. The underlying economic prin­
ciples will receive more attention than the practical phases of trans­
portation. Special attention will be given to those problems that are
peculiar to the intermountain section. Prerequisites, Economics 51, 52.
Three credits. Fall, M. W. F. 11.

**Murray**

140. **International Economic Relations.** Special attention
will be given to the basic economic relationships existing between the
industrial nations of the world, international commerce, tariffs and
trade restrictions, international debts and finance, and various means
of promoting progress on a basis of sound economics. Prerequisites,

**Wanlass**

145. **Economics of Consumption.** There is an economics of
consumption that is quite as important as the economics of production.
This course deals with personal and group expenditures, standards of
living, budgets, variations in consumption, etc. Prerequisite, Econ.

**Wanlass**

150. **Types of Economic Organization.** A study of the
various forms of economic organization that have been proposed, in­
cluding some of the Utopias, Marxian Socialism, Collectivism, the
Single Tax, Consumer’s Cooperatives, Syndicalism, Guild-Socialism,
Communism, Fascism, and Capitalism. Three credits. Spring, M.
W. F. 11.

**Murray**
155. Principles of Taxation. After a brief survey of the fundamental economic principles of public finance, a critical examination of our federal, state, and local taxes and the various business taxes will be studied. Special attention will be given to tax problems in Utah. Prerequisites, Economics 51, 52. Three credits. Winter, M. W. F. 11.

165. Money and Credit. The nature, development and uses of money and credit. Special attention given to bimetallism, the gold standard, the money market and the relation of money and credit to prices. Prerequisite, Economics 51, 52. Five credits. Fall, daily 9.

167. Banking. The functions and operation of such financial institutions as commercial banks, savings banks, and trust companies will be studied critically. This will be followed by an historical treatment of banking in the United States and a survey of European and Canadian banking in comparison with our Federal Reserve System. Varied reading and reports on pertinent problems will be part of the course. Prerequisites, Economics 51, 52 and 165. Five credits. Winter, daily 9.

171. Economics of Business Cycles. A study of the theory, history and statistics of business cycles and of problems of their prediction and control. Prerequisites, Economics 51, 52. Three credits. Fall, M. 1, T. Th. 9.

172. Industrial Combinations and Monopolies. This course deals with the causes of the tendency toward combination on the part of industrial enterprises, the significance of this tendency as related to various phases of economic life, and the social problems which have arisen as a result of this tendency. Prerequisites, Economics 51, 52. Three credits. (Not given 1936-37)

175. Public Utility Economics. A study of the economic principles involved in the furnishing of communication and urban transportation services and the provision of light, heat and power facilities by the public service companies of the United States. Prerequisites, Economics 51, 52. Three credits. (Not given 1936-37)
180, 181, 182. **Current Economic Problems.** (Economics Seminar.) A reading and research course designed for junior, senior and graduate students who are majoring in economics and related subjects. Special reports on current economic problems and literature will be made. Required of students graduating in economics. Two years credit allowed. One credit each quarter. T. 11.  

Wanlass

200. **Research in Economics.** Special investigations in problems of economics may be carried on by senior and graduate students. Credit will be granted according to work done.

Wanlass

205. **History of Economic Doctrines.** A critical study of the origin and development of the economic theories of the leading thinkers in the leading nations of the world from 1750 to the present time. Three credits. (Not given 1936-37)

Murray

**EDUCATION**

*E. A. Jacobsen, C. E. McClellan, Professors; L. R. Humpherys, Associate Professor; Edith Bowen, Elsa Brown Bate, Assistant Professors; George S. Bates, Alvin Hess, Lenore Lewis, Instructors.*

For a major in education the student must complete 41 quarter hours of work in the field of psychology and education, 14 hours of which must be upper division work. These 41 hours must include the courses required for a teacher's certificate, and at least one course in each of the following fields: Advanced Administration or Supervision, History or Philosophy of Education, Tests and Measurements or Statistics, Advanced Educational Psychology, and special work in Education Seminar.

A major in education requires a teaching major of 30 quarter hours, and a minor of 18 hours, in subjects taught in secondary schools. Requirements for general teaching certificate must be met. (See page 52.)


Pond and Staff
31. Elements of Scoutmastership. A study and practice in the arts of Scouting and acquaintance with the skills involved in the practice of Scouting. The organization and methods of Scouting will be stressed. One two-hour session and one field period weekly. This course meets the requirements for approved certification in the 5 year training program of the Boy Scouts of America. Time to be arranged. Fall quarter. Three credits.

32. Educational Camping. A study of organized camping as an educational activity. Special attention will be given to camp organization and objectives with practice in technique. One hour weekly with additional field work. Time to be arranged. Open to men and women. Scouting specialization credit given toward the 5 year training program of Scouting. Spring quarter. One credit. Arranged.

50. Pictures in Education. Introduction to the rapidly growing field of visual education. Weekly lectures and demonstrations showing some of the outstanding uses of visual aids. Emphasis is placed on the relation of pictures to life and education. Fall quarter. Two credit hours. Th. 4-6.

51. Visual Education. May be taken without special prerequisites, although "Pictures in Education" is recommended. Stress is placed on the educational appreciation of theatrical motion pictures, with weekly demonstrations of important uses of motion pictures. Winter quarter. Two credit hours. Th. 4-6.

52. Motion Pictures in Education. The importance of instructional motion pictures as classroom aids is developed, together with suggestions on how to make effective films fit the teaching schedule. Weekly demonstrations of exceptional teaching films. Spring quarter. Two credit hours. Th. 4-6.

104. Elementary School Curriculum. This course is designed to familiarize prospective elementary teachers with the content of the elementary curriculum and the objectives and standards to be realized in the grades. Three credits. Any quarter, T. Th. 1-3.

105. Principles of Teaching in Elementary School. The

106. **Practice Teaching.** This course is for juniors who have had educational psychology, principles of education and methods. The apprentice plan is followed which requires an initial period of observation with minor responsibility but with gradual increase of work and responsibility as trainee's ability is demonstrated. The quarter during which the student is to do practice teaching must be arranged for at the time of registration in the Fall quarter. Ten credits. Any quarter, time arranged.

109. **History of Education.** A brief review of the historical development of educational theories and practices from the Greeks to the present. Special emphasis will be placed upon the relation of education to the social, religious, political and industrial conditions of the period. Important educational reforms and reformers will be studied for the lessons they may teach to modern education. Two credits. Winter, T. Th. 8.

110. **History of American Education.** The evolution of the American Public School system; its colonial and European origins; development of public control and support, expansion of activities and scope. Two credits. Spring, T. Th. 8.

111. **Principles of Education.** A study of the scientific data of education as related to the processes and methods used in teaching. Consideration will be given to educational values and objectives and to thesis and measurements by which standards are determined. Prerequisite, Psychology 102. Three credits. Any quarter, M. W. F. 8.

114. **Methods in Secondary Education.** The study of problems and principles involved in the learning process: relationship between learner, subject matter, and method; objectives, motivation, presentation, discipline, evaluation, and other fundamental considera-
115. Directed Observation and Teaching. A course in the application of the principles of education. High school classes will be visited, reports on observations made, lesson plans created and some apprentice teaching done. Evidence will be sought through various tests to discover the fitness of students for the teaching profession. Prerequisite to Education 117. Four credits. Any quarter, time arranged.

McClellan

116. Classroom Management and Techniques. This course accompanying Practice Teaching, Education 117, will consider details of teaching: personality problems of the teacher, individual differences among students, lesson assignments, study procedures, types of teaching, discipline, examinations, grades, and other such problems. Two credits. Any quarter, T. Th. 8.

McClellan

117. Practice Teaching in High School. Required for Junior High or Senior High certificate. Open only to seniors and graduate students. Prerequisites, Psychology 102, or 103; ten hours of education, including Education 111, 114, and 115, or equivalent courses; and 18 hours in subject in which student expects to do practice teaching. Applications for this course to be made at least two quarters in advance. Four credits. Any quarter, time arranged.

McClellan


Bate


Bate

121. Organization and Administration of Education. This
course is designed to provide a general knowledge of the administration of the American public school system with special reference to Utah conditions. Topics discussed will include national, state, and local administration; finance, relationship of school units, pupil administration; personnel problems of teaching. Three credits. Winter and Spring, M. W. F. 10.

Farnsworth

122. Practice Teaching in Home Economics. Supervised teaching carried on in the Logan High School (for twelve weeks). One group and two individual conferences with each girl weekly. Prerequisite, Education 111, 119. Four to eight credits. Any quarter, time arranged. Discussion W. 4.

Bate


Humpherys

125. Practice Teaching in Shop Work. Supervised observation and practice teaching in various shop units in selected schools near the College. Individual conferences with Critic Teacher and Teacher Trainer. Prerequisite, Education 124. Four to eight credits. Winter or Spring, time arranged.

Humpherys

126. Methods of Teaching Agriculture. For prospective Smith-Hughes and agricultural teachers. The Smith-Hughes law and how it operates in Utah; selection and arrangement of subject matter; lesson planning; observation management of students in class room, laboratory and field; visual and extension methods of teaching. Prerequisite, Education 111 or its equivalent. Five credits. Winter, daily 10.

Humpherys

127. Practice Teaching in Agriculture. Opportunity will be provided for a limited number of men to do personally directed teaching in Smith-Hughes work in approved departments of vocational agriculture. Prerequisite, first three years of Smith-Hughes curriculum. Four to eight credits. Winter or Spring, time arranged.

Humpherys
129. **Guidance and Personnel.** A study of the meaning, purpose, trends and present status in the guidance movement. An analysis of the various agencies in guidance and personnel work and how to organize them in our secondary school system. Three credits. Fall, Winter and Spring, M. W. F. Th. 9. 

*Humpherys and Farnsworth*

131. **Educational Tests and Measurements.** A course dealing with the history, principles and practices of the testing movement. Analysis of types of tests, their construction and use, with some practice in giving, scoring and interpretation. Three credits. Fall, M. W. F. 2.

*Farnsworth*

135. **Statistics for Teachers.** Practice in the computation and interpretation of simpler statistical measures. Use of labor saving devices in computations. Three credits. (Not given 1936-37) 

*Farnsworth*

160. **Philosophy of Education.** The dependence of education upon the methods and deductions of modern thinking; with an attempt, also, to evaluate the functions of and relationships between the various factors that comprise our system of public education. Two credits. Spring, time arranged. 

*McClellan*

228. **Work of the Secondary School Principal.** This course will be in the nature of an appraisement of the position of the secondary school principal. It should involve the building of an adequate philosophy of secondary education, listing and resolving the problems met by this group in their own particular position. Those who compose the class will in large measure determine the problems discussed. It will be a laboratory course chiefly. Two credits. Winter, T. Th. 9. 

*Farnsworth*

229. **Educational Administration.** A study of state, city, and rural school systems, with the principles underlying their organization and administration; an examination of the powers, duties and responsibilities belonging to state and local boards of education, and upon superintendents, principals, and other school officials. A review of the literature of the field. Two credits. Fall, T. Th. 9.

*Farnsworth*

230. **Educational Supervision.** A study of the objectives, ideals and present practices of the school; an examination of courses
of study as a means of reaching desired objectives; a study of psychological principles as applied to present practices in teaching; a consideration of the technique necessary for the supervisor in determining success or failure on the part of the teacher. Two credits. Winter, time arranged.

237, 238, 239. Educational Seminar. This course gives opportunity for the investigation and report of individual problems and for group discussion and criticism on these reports. One credit. Any quarter, time arranged.

267, 268. Introduction to Research in Education. An inquiry into the nature and source of research problems, with a study of the underlying principles and the methods of working out such problems in the field of education. Some attention is given to the matter of thesis writing as a problem related to research. Two credits each quarter. Fall, Winter, time arranged.

271. Research in Education. This course provides for individual work in thesis writing with the necessary guidance and criticism. Nine to fifteen credits. Any quarter, time arranged.

ENGLISH AND SPEECH

N. Alvin Pedersen, Professor; Wallace J. Vickers, Alma N. Sorensen, Associate Professors; Charlotte Kyle, King Hendricks, Wilford D. Porter, Assistant Professors; Ruth Moench Bell, Instructors; A. J. Hansen, Assistant.

To fill the Language Arts Group take English 10 and select five hours from courses in literature of junior college grade or Speech 1a and 1b. Speech 60 counts in the Arts Appreciation Group.

English 1, 10, 52, 105, six hours of advanced writing, of which three must be creative, 160, 162, 163, 180, 190, 191, and five quarters of French or German are required of majors in English. They must also maintain a “B” grade in their major subjects.

1. College Grammar. Five credits. Fall or Spring, daily 8.

2. English for Foresters. Drill in fundamentals. Spelling, capitalization, grammar, sentence structure, paragraphing, and organ-
ization of material are stressed, including an introduction to clear writing. Three credits. Fall quarter, M. W. F. 3; Spring quarter M. W. F. 2.

3. **English for Engineers.** Fundamentals in grammar, sentence, and paragraph; outlining; reading magazine articles for illustrative material. Four credits. Winter, T. W. Th. F. 3.


5. **Scientific Vocabulary.** A study of word formation and derivation as a means of understanding scientific terms and of acquiring a large vocabulary. Three credits. Fall, T. Th. F. 10; or Spring, T. Th. F. 3.

10. **Sophomore Composition.** Fundamentals in sentence and paragraph structure; drills and tests for accuracy; practice in outlining and organizing material; attention to correct usage; emphasis on expository writing. Five credits. (Not given 1936-37)

11. **Expository Writing.** A course in the preparation and the writing of reports. Open only to students of Engineering. Four credits. Fall. M. T. W. Th. 3.

12, 13, 14. **Newspaper Reporting and Editing.** Lectures, practice, and group discussions on the work of the reporter, correspondent, and copy reader. Also, ethics, social responsibilities and problems of newspaper reporting. Students are required to cover assignments for local, state, and college newspapers and receive personal criticism of written work. Not open to freshmen. Three credits each quarter. M. W. F. 11.

15, 16. **Community Journalism.** Discussion of problems pertaining to the writing, editing and publishing of a weekly newspaper; news sources and methods for community correspondents. Consideration will be given to writing for the farm and home. Not open to

21. **Readings in Poetry.** The purpose of this course is to aid the student in seeing what is enjoyable in poetry. Five credits. Winter quarter. Daily 8.


24. **Children's Literature.** Introduction to the prose and poetry of childhood and adolescence. A $1.50 library fee is required. This course is helpful to teachers and parents. Three credits. Fall or Winter, M. W. F. 8.


27. **The Nineteenth Century Novel.** Analysis of the novels of Hardy, Meredith, Howells, James, Turgenev. Three credits. Spring, M. W. F. 11.

32. **Ballads.** Readings of famous English and American Ballads with a study of their origin and place in Literature. Attention will be given to both the traditional and the modern popular ballad. Three credits. Fall, M. W. F. 3.

33, 34. **Short Story.** A study of the technique of the Short
Story. English, American, and European stories will be analyzed. Encouragement will be given to those who wish to write. Four credits. Winter and Spring, M. T. W. Th. 9.


37. **The Essay.** Writers of the present—American and English. Four Credits. Spring, M. T. W. Th. 2.

40. **World Literature.** A survey course including a study of epic and romance, tragedy, comedy, satire, etc., as these forms have appeared in Greek, Roman, Hebrew, Italian, French, German, English, and American literature. Five credits. Spring, Daily 10.

41, 42, 43. **Scandinavian Literature in Translation.** Selected readings from recent and traditional writers—short stories, novels, and poetry. One credit each quarter. M. 1.

47. **Contemporary European Novel.** Readings in the fiction of present-day Europe. Three credits. Spring, M. W. F. 3.

52. **American Literature.** General survey of American prose and poetry from Colonial period to the present. Four credits. Fall, M. T. W. F. 2; Spring M. T. W. Th. 10.

63. **Readings in Shakespeare.** General course covering the dramatic principal plays. Five credits. Fall, Daily 10.

92. **Tennyson.** The chief poems of Tennyson, with attention to the poet’s technique, message, and charm. Five credits. Fall, Daily 10.

105. **History of the English Language.** A study of the
evolution of the English language from Anglo-Saxon times to the present. Three credits. Winter, M. W. F. 2.

107. ARGUMENTATION. A study of logic as it is related to argument. The course provides ample practice in analyzing masterpieces of argument and in constructing both written and oral argument. Open to junior college students only upon consultation with the instructor. Five credits. Fall, Daily at 2.

108. DEBATE. Application of the principles of argumentation to debate. Primarily for candidates for the debate squad, but open to everyone. Students with no experience in debate should consult the instructor before registering. Five credits. Winter, Daily at 2.

110. JUNIOR COMPOSITION. Open to Juniors who have completed English 10. (Not given in 1936-37)

111. THESIS WRITING. A course in the preparation and the writing of a thesis. Limited to thirty students. Candidates for the course must have the approval of the instructor. Three to five credits. Winter or Spring, M. T. W. Th. 1.

112. THE WRITING OF SPECIAL FEATURE ARTICLES. Lectures and practice in preparing special articles for newspaper and magazine publication. Analysis of periodicals will be made to determine available markets and what editors buy. Not open to students below junior year. Three credits. Spring, T. Th. 8.

113, 114. PUBLICITY METHODS. A detailed study of media and methods used to inform the public. Special consideration will be given to writing radio continuity; preparing newspaper ads and articles; posters, exhibits, film strips, circular letters, mimeographed material and bulletins. Two credits. Fall and Winter, T. Th. 9.

118, 119. CREATIVE WRITING. Short stories, essays, poetry. Considerable freedom of choice as to type. To register for Winter quarter exclusive of Fall quarter, consult instructor. Three credits each quarter. Fall and Winter, M. W. F. 11.
126. **Types of Fiction.** Period restricted to the eighteenth and nineteenth centuries. The appearance and development of important types in England and America, together with a comparative study of selected European fiction in translation. Five credits. Daily 9, Winter.

_Sorensen_

140. **The Bible as English Literature.** The literature of the Bible arranged chronologically and studied in its relation to the historical, social, and religious background of the Hebrews. Five credits. Fall, Daily 10.

_Vickers_

141. **Introduction to Greek Literature.** This course provides an opportunity to become acquainted with both the Greek epics and the Greek dramas. The reading is done in translation. Five credits. Winter, Daily 10.

_Vickers_


_Pedersen_


_Hendricks_


_Hendricks_


_Hendricks_

160. **The Literary History of England.** This course is designed for English Majors and Minors. Its purpose is to correlate the reading previously done for various courses in English literature. Five credits. Spring, Daily 10.

_Vickers_
FOODS AND NUTRITION

162. CHAUCER. Extensive reading course. Attention is paid to pronunciation. Five credits. Spring. (Given 1937-38) Pedersen


165. ELIZABETHAN DRAMA. A study of the predecessors of Elizabethan dramatists, with emphasis on the contemporaries and the followers of Shakespeare. Five credits. Fall, Daily 9. Sorensen

170. MILTON. Selected prose and poetry with special emphasis on Paradise Lost. It is desirable, though not necessary, to have English 140 and 141 before taking this course. Five Credits. Spring, Daily 2. Vickers

180. THE EIGHTEENTH CENTURY. A comprehensive study of the literature from 1660 to 1795. Five credits. (Given 1937-38) Sorensen

190. ROMANTIC PERIOD. A study of the literature from 1795 to 1832, of Scott, Wordsworth, Coleridge. Five credits. Fall, Daily 9. Kyle

191. THE VICTORIAN PERIOD. A comprehensive review of the literary influences and personalities of the period, with emphasis on the chief poets and prose masters of the age. Five credits. Winter, daily 10. Sorensen

193. ARNOLD. Studies in the prose of Matthew Arnold, with emphasis on Arnold’s contribution to nineteenth century thought. Two credits. Fall, M. W. 11. Sorensen

FOODS AND NUTRITION AND GENERAL HOME ECONOMICS

Christine B. Clayton, Professor; Charlotte E. Dancy, Elsie M. Troeger, Sadie O. Morris, Assistant Professors; Agnes Bahlert, Instructor.

Majors in the field of Foods and Nutrition are required to complete the following courses: Foods 5, 20, 21, 35, 106, 141, 142, 180, 190 and 191. Those preparing for Hospital dietitian-internships should
include Biochemistry and a course in Accounting. Majors in Foods should register for Chemistry 3, 4, 121, 122.

5. Principles of Nutrition. This course includes a study of the relation of food to physical fitness, and the practical application of such information to the college student. Open to men and women. Five credits. Fall and Winter, Daily 9; Spring, Daily 8.

Morris

8. Meal Preparation for Men. This class is designed for men students who wish to obtain practical training in cookery and meal preparation. Two credits. Fall, M. 2; Lab. W. 2-5; Spring, M. 2; Lab. W. 2-5.

Bahlert

9. Meal Preparation and Serving. A study of the methods of preparing and serving of simple meals. Open to all women students of the college. Three credits. Fall, F. 2, Lab. T. Th. 2-5; Winter, F. 2, Lab. T. Th. 2-5; Spring, F. 2, Lab. T. Th. 2-5.

Bahlert


Troeger

35. Nutritional Growth and Development of Children. A study of the growth and development of infants and children as influenced by nutrition. The food requirements of children from infancy to school age are considered together with problems in child feeding. Prerequisite, Foods 5 or equivalent. Lecture course with field trips. Three credits. Fall, M. W. F. 8.

Morris

106. Food Engineering. This course includes laboratory practice in the most efficient methods of preparing and of serving meals with consideration given to money, time, and energy. Required of all Smith-Hughes students. Three credits. Winter, M. W. 11-1, F. 11; Spring, M. W. 11-1, F. 11.

Bahlert
111. **Nutrition for Athletes.** A study of the relation of food to physical fitness. Three credits. (Not given 1936-37)  
*Clayton*

141. **Advanced Nutrition.** A review of the fundamentals of biochemistry most closely related to the nutrition of man. Prerequisites, Nutrition 5 and Biochemistry or its equivalent. Four credits. Fall, M. T. W. F. 11, Lab. W. F. 2-4.  
*Morris*

142. **Dietetics.** Includes the calculation and preparation of dietaries, also a study of nutritional deficiencies with their effects on laboratory animals. Prerequisites, Organic Chemistry, and Nutrition 5. Winter, M. T. W. F. 11, Lab. W. F. 2-4. Four credits.  
*Morris*

160. **Special Problems.** Open to qualified students majoring in Foods and Nutrition upon consultation with instructor. Time and credit arranged.  
*Staff*

180. **Institutional Organization.** This course includes large quantity cooking, institutional organization, building and equipment routing, and accounting, applicable for the school cafeteria, dormitory, hospital, etc. Laboratory will be assigned on either Tuesday or Thursday. Those with special interests may develop their own particular problems. Prerequisites: Nutrition 5 and Foods 20 and 21. Three credits. Winter, M. W. 9, Lab. T. W. 8-10 or 10-12 in the cafeteria plus a conference hour.  
*Troeger*

181. **Institutional Management.** This course will include large quantity cooking continued, management, purchasing, equipment and cost control for the school cafeteria, dormitory, hospital, etc. Laboratory will be assigned on either Tuesday or Thursday. Students may sign for this course without having had 180. Prerequisites: Nutrition 5 and Foods 20 and 21. Three credits. Spring, M. W. 9, Lab. T. Th. 8-10 or 10-12 in the cafeteria plus a conference hour.  
*Troeger*

190. **Readings in Nutrition.** Analysis and discussion of current literature in Nutrition. 1 credit. Winter, Th. 3-5.  
*Morris*
191. SEMINAR. Digest of literature on relationships of diet to diseases. Two credits. Spring, Th. 3-5. Morris

210. RESEARCH. Intensive investigation of problems in Foods and Nutrition. Any quarter. Time and credit arranged. Staff

GENERAL HOME ECONOMICS

10. SURVEY IN HOME ECONOMICS. Deals with the orientation of the student to her college environment and her guidance in the choice of a vocation related to the field of Home Economics. Open to all college women. One credit. Fall, M. or W. 1. Moen

25. HOME HYGIENE AND CARE OF THE SICK. A course in home nursing and first aid to the injured. The first hour is devoted to discussion, the laboratory to demonstrations and practice. Reading of reference material and writing of special reports required. Laboratory apron needed. See instructor. Class limited to 24. Two credits. Any quarter. T. 3, Lab. Th. 3-5. Dancy

50. CONSUMER EDUCATION. A study of consumer problems in foods, clothing and shelter, as they relate to the homemaker at the present time, giving emphasis to kinds, quality and price trends. Prerequisite, Economics 51. Special project required. Five credits. M. T. W. F. 11. Morris

149. HOUSEHOLD MANAGEMENT. An application of scientific management to the home. Four credits. Winter M. W. F. 9, Lab. T. 10-12. Bahlert

150. RESIDENCE IN HOME ECONOMICS COTTAGE. This course affords an opportunity for senior and graduate women to live in the cottage for a period of one quarter, to assume the responsibilities involved in managing a home. Prerequisite or parallel, H. E. 149. Five credits. Any quarter, time arranged. Bahlert
FORESTRY

P. M. Dunn, Professor; R. P. McLaughlin, Associate Professor; J. W. Floyd, Assistant Professors, Instructor.

Upon completion of the prescribed course, students are granted the degree of bachelor of science in Forestry. (See general write-up, pages 61-62.)

I. GENERAL FORESTRY. A general survey of the profession of forestry, range, soil conservation and wildlife; character of the work; and relation of multiple uses of wild land to the welfare of the state and the nation. Three lectures. Fall quarter, three credits. M. W. F. 11

10. FORESTRY FOR AGRICULTURAL STUDENTS. The application of forestry, range and wildlife to the agricultural problems of the state and region. The use of trees on the farm, the relation of range management and wildlife management to general agriculture. Three lectures, Winter quarter. Three credits. M. W. F. 9.

12. DENDROLOGY I. Characteristics, distribution and economic importance of the principal North American conifers. Two lectures, one Lab., field trips. Three credits. Fall, M. W. 8, Lab. T. or Th. 2-5 or F. 8-11.


106. FOREST MEASUREMENTS I. Methods of measuring timber in the log, the tree and the stand. Log rules and volume tables. Timber cruising practices. Three lectures, two Labs. Field trips. Five credits. Fall, T. Th. 9, W. 1, Lab. T. Th. 2-5.

107. FOREST MEASUREMENTS II. Growth rate, yield, statistical methods useful in analyzing forest data. Prerequisite, For. 106. Three lectures, one Lab. Four credits. Winter, M. W. F. 8, Th. 8-11.

Staff

115. **Silviculture II.** Silviculture practices in the various forest regions of the U.S. Prerequisite, For. 114. Four lectures. Four credits, Winter, M. T. W. F. 11.

Staff

116. **Forest Planting.** Seed collection and storage, nursery practice and field planting. Two lectures, one Lab. Field trips. Three credits. Spring, M. W. 11.

Dunn


Staff

121. **Forest Management.** The place of forest management in forestry practice. Timber production as a business; sustained yield management. Forest management plans. Prerequisites, For. 106, 107, 114. Four lectures, one Lab. Five credits. Fall, M. T. W. F. 9, Lab. T. 2-5.

Staff

122. **Forest Finance.** Forest land valuation. Investment and costs in forest production; forest taxation, stumpage values. Prerequisites, For. 114, 121. Three lectures, Winter. Three credits, M. W. F. 8.

Staff

125. **Logging.** Methods of handling timber from tree to mill for the various forest regions. Three lectures. Three credits. Fall. Arranged.

Staff


McLaughlin


Staff

*McLaughlin*


*McLaughlin*


*Floyd*


*Dunn*

137. **FOREST RECREATION.** History and theory of forest recreation, classification of forest lands for various recreational uses, types of development. Three lectures. Three credits. Fall, M. W. F. 9.

*Floyd*


*Staff*

139. **DESIGNS FOR RECREATIONAL AREAS.** Plane table mapping and designing plans for various forms of forest recreational development. Includes practical field work. Two lectures, three Labs. Field trips. Five credits. Spring, T. Th. 8, Lab. T. 8-10, W. F. 2-5.

*Staff*

143, 144. **FORESTRY SEMINAR.** Review and discussion of current forestry problems and practices. Lectures and Labs. One credit each quarter. Fall and Winter. Time arranged.

*Staff*

145. **FOREST PROBLEMS.** Individual accomplishment of an original problem related to the major work. One credit. Fall. Time arranged.

*Staff*
### Junior Year

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<td>Forestry 106, 107, Measurements I, II</td>
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<td>Forestry 114, 115, Silviculture I, II</td>
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<td>Forestry 125, Logging</td>
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<td>Forestry 154, Recreation</td>
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<td>Forestry 155, Improvements</td>
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<td>Forestry 118, Protection</td>
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<td>Botany 120, Physiology</td>
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<td>Botany 140, Pathology</td>
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**Total** | 19 | 18 | 19

Forest Radio minors, take M. A. 86, 3 credits, Fall; M. A. 87, 2 credits, Winter; and M. A. 88, 3 credits, Spring.

Forest Recreation minors, take Hort. 3, 3 credits and For. 156, five credits, Spring.

### Senior Year (Forest Management)

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<td>Forestry 132</td>
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**Total** | 17 | 17 | 18

### Senior Year (Forest Utilization)

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<td>Electives</td>
<td>5</td>
<td>3</td>
<td>4</td>
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**Total** | 17 | 18 | 18

Total Credits | 213

Total Forestry Credits | 79

**Required Credits**

- Social Science | 10
- English or Language | 17
RECOMMENDED ELECTIVES

Course                                      Credits
Forest Radio, M. A. 86, 87, 88               8
Designs for Rec. areas. For. 156            5
Landscape Appreciation, Hort. 3             3
Range Forage Plants. Range 176              4
Statistics, Math. 75                        5

FORGING AND GENERAL BLACKSMITHING

All courses taught by S. R. EGBERT, Assistant Professor

An average of one-third of the time of all courses in forging is spent in demonstrating and lecturing. All courses are given in the forge rooms, Mechanic Arts Building. All courses, except as otherwise specified, are repeated each quarter and they are all open to vocational students.

MA 31, 32, 33. Forge Practice. Forging, welding, tempering, tool making and other operations essential to forge work. MA 31, three credits, M. W. F. 2-5. MA 32, two credits, T. Th. 2-5. MA 33, five credits, Daily 2-5.

MA 34, 35, 36. Forge Shop Operation. Advanced and general repair work, including plow work, spring work, axle and tire setting, and horse-shoeing. Prerequisites, Forge Practice 31, 32, 33. MA 34 (Fall), three or two credits. MA 35 (Winter), three or two credits. MA 36 (Spring), three or two credits. Three credit courses, M. W. F. 2-5; two credit courses, T. Th. 2-5.

MA 37. Select Work from Forge Practice 31, 32, 33. For automobile and tractor students who cannot spend each day in the shops. Two credits. M. W. F. 3-5 or T. Th. 2-5.

MA 40, 41, 42. Farm Shop Work. This course is especially arranged for students in agriculture. The application of forging operations to repair on the farm. The repairing of the following farm implements will be included in the course: plow, harrow, wagon, hayrake, mowing machine, binder, header, etc. Making and tempering punches and cold chisels, sharpening and tempering harrow teeth, picks, etc., welding. Two credits each quarter. MA 40 (Fall); MA 41 (Winter), M. W. F. 3-5 or T. Th. 2-5; MA 42 (Spring), M. W., T. Th., or W. F. 2-5.
MA 43. **FENDER AND BODY REPAIR.** Straightening and welding of broken fenders. Servicing and painting of automobile fenders and bodies. MA 43, two credits. Spring quarter. MA 43, two credits. Fall or Spring, time arranged.

MA 131. **ADVANCED SHOP PRACTICE.** Composition and heat treatment of steel. The student may emphasize any line of blacksmithing work that suits his particular needs. Prerequisites, Forging 34, 35, 36. Credit will be given for unfinished courses according to work done. Not less than two credits will be given. Two to four credits. M. W. F. 2-5 or T. Th.

MA 132, 134. **SMITH-HUGHES UNIT.** Metal Work. Cold metal, hot metal, soldering, sheet metal and plumbing. Three credits each quarter. MA 132, Fall or Spring, T. Th. 2-5. MA 134, Fall or Spring, M. W. 2-5.

MA 133. **FOUNDRY.** Operated for demonstration and the making of castings. If sufficient number of students apply, the foundry will be run for instructional purposes also. Two credits. Spring, arranged. For additional courses see Ag. Eng. 14.

**GEOLOGY**

**JAMES STEWART WILLIAMS,** **Professor; WILLIAM PETERSON,** **Professor; A. LEE CHRISTENSEN,** **Assistant Professor**

**GEOLOGY CLUB:** The Geology Club, an organization of geology students under the supervision of the Department of Geology, meets in the lecture room of the department at 8:00 p.m. on the first and third Thursdays of each month. The programs consist of talks by guests, faculty members and students. All interested persons are invited to attend. Regular attendance is required of all geology majors.

**MAJOR IN GEOLOGY:** The following courses, or their equivalents, outside the Department of Geology, are required of geology majors: Chemistry 3, 4, and 5; Civil Engineering 81 and 82; English 108 and 109; Physics 20, 21, and 22; Mathematics 34, 35, and 36.

The following courses, in the department, are required of majors: 1, 3, 10 or 11; 2; 4; 104; 105; 106 or 108; 110; 112 or 113; 114 and 120.

**EXACT SCIENCE GROUP:** Courses 1, 2, 3, or 4 will count in the exact science group. Course 1 or 3 should precede 4, however, and it is desirable that course 2 should be preceded by an elementary course in college chemistry. Course 2 is limited to 15 students.
FIELD TRIPS: Since field work is a very essential part of the study of geology, majors should be prepared to devote most of the Saturdays during the fall and spring quarters to this work. Two longer field trips, each of several days' duration, are taken each year, one in the fall and one in the spring. Majors should plan to take as many of these trips as possible, and attendance on the majority of the trips is required for a major.

1. GENERAL GEOLOGY. A general introduction to both physical and historical geology. Suggested for students who wish only an introduction to the subject. One or two Saturday field trips are required. 5 credits. Sec. 1 Fall, daily 8.

   Williams

   Sec. 2 Winter, daily 2.

   Christensen

   Sec. 3 Spring, M. T. W. Th. 1, one quiz section each week, hour to be arranged.

   Williams

2. MINERALOGY. A study of the common ore minerals and their occurrence. Identification of minerals by means of their physical properties and simple chemical tests. Elementary crystallography and its application to mineralogy. Methods of blowpipe analysis and their use in rapid testing of minerals and metallurgical products. Registration limited to 15 students. 5 credits. Fall, M. W. F. 10, Lab. T. Th. F. 8-10.

   Christensen

3. PHYSICAL GEOLOGY. A study of the earth including its origin, its age, the materials of which it is composed, its structure and surface features. Also the physical agencies such as the atmosphere, running water, waves, moving ice and volcanic activity, which are continuously at work upon its surface.

   This course is designed as a substantial introduction to physical geology. It is suggested for science students who wish an introduction to geology. 5 credits. Sec. 1 Fall, daily 10. Sec. 2 Spring, daily 8.

   Williams

4. HISTORICAL GEOLOGY. A study of the history of the earth as interpreted from the rocks and their contained fossils. The distribution of land and sea as it has changed through the ages, and the succession of plants and animals that have inhabited the earth. It is desirable
that this course be preceded by Geology 1 or 3. 5 credits. Winter, daily 8.

10. ENGINEERING GEOLOGY. Application of geology to engineering problems. Recognition, occurrence and uses of the common rocks. Geologic processes, the land forms which they produce and how they influence or govern the engineer in his field operations. Trips for field study of various geologic features and engineering works of the region will be taken. 5 credits. Spring, M. T. W. F. 11, Lab. sec. a T. 2-5, sec. b Th. 2-5.

Christensen

11. FORESTRY GEOLOGY. Occurrence of common rocks, their weathering, and soil formation. Processes at work on the earth’s surface and resulting land forms. Geologic factors which influence current problems of soil erosion and flood control will be emphasized. Training in the use and interpretation of topographic maps. Written reports and occasional field trips will be required. 5 credits. Sec. 1 Fall, M. T. W. Th. 2, Lab. sec. a M. 8-10, sec. b W. 8-10. Sec. 2 Spring, same schedule.

Christensen

15. COLLEGE GEOGRAPHY. Study of physical environment of man, including climate, topography and location, and the way in which these factors influence or govern his activities and development. Not given 1936-37.


Christensen

104. REGIONAL GEOLOGY OF THE UNITED STATES. A study of the major geological structures and land forms of the physiographic provinces of the United States. 5 credits. Fall, daily 9.

Williams

105. ADVANCED GENERAL GEOLOGY. A more advanced study of some of the most important problems of general geology. Prerequisite 10 senior college credits in geology. 5 credits. Winter, daily 9.

Williams
106. **Invertebrate Paleontology.** An introduction to the study of fossils. A living example of each of the groups of animals with important fossil representatives will be used as an introduction to the fossil forms of that group. Methods of preparation and study will be developed from work upon material collected by the student himself. Prerequisite Zoology 1 or Geology 4. 5 credits. Winter, M. W. F. 10, 6 hours of laboratory to be arranged.

*Williams*

107. **History of Geology.** A sketch of the development of thought concerning the earth from the speculations of the ancients to the recent developments in the modern science. 3 credits. Winter, hour to be arranged.

*Williams*

108. **Stratigraphy.** An introduction to the processes by which the sedimentary rocks have been formed, and to their original structures, followed by a study of the stratigraphic systems and their identification by guide fossils. Field trips required. Prerequisite Geology 106. 5 credits. Spring, daily 9.

*Williams*

110. **Structural Geology.** Rock structures and their deformation, including mountain building processes. Emphasis will be placed on the recognition and interpretation of folded and faulted structures in the field. Written reports and field trips required. Prerequisite Geology 1, 3, 10 or 11. 5 credits. Spring, daily 10.

*Christensen*

111. **Geology of Ground Water.** A study of structure to determine the cause of springs, artesian wells, etc. Structures that will yield water either through tunneling or boring. Prerequisite Geology 3, 10 or 11. (Not given 1936-37)

112. **Economic Geology—Nonmetals.** A study of geologic occurrence, distribution and uses of coal, petroleum and natural gas, building materials and other nonmetallic minerals. Commercial requirements, preparation and marketing of these substances will also be considered. Prerequisite Geology 1, 3, 10 or 11 and 2; or 15 credits of chemistry. 5 credits. Fall, M. T. W. F. 11, 3 hours of Lab. to be arranged.

*Christensen*

113. **Economic Geology—Metals.** A study of geologic occurrence and distribution of the various metallic ores. Processes of
secondary enrichment and their results on various types of ore deposits. Prerequisite Geology 1, 3, 10, or 11 and 2. 5 credits. Winter, M. T. W. F. 11, 3 hours of Lab. to be arranged.

Christensen

114. FIELD METHODS. Field practice in measurement of the attitude and the thickness of formations, field use of topographic maps, and note taking. Mapping by pacing and compass, and by plane table. Prerequisite Civil Engineering 81 and 82. 5 credits. Spring, Daily 2.

Williams or Christensen

116. SPECIAL PROBLEMS. Direction in the study of special problems in which a student has become interested, and upon which he desires to make written reports. From 1 to 6 credits, not to exceed 2 in any quarter. Time to be arranged.

Williams or Christensen

120 or 220. THESIS. Senior college or graduate thesis. A thesis on some field problem is required of majors and 5 credits is given for its completion. Registration for this undergraduate thesis is limited to the fall or spring quarter, it must be for 5 hours and the thesis must be completed in one quarter.

Registration for the graduate thesis may be for one, two or three quarters, and 9-15 credits are given for its completion.

Williams or Christensen

230. GRADUATE SEMINAR. Two to 5 credits any quarter. Hour to be arranged.

Williams

HISTORY

JOEL E. RICKS, Professor; MILTON R. MERRILL, Associate Professor; JOHN DUNCAN BRITE, Assistant Professor

History 3, 4, or 15 will count to fill new Social Science Group.

Students majoring in the Department of History should include the following classes in the major: History 1 or 111, 13, 14, 15, 32, 124, 125, 126, 127, 128, 134, 160, 171, 197. Students majoring in History should consult the head of the Department.


Brite
Section 2. Spring, Daily 2.

4. WORLD CIVILIZATION. Survey of civilization of the world principal contributions and significance of past civilizations. This course is planned to meet the needs of students who wish to understand from ancient times to the present. Attention will be given to the life, the main currents in world development and who do not have time for a more detailed course. Five Credits. Section 1, Fall, Daily 9.

Section 2, Winter, Daily 2.

Section 3, Spring, Daily 8.

13. UNITED STATES HISTORY. Survey of United States History from earliest times to 1789. Five Credits. Fall, Daily 10.

14. UNITED STATES HISTORY. Survey of United States History from 1789 to the Civil War. Five Credits. Winter, Daily 10.

15. UNITED STATES HISTORY. From the Civil War to 1900. Five Credits. Section 1, Fall, Daily 2.

Section 2, Winter, Daily 10.

Section 3, Spring, Daily 9.

31, 32, 33. ENGLISH HISTORY. Survey of the history of England and the British Empire from the earliest times to the present. Three credits each quarter. M. W. F. 8.

105. GREEK HISTORY. A study of Greek civilization and culture from the earliest times to the rise of Rome, with a preliminary survey of Egyptian, Babylon, Assyrian, and Persian civilizations. Four credits. Spring, T. W. Th. F. 8.

111. EUROPEAN HISTORY. The Middle Ages. Three credits. Fall Quarter. M. W. F. 11.

125. **European History.** Rise and development of absolute monarchies in the seventeenth centuries, with emphasis upon the Enlightened Despots and the Age of Reason preceding the French Revolution. Three Credits. Spring, M. W. F. 10.


127. **Nineteenth Century Europe.** The political and economic development of the major European States since the French Revolution, with emphasis upon social legislation and the background of the World War. Four Credits. Winter, M. T. W. F. 11.

128. **European History.** Twentieth Century World. Three Credits. Spring, M. W. F. 11.

134. **United States History.** History of the West. The Old West, the frontiers; the rise of the New West. Special emphasis upon the Trans-Mississippi West. Winter, Daily 9.


197. **Seminar in United States History.** Required of all Seniors Majoring in History. Two credits. Fall, time arranged.

**HORTICULTURE**

A. L. Wilson, Professor; F. M. Coe, Assistant Professor,
A. L. Stark, Extension Horticulturist

The intermountain and Pacific Coast regions offer excellent op-
portunities to men with fundamental and practical horticultural training. The wide variety of fruit and truck crops grown for market and canner offers excellent business possibilities for men trained in the production of these crops. Increasing interest in landscape gardening and floriculture is creating opportunities in these allied fields. Many opportunities are open for qualified graduates of ability in high school (Smith-Hughes) and college teaching, in experiment station and extension work, in government service, in inspection and regulatory work, and in seed production, nursery, spray material, and the fruit and vegetable marketing industries. Students may either major or minor in horticulture. Orientation and elective courses are also offered which supplement training in other fields of agriculture. Instruction is also offered which meets the requirement for horticultural training in the Extension Service, Smith-Hughes teaching, and the Civil Service examinations.

Both the fundamental sciences and practical arts of horticulture are stressed. Actual work in identification of varieties of fruits, vegetables, and ornamental plants, pruning, grafting, spraying, planting, propagation, and forcing of fruits and vegetables and use of ornamental plants in design are given as far as possible. Facilities of the departmental laboratories, orchards, gardens, greenhouses and campus are supplemented by field trips to other parts of the state to study practical problems at first hand.

It is expected that students majoring in horticulture secure a well organized background in physics, chemistry, botany and entomology, soil science, genetics and one course in irrigation. Students interested in landscape should have some courses in art and in engineering. Courses in speech and writing are also very desirable. The departmental staff should be consulted by students before they make up their courses of study.

The following courses will be required for a major in horticulture: 1, 3, 4, 101, 102, 105, 107, 108, 151, 152, 153, 154, 205.

1. ELEMENTS OF FRUIT PRODUCTION. This course which covers in an introductory way the field of Pomology, is offered to fill the orientation group requirement in Agriculture. Lecture, recitation, laboratory work, and assigned study in methods of profitable fruit production in the intermountain region, including outlook, selection of location and varieties, propagation of fruit plants, establishing orchards, pruning and training, soil management, pest control, harvesting and marketing. Preparation of an orchard plan and participation in the
fruit exhibits and contests in the Ag. Show are required. 3 credits
Given Fall and Spring quarters only. Lectures T. Th. 8. Labs. Fall,
Sec. 1, T. 2-5; Sec. 2, W. 2-5; Spring, Sec. 3, T. 2-5, Sec. 4, W. 2-5.

3. ELEMENTS OF LANDSCAPE GARDENING. This course is
intended to develop an appreciation of landscape architecture and include
landscape design as applied to the simpler problems of beautifying home
grounds, farmsteads, school grounds, small parks, rural cemeteries.
Trees, shrubs, vines, annual and perennial flowers used in landscape
work are discussed from the point of view of their propagation, care,
and use. An annual spring trip to study gardens in Ogden and Salt
Lake required. This course is designed for women as well as men
students, and is of particular value to prospective teachers, extension
agents, recreational planners and others preparing for community leadership,
as well as nurserymen, florists, professional and home gardeners.
Spring quarter only. 3 credits. Lectures, M. W. 8, Lab. M. 2-5.

4. ELEMENTS OF VEGETABLE PRODUCTION. In this course special
emphasis will be placed on (a) types of vegetable production and factors
underlying the industry; (b) location and plan of the home and com-
cmercial garden; (c) garden soils, soil management and garden fertility;
(d) seeds and seed growing; (e) plant growing and plant growing
structures; (f) harvesting, handling and storage of vegetables. Varieties
and cultural practices for individual crops will receive only brief at-
tention (see course 105). Three credits. Winter, T. Th. 8, Lab.
Sec. 1, T. 2-5; Sec. 2, W. 2-5.

5. PLANT PROPAGATION AND GREENHOUSE PRACTICE. Principles
and methods of propagating ornamental, fruit, and vegetable plants.
Seedage, graftage, cuttage, separation and division. Culture of com-
moner greenhouse floral crops, conservatory and house plants. Winter
quarter. Two credits. Lecture, T. 11; Lab. M. 2-5. (Given alternate
years; given 1936-37).

6. GARDEN AND NURSERY PRACTICE. Continuation of course 5,
with emphasis on outdoor handling of plants in nursery and garden.
May be taken with or without courses 3 and 5. Two credits. Spring.
Lecture T. 11, Lab. Th. 2-5. (Given alternate years; given 1936-37).

8, 9. VEGETABLE FORCING. Principles of greenhouse construc-
tion, heating and management, with special emphasis on vegetable forc-
Horticulture

101, 102. Advanced Pomology. A two term course covering the fundamental principles and practices of orcharding as developed by research in horticultural science. This course includes geography of fruit production, climatic factors, temperature relations, propagation, water relations, nutrition, pruning and training, fruit setting, thinning, soil management. The practical application of fundamental principles is considered. Courses 110 and 111, Orchard Practice, are the laboratories for this course, and should accompany it. Prerequisites, Botany 21, 22, Chem. 10, 11, 12, or 3, 4, 5 and Agronomy 6. Fall and Winter. Three credits each term. (Given 1937-1938.)

Wilson

105. Major Vegetable Crops. This course includes a brief discussion of the origin, commercial importance, culture and varieties of all vegetable crops. However, special emphasis will be placed on those crops of major importance, particularly those grown in Utah, such as canning crops, onions, cabbage, celery, etc. Hort. 4 and Agronomy 1 should precede this course, although they are not required. Three credits. Fall, T. Th. 8, Lab. M. 2-5.

Coe

107. Spraying. Fungicides and insecticides used in the control of fruit and vegetable insects and diseases; their preparation, properties and use in spraying; spray machinery and equipment, dusts and dusting; spray schedules; economics of spraying; fumigation; rodent control. Laboratory work in the preparation, mixing and application of spray materials. Prerequisites, Chem. 10, 11, Botany 130 (Plant Pathology); and Zool. 14; (Ec. Entomology). Four credits. Given 1937-38.

Coe and Powell

108. Small Fruits. Commercial and home culture of strawberries, blackberries, raspberries, gooseberries, currants and grapes. This course will include a general survey of the industry with emphasis on the following phases: (a) the location of vineyards and berry-plantations; (b) soils, including management, irrigation and fertility; (c) propagation, planting and culture; (d) pruning and training; (e) harvesting and preparation for market. Three credits. Given 1937-38.

Wilson
110, 111. Orchard Practice. Field work in seasonal orchard operations. Fall quarter includes picking, grading and packing of fruits, and field trips to orchards. Spring operations are pruning, renovation, grafting, planting, spraying, cultivation, irrigation, and thinning. Must be preceded or accompanied by Hort. 1 or 101. One credit each quarter. Fall and Spring. Time arranged. Given 1937-38.

Coe


Coe

131. Subtropical Fruits and Nut Culture. Culture of citrus fruits, avocados, figs, dates, bananas, and other tropical and subtropical fruits; walnuts, almonds, filberts, pecans, and other nuts. Two credits. Winter. Time arranged.

Coe

151. Systematic Pomology. Varieties of fruits; their classification, identification, and adaptation; critical study of many varieties of fruits; the more important fruit groups and their inter-relationships. Practical work in variety identification, fruit exhibition and judging. Assigned readings on fruit varieties. Participation in the Agricultural Show required. Prerequisites, Hort 1, Botany 30. Four credits. Fall, M. W. 8, Lab. T. Th. 9-12.

Coe

152. Commercial Pomology. Problems dealing with the handling and marketing of fruits, including picking, grading, packing, transportation, storage, distribution and sale; study of buildings and equipment for packing and storing fruit; roadside and local marketing. Hort. 110, should precede or accompany this course. Prerequisite, Hort. 1 or 101. Four credits. Winter quarter. M. W. F. 8, Lab. Th. 2-5.

Coe

153, 154. Seminar. Reports on research work and presentation of original papers. Two lecture periods. Two credits each quarter. Fall and Winter, time arranged.

Wilson, Coe

155. Special Problems. Studies of advanced problems in Pomology, Landscape Gardening, or Vegetable Crops for qualified seniors or
graduate students. Problem or subject to be selected by student. Assigned readings and research work in library, laboratory, greenhouse or field, presented as term papers. Registration by permission only. Two to five hours credit.

Staff

201, 202, 203, 204-A, 204-B. Research. Original research on horticultural problems for graduate students qualified to do investigational work in Horticulture, to be presented as graduate thesis for major or minor credit. Graduate thesis work may be used in partial fulfillment of requirements for the master of science degree, with major or minor in Horticulture. Re-registration until problem is completed. Registration by permission only. Course 201, Fall quarter; 202, Winter quarter; 203, Spring quarter; 204-a and 204-b, Summer Session and Intersession, respectively. Three to ten credits.

Staff

205. Advanced Vegetable Crops. A consideration of the economic, ecological and physiological factors underlying vegetable production, based on a study of experimental results. Original papers will be used in lieu of a text. Prerequisites, Hort. 4, 105, Agron. 6, Botany 120, Chemistry 12 and Bacteriology 111 are also desirable. Open only to graduate students and qualified seniors. Five credits. Winter, Daily 9.

Wilson

253, 254. Experimental Horticulture. A study of experimental methods based on reports of horticultural research. A critical analysis of these reports will be made involving the experimental set-up, presentation of data and conclusions. Open to graduate students and qualified seniors. Fall and Winter. Two credits each quarter. Time arranged. Given 1937-38.

Wilson

MACHINE WORK

All courses taught by A. Newey, Associate Professor

The courses offered in the Machine Work Department give good basic training for the student who is entering a career in any line of mechanical work. The operations and principles taught will help in advancement in many lines of mechanical endeavor. Students preparing for engineering, electrical work, auto mechanics, aviation, ignition, tractor work, farm machinery; and those interested in model building and experimenting, can well afford to study machine work.

All courses in Machine Work are open to vocational students.
MA 51, 52, 53. Machine Shop Practice. Lathe, planer, shaper, and drill-press operations, the use of hand tools, laying out, making automobile and machine parts, and other operations that are essential in machine shop work. These courses include assignments of reading on machine work subjects, and the application of mathematics to machine work. Each course repeats Fall, Winter and Spring quarters. Four or five credits.

MA 54, 55. M. S. P. The contents of MA 54, 55 is the same as MA 51. Each course repeats Fall, Winter and Spring quarters. Two or three credits.

MA 56, 57. M. S. P. The content of MA 56, 57 is the same as that for MA 53. Each course repeats Fall, Winter and Spring quarters. Two or three credits.

MA 58, 59. M. S. P. Short Course. The content of MA 58, 59 is the same as MA 53. Each course repeats Fall, Winter and Spring quarters. Two or three credits.

MA 151, 152, 153. General Machine Work. Advanced lathe, planer and milling machine work, grinding milling cutters, making tools, and special shop equipment. Prerequisite, MA 51, 52, 53. (Prerequisite courses must total 15 credits). Each course repeats Fall, Winter and Spring quarters. Four or five credits. Time arranged.

MA 154, 155, 156. Tool Making. These courses include practice in making arbors, gauges, taps, reamers, milling cutters, etc., and in designing and building special tools and equipment. Prerequisite, MA 152. Each course repeats Fall, Winter and Spring quarters. Four or five credits. Time arranged.

MA 157. Smith-Hughes Teachers’ Machine Course. This course is planned to give a student, who is training to become a shop-work teacher, a general training in the operations and methods of doing machine work. Its purpose is to broaden his understanding of mechanic arts and make him more proficient in tool processes and in the care and repair of school shop equipment. Only students of senior standing may register. From two to nine credits. Any quarter. Time and credit arranged.

(Note: For unfinished courses credit will be given according to work done, provided the student re-registers. Not less than two credits will be given.)
MATHEMATICS

V. H. TINGEY, Associate Professor; LEON B. LINFORD, Professor; S. R. EGBERT, Assistant Professor; L. H. LINFORD, EUGENE GARDNER, Instructors.

Mathematics 15 will count in the New Exact Science Group. May be replaced by Mathematics 34 or 35.

Two types of majors are offered in Mathematics. Those intending to do graduate work in Mathematics must take the Regular Major. Those preparing to teach in high schools may elect either the Regular or the Teaching Major.

Regular Major: Mathematics 34, 35, 46, 97, 98, 99, and Physics 20, 21, 22, during the first two years. In addition, Mathematics 75, 120, 121, 122, 150, 151, 152, and at least nine credits of Senior College Physics approved by the Mathematics Department. If preparing for Graduate work, Chemistry 3, 4, 5 and German, French, or both are recommended.

Teaching Major: Mathematics 34, 35, 46, 75, 97, 98, 99, Physics 20, 21, 22, Chemistry 3, 4, 5, or 10, 11, 12, and nine credits of approved Senior College work in either Physics or Chemistry. In addition the candidate must satisfy the requirements for high school certification. (See page 53.)

15. ALGEBRA. A course in college algebra designed to emphasize the more immediately applicable phases of algebra. For students not intending to take calculus. Students not intending to take Mathematics 16 are advised to register for this course in the Spring quarter. Five credits. Fall, Daily 8, 9, 10, 2, or 3; Winter, Daily 8 or 2; Spring, Daily 8, 9, or 2.

Staff

16. GENERAL MATHEMATICS. A continuation of Mathematics 15. Includes the essentials of trigonometry and analytical geometry, and an introduction to the ideas of the calculus. Mathematics 15 and 16 constitute the recommended preparation for Mathematics 75 as required in the school of Forestry and in certain departments in the schools of Agriculture and Commerce. Five credits. Winter, Daily 10, 2, or 3; Spring, Daily 8.

Staff

34, 35. COLLEGE ALGEBRA. Required for all advanced work in Mathematics, and of majors in Physics, Chemistry, Bacteriology, and Engineering. Should be taken during the Freshman year. Mathe-
matics 34, or Mathematics 15 with a grade of "B" or better must precede Mathematics 35. Credit will not be allowed for both Mathematics 15 and 34. Five credits each quarter. Math. 34, Fall, Daily 10 or 3, Winter, Daily 9; Math. 35, Winter, Daily 10 or 3, Spring, Daily 9.

46. TRIGONOMETRY. Prerequisite or parallel, Mathematics 35. Five credits. Spring, Daily 8 or 10.

50. DESCRIPTIVE ASTRONOMY. An introductory course. Prerequisites, entrance Mathematics and Physics 1. (Not given 1936-37)

60. MATHEMATICAL THEORY OF INVESTMENT AND LIFE INSURANCE. Prerequisite, Mathematics 15 or 34. (Not given in 1936-37)

75. ELEMENTARY STATISTICAL METHODS. An introduction to the mathematical theory of statistics, together with its applications. Prerequisite, Mathematics 15 or 34. It is recommended that Mathematics 16 or 46 precede this course. Not open to Freshmen. Five credits. Winter, Daily 10 or Spring, Daily 9 or 10.

Tingey

97. ANALYTICAL GEOMETRY. Fall.

98. (118) DIFFERENTIAL CALCULUS. Winter.

99. (119) INTEGRAL CALCULUS. Spring.

Prerequisites, Mathematics 34, 35, 46. Courses must be taken in the above order to form a course throughout the year. Senior college credit may be granted for Mathematics 98 and 99 if taken during the Junior or Senior year by registering for Mathematics 118 and 119, and consultation with the instructor. Five credits each quarter, Daily 8.

Tingey

120. ADVANCED ANALYTICAL GEOMETRY. Fall.

121. ADVANCED CALCULUS. Winter.

122. ORDINARY DIFFERENTIAL EQUATIONS. Spring.

Prerequisites, Mathematics 97, 98, 99. Courses cannot be taken in any but the above order without the consent of the instructor. Three credits each quarter. M. W. F. 11.

L. H. Linford


Prerequisites, Mathematics 120, 121, 122 and Physics 20, 21, 22. This course will be concerned with definite integrals, convergence of series, gamma-functions, Bessel's functions, Legendre's polynomials, etc., and their applications in the solution of partial differential equations of Physics. Three credits each quarter.  

Leon Linford

160, 161, 162. Seminar in Mathematics. Special work for students specializing in Mathematics. Time and credit arranged.  

Staff

MILITARY SCIENCE AND TACTICS


The Utah State Agricultural College, having accepted the provisions of the Act of Congress approved July 2, 1862, is classified as a Land Grant College and is therefore obliged to offer a course in military science and tactics as a part of the College curricula.

Recognizing that preparation for the national defense is one of the important duties of citizenship, and that qualities of patriotism, loyalty, discipline, leadership, and respect for constituted authority inculcated by proper military training are valuable in the formation of character, it has been the consistent policy of the College to cooperate with the Federal Government in making the Department of Military Science and Tactics as effective as practicable.

At the request of the College authorities a senior unit of the Reserve Officers' Training Corps was authorized at this Institution by the President of the United States under the provisions of Section 33 of the Army Reorganization Act of June 4, 1920. Accordingly, the Board of Trustees has agreed to maintain a course in Military Science and Tactics as a required subject for all able-bodied male students during their first two years at the College.

The primary object of establishing units of the Reserve Officers' Training Corps is to qualify students for appointment in the Officers'
Reserve Corps of the United States Army. This training will also be as valuable to the student in his industrial or professional career as it would be should the nation call upon him to act as a leader in its defensive forces.

Enrollment in the Reserve Officers’ Training Corps is not in any sense “conscription,” nor does it convey liability to service in any component or branch of the United States Army. As its name implies, the R. O. T. C. is an instrument of training and instruction only.

MILITARY SCIENCE REGULATIONS

The student by registration at the Institution, obligates himself to conform to such requirements as are or may be prescribed by the College Council under the regulations of the Reserve Officers’ Training Corps. These requirements, at present, are as follows: Two years of military training (6 credit hours) are required of all able-bodied male students. By regulation of the College the course is required during the first and second years at the Institution.

In order to remain in and receive instruction at the College or to graduate finally from the College, the student must be in attendance at all military classes and do satisfactory work in them.

It shall be the duty of every student of whom military training is required, to see that he is properly registered for the course and to report for instruction. Students who are required to take military training but fail to register or to report for classes will, with the approval of the President, be excluded from all classes in the College. The responsibility of complying with the regulations regarding military science rests entirely with the student.

No male student will be excused from the requirements in military science except for the following reasons:

(a) Students who are physically disqualified may be excused from Military Science by the College Medical Examiner. Participation in athletics cancels all excuses from Military Science based on physical disability.

(b) Any student entering as a Junior or Senior may be excused from Military Science.

(c) In exceptional cases, students over twenty-five years of age at the time of original entrance into the College may be excused from Military Science.

(d) Married students may be excused from the requirements in Military Science.
(e) Students who are not citizens of the United States and who do not intend to become citizens will not be permitted to take military training.

(f) A student who is working his way through college by means of employment which conflicts with Military Science may have said requirements deferred during any quarter in which he is so employed. Students taking advantage of this provision must present a letter from their employer substantiating their claim and setting forth the hours of employment.

(g) Students who attend college during the Winter quarter only may have the requirements in Military Science deferred during that quarter.

(h) Students who are active in the Army, Navy, or Marine Corps of the United States, or who are commissioned officers of the National Guard or Naval Militia, or reserve officers of the Military or naval forces of the United States, or members of the Naval Reserves will not be permitted to enroll in the Reserve Officers' Training Corps. Vocational students are automatically excused from the requirements in Military Science.

A student claiming exemption from military science for any of the reasons noted above will present a petition for such excuse to the appointed Committee on or before the beginning of the quarter in which he desires to be excused. All such petitions will be prepared on the prescribed form which may be obtained in the office of the Professor of Military Science and Tactics, and will be accompanied by letters, or other documentary evidence substantiating the claim. Petitions for deferment on grounds of employment must be presented immediately after such employment has been secured.

Pending the action of his petition, the student will register for the course prescribed for his class and will enter upon the work of such course.

Any student who may be excused from attendance in military science for any valid reason must make up the deficiency in other departments of study.

Every student registered for military science is required to make a uniform deposit of $5.00. A laboratory fee of $1.00 will be deducted from this deposit. The balance, less the cost of any property lost or damaged, will be refunded upon the completion of the year or upon withdrawal from the course.
RESERVE OFFICERS’ TRAINING CORPS

The four years’ course in the Reserve Officers’ Training Corps is divided into the basic course and the advanced course.

The basic course consists of the first two years in Military Science and corresponds to the freshman and sophomore years. When entered upon by any student it shall, as regards such student, be a prerequisite for graduation unless he is relieved from this obligation by proper authority.

The advanced course consists of the third and fourth years of Military Science, and corresponds to the junior and senior years. Entrance upon the advanced course is elective, but once entered upon such course becomes a prerequisite for graduation, in accordance with the terms of the establishment of the Reserve Officers’ Training Corps.

UNIFORMS AND EQUIPMENT

A serviceable uniform of standard army pattern is furnished by the War Department to each student taking military training. Shoes are not furnished. Each student should provide himself with a pair of black shoes before entering the College, as they will be required immediately upon his admission.

The uniform and equipment issued for the use of student remains the property of the United States. At the end of each year, or at such other times as students may terminate their military training, all clothing and other supplies will be returned in a serviceable condition, not later than one week following the termination of such training. Articles which have been lost, damaged, or destroyed will be charged against the student concerned.

BASIC COURSE

Students in the basic course are required to pursue their courses diligently until satisfactorily completed, and to meet such requirements for the care of equipment as may be prescribed. In case of failure in any quarter of the freshman or sophomore years, the student will be required to repeat the work during the next quarter in residence.

Students who complete the two years’ basic course are qualified as non-commissioned officers in the organized reserve, to which position they are appointed if they so desire.

ADVANCED COURSE

The advanced course is elective.
The general prerequisites for admission to the advanced courses are:

a. Completion of two years' training in the basic course in any senior unit of the Reserve Officers' Training Corps.

b. Selection for further military training by the President of the College and the Professor of Military Science and Tactics.

c. The execution of an agreement in writing, whereby the student in consideration of the commutation of subsistence furnished to him, agrees:

1. To continue in the Reserve Officers' Training Corps during the remainder of his course in this College.

2. To devote a minimum of five hours per week during this period to the military training prescribed.

3. To pursue such courses of camp training during this period that may be prescribed by the Secretary of War.

d. The student must be registered in one of the Schools of the College as an undergraduate while pursuing the advanced course.

e. The applicant must have at least two years of academic work to complete for graduation at the time he enters the advanced course.

Each student enrolled in the advanced course will be paid commutation of subsistence at the rate of thirty cents per day from the beginning of the first year of the advanced course to the end of the second year of the advanced course, except while attending camp, when the student will be subsisted in kind.

The course of camp training is for six weeks during the summer vacation, normally following the student's completion of the first year of the advanced course. The United States furnishes uniforms, transportation to and from the camp at the rate of five cents per mile, and subsistence for students attending the training camp. Students are also paid at the rate of seventy cents per day during their attendance at camp.

R. O. T. C. BAND

A military band is an element of the Reserve Officers' Training Corps, under the direction of the Band Instructor, and is governed by the rules of the Department of Military Science and Tactics. Uniforms and instruments are furnished by the War Department.

Members of the band will be selected from among those students who are registered in Military Science and who have demonstrated their ability for such selection. Tryouts for the band will be conducted
under the supervision of the Band Instructor and will be held preferably during the first two weeks of each quarter. Members of the band receiving credit in Military Science will be limited to not more than sixty (60) students.

Students who are selected for the band will be required to take such theoretical work in Military Science as may be prescribed by the Professor of Military Science and Tactics, and sufficient practical drill to insure their making a creditable appearance in ranks.

Instruction taken by members of the band is credited as instruction in Military Science, but will not be accepted toward qualification for admission to the advanced course.

CREDITS

Students who satisfactorily complete the basic course receive one credit hour per quarter, which may be included in the 186 credit hours required for graduation.

Students who satisfactorily complete the advanced course receive three credit hours per quarter, which counts toward the 186 credit hours required for graduation. In addition, students enrolled in the advanced course will receive three credit hours for satisfactory completion of the six weeks course at the training camp, held during the summer, between the junior and senior years.

Students majoring in the Schools of Arts and Sciences and Engineering may submit Advanced Military Science as a minor for graduation.

Members of the band who successfully complete the work in the various quarters receive credits as follows: First and Second years, one credit per quarter in Military Science.

COURSES OF INSTRUCTION

Classes in Military Science will not be held at times other than as scheduled, but any student desiring extra instruction may make the necessary arrangements with the professor of Military Science and Tactics.

BASIC COURSES

1. MILITARY SCIENCE. First year. Fall quarter. Three hours per week. One credit.

Instruction during this period will include infantry and artillery drill; ceremonies; military courtesy and discipline; military policy;
rifle marksmanship. Fall, Lab. T. Th. 1, T. 9, 11; W. 8, 10; Th. 8, 9.

Goodrich and Breitung

2. MILITARY SCIENCE. First year. Winter quarter. Three hours per week. One credit.

Instruction during this period will include infantry and artillery drill; Coast Artillery instruction (second class subjects). Winter, M. T. W. 1-3; Th. 12-2; T. 9, 11; W. 8, 10; Th. 8, 9.

Goodrich and Breitung

3. MILITARY SCIENCE. First year. Spring quarter. Three hours per week. One credit.

Instruction during this period will include infantry and artillery drill; ceremonies, inspection, military hygiene and first aid; Coast Artillery instruction (second class subjects). Spring, Lab. T. Th. 1; T. 9, 11; W. 8, 10; Th. 8, 9.

Brown and Goodrich

4. MILITARY SCIENCE. Second year. Fall quarter. Three hours per week. One credit.

Instruction during this period will include drill and command (infantry and artillery); Ceremonies, coast artillery instruction (first class subjects). Fall, Lab. T. Th. 1; T. 9, 11; Th. 8; F. 10.

Brown

5. MILITARY SCIENCE. Second year. Winter quarter. Three hours per week. One credit.

Instruction during this period will include drill and command (infantry and artillery); Coast Artillery instruction (first class subjects). Winter, Lab. M. T. W. 1-3 or Th. 12-2; T. 9, 11; Th. 8; F. 10.

Brown

6. MILITARY SCIENCE. Second year. Spring quarter. Three hours per week. One credit.

Instruction during this period will include drill and command (infantry and artillery); ceremonies; inspections; Coast Artillery instruction (first class subjects). Spring, Lab. T. Th. 1; T. 9, 11, 2; Th. 8, 10; F. 9.

Breitung

R. O. T. C. BAND COURSES

1B, 2B, 3B. R. O. T. C. BAND. First year. One credit per quarter.

Goodrich
ADVANCED COURSES

101. MILITARY SCIENCE. First year. Fall quarter. Five hours per week. Three credits.
Instruction during this period will include military map reading and sketching; drill and command; drill regulations and Coast Artillery instruction (expert subjects). Fall, M. W. F. 10, Lab. T. Th. 1.

Goodrich

102. MILITARY SCIENCE. First Year. Winter quarter. Five hours per week. Three credits.
Instruction during this period will include drill and command; gunnery; Coast Artillery instruction (expert subjects). Winter, M. W. F. 10; Lab. M. T. W. 1-3, Th. 12-2.

Goodrich

103. MILITARY SCIENCE. First year. Spring quarter. Five hours per week. Three credits.
Instruction during this period will include drill and command; gunnery; conduct of fire; analysis of drill and service practice. Spring, M. W. F. 10, Lab. T. Th. 1.

Breitung

104. MILITARY SCIENCE. Second year. Fall quarter. Five hours per week. Three credits.
Instruction during this period will include drill and command; artillery material; military law; administration and supply. Fall, M. W. F. 11, Lab. T. Th. 1.

Breitung

105. MILITARY SCIENCE. Second year. Winter quarter. Five hours per week. Three credits.
Instruction during this period will include drill and command; motor transportation; military history; artillery tactics. Winter, M. W. F. 11, Lab. M. T. W. 1-3, Th. 12-2.

Breitung

106. MILITARY SCIENCE. Second year. Spring quarter. Five hours per week. Three credits.
Instruction during this period will include drill and command; field engineering; orientation. Spring, M. W. F. 11, Lab. T. Th. 1.

Goodrich
MODERN LANGUAGES AND LATIN

George A. Meyer, Professor; George C. Jensen, Associate Professor; Thelma Fogelberg, Assistant Professor; Marion L. Nielsen, Instructor.

The department offers courses in French, German, Spanish, and Latin. The work is organized so as to permit the pursuing of language study according to either of two general aims:

1. The gaining of a ready ability to read and analyze prose in a foreign language. Students having this aim will normally take course 1a and 101a.

2. The study of a foreign language for its literary and cultural values. Students having this aim will normally take courses 1b and 101b. These courses are designed to give a speaking as well as a reading knowledge of the language, and an acquaintance with the history, literature, and culture of the people using that language.

Consultation with members of the staff before registration will help students to make proper choice of course.

Modern language credits may be used for filling five hours of the Language Arts Group requirements (p. 49).

By faculty ruling, no credit may be given towards graduation for less than three quarters work in a Beginning Language course.

Students are advised to begin their language study in Junior College. One of the great values of such study is its help in clarifying the student's knowledge and use of English. In Senior College it is increasingly difficult to fit 5 hours of beginning language into a schedule.

Major in a Modern Language:

French. The following courses are required: 1b, 2b, 3b, 101b, 102b, 103b, 104 and 12 hours from courses numbered above 104.

German. Forty-five hours of credit including 1b, 2b, 3b, 101, 102, 103, and 15 hours from courses numbered above 103.

FRENCH


Fogelberg

1b, 2b, 3b. First-Year French. (Advanced) A more intensive and extensive course than the above. For students who have had
previous language training or who wish to continue with French 101b, a five-hour second-year course. Admission by permission of the instructor. Five credits each quarter. Daily 9.

*Meyer*

101a, 102a, 103a. **SECOND-YEAR FRENCH.** Reading of modern French literature, grammar review, idiom and vocabulary study, free composition. Designed to give the student a thorough preparation for reading and translation. Completion of this course satisfies the modern language requirements of the various departments. Three credits each quarter. M. W. F. 3.

**Fogelberg**

101b, 102b, 103b. **SECOND-YEAR FRENCH. (Advanced)** Open to those who have completed 3b, and to others by permission of the instructor. Reading, grammar review, intensive study of the language, with emphasis on oral work and phonetics. The aim of the course is to prepare students for advanced work in French literature with the possibility of taking a major in the subject, and to give a practical speaking knowledge of the language. Five credits each quarter. M. T. W. F. 11. 1 hour, arranged.

*Meyer*

104. **FRENCH PHONETICS.** Principles of French pronunciation and their practical application. Drill in class and privately with the aid of phonograph records. Prerequisite French 103a or 103b. Three credits. Fall, M. W. F. 2.

*Meyer*


*Meyer*

106. **FRENCH SHORT STORY.** A study of the French Conte as a literary form from the earliest times. The course will serve as an introduction to literary movements in France. Special emphasis on the 19th century. Three credits. Spring, M. W. F. 2.

*Meyer*

110, 111, 112. **FRENCH RESEARCH.** Outside reading in periodicals and scientific works. Designed to aid science majors and graduate students in the use of French as a tool for their work. Prerequisite, two years of college French. Hours and credits to be arranged with the instructor.

*Meyer*
119, 120, 121. French Literature of the Eighteenth Century. Special emphasis on the philosophy of the period. Voltaire, Rousseau, Buffon, Diderot. Fall, Winter and Spring. Two credits each quarter. (Not given in 1936-37)  
Meyer

122, 123, 124. Nineteenth Century French Drama. Two credits each quarter. (Not given in 1936-37)  
Meyer

125, 126, 127. Nineteenth Century French Novel. Two credits each quarter. (Not given in 1936-37)  
Meyer

GERMAN

1a, 2a, 3a. First-Year German. Regular beginner’s course. Grammar reading, pronunciation, and dictation. Five credits each quarter. Two sections. Section 1, daily at 8; Section 2, daily at 2.
Nielsen

1b, 2b, 3b. First-Year German. For English and German majors. Others by permission. A more intensive and extensive course than the above. Conversation emphasized, and philological relationships to English are dealt with. Five credits each quarter. Daily, 8.
Jensen

Jensen

104. Scientific German. Open to students who have had German 103 and to others by special permission. Reading of scientific texts. Two credits. Fall, T. Th. 2.
Jensen

108. Conversation and Composition. (Advanced) Open to properly qualified applicants (see the instructor). Two credits. Winter, T. Th. at 2.
Jensen

Jensen
121. Lessing and Schiller. Plays and biographies. Prerequisite, two years of college German or an equivalent. Three credits. Fall quarter, M. W. F. 11.

130. Goethe’s Faust. Especially recommended for literary students and returned missionaries. Prerequisite, two years of college German. Three credits. Fall, M. W. F. 9. (Not given in 1936-37)


133. German Drama of the Nineteenth Century. Rapid reading and discussion of representative plays from Kleist to Hauptmann. Spring quarter. Three credits. (Not given 1936-37)

150. Schnitzler’s Stories and Plays. Prerequisite, German 103 or an equivalent. Two credits. Spring. T. Th. 2.

SPANISH

1, 2, 3. First-Year Spanish. Grammar, conversation and reading. Five credits. Fall, Winter and Spring. (Will be given in 1936-37 if sufficient number request.)


LATIN

1, 2, 3. Grammar and Reading. An introductory course with special emphasis on the relation of Latin to English. Study of vocabulary and word formation as an aid to better comprehension of our own tongue. Especially recommended for English majors, and for pre-law and pre-medical students. The course includes readings from Caesar and various Latin writers. Five credits each quarter. Daily 10.
Walter Welti, N. Woodruff Christiansen, Associate Professors.

Music 1, 80, or 81 will count in the New Arts Appreciation Group.

Vocal Music Majors. Required study: 4, 5, 6, 7, 12, 13, 30, 31, 105, 106, 117, 134, 135, three years of chorus, sufficient vocal development to present a creditable solo recital prescribed by major professor, ability to play second grade piano music at sight, five hours of German or French, a general course in history and in oral expression. Consult major professor early.

Instrumental Music Majors: To complete a major in instrumental music, with recommendation to teach band and orchestra, the following courses are required: 12-13, 111-112-113, 80-81-21-22-23, (21-22-23 must be taken before practice teaching), three or more quarters of symphony orchestra, six or more quarters of band as prescribed by the major professor, three quarters or equivalent of piano, sufficient private instruction or equivalent on a band or orchestral instrument for a creditable solo performance, and one quarter each private instruction, or equivalent, on a string instrument, a brass instrument, and reed instrument.

For music major without recommendation to teach band and orchestra, consult the major professor.

Music majors specializing in Piano may enroll under either instrumental or vocal requirements.


Welti

4, 5, 6. Eye and Ear Training. The fundamentals of music theory; the meanings and application of notes, key signatures, rhythmic and melodic outlines; simple melody writing. A continuous course throughout the year. Two credits each quarter. T. Th. 9.

Welti

12, 13. Harmony. Prerequisite, Music 4 or its equivalent, and familiarity with the piano keyboard. Chord structure and progressions, to and including modulations. Three credits each quarter. Winter and Spring, M. W. F. 9 or 10.

Welti and Christiansen
15, 16, 17. ORCHESTRA COMBINATIONS. Students may enter this course by permission of the teacher only. Instrumental trios, quartets, etc., for ensemble training. One-half credit each quarter. Time arranged.

18, 19, 20. SYMPHONY ORCHESTRA. Provides training and practical experience in a wide range of orchestral work. Students are required to play at all public appearances of the orchestra. One and a half credits each quarter. (See 118, 119, 120.) M. W. 12-2, F. 12.

21, 22, 23. BAND AND ORCHESTRA METHODS. A study of the various band and orchestra instruments, and the essential points in the teaching of them. Designed for students who may teach elementary bands and orchestras or who intend to follow music as a profession. This course must precede practice teaching in instrumental music. Two credits each quarter. Arranged.

24, 25, 26. MEN’S GLEE. A normal singing voice is required. Consult director at once to make sure of your qualifications and the part you sing. One credit each quarter. M. W. F. 12.

27, 28, 29. LADIES’ GLEE. Same conditions as for men’s glee, applied to women’s voices. One credit each quarter. T. Th. F. 12.

30. SCHOOL MUSIC SUPERVISION. Methods of teaching and supervising music in the grades. It is recommended that music 4 be taken before this course. Winter quarter. Three hours credit. Arranged.

32, 33. BAND B. For students needing additional work as a preparation for Band A; also to include students whose instrumental sections in Band A are already filled. This band is in no sense a beginners band. Fall and Winter quarters. One credit each quarter. T. Th. 12-2.

R. O. T. C. BAND. Band men who are required to take Military Science should register for Military Science and then ask to be assigned to the R. O. T. C. Band.

35, 36, 37. VOCAL GROUPS. Offering an opportunity for good
voices to organize into trios, quartets, and other small units, and to perform upon numerous occasions. One credit each quarter. Time arranged.

38. MUSIC FOR YOUNG CHILDREN. A study of material for listening lessons, tiny songs, music games, and simple body rhythms for children of Nursery School age. Fall quarter. One credit. T. 11. Welti

41, 42, 43. BAND A. This organization is the College Concert Band. It includes the R. O. T. C. band and all other students who qualify. Special emphasis will be placed upon the proper instrumentation; membership will be determined by examination. Concerts will be given and music furnished for athletic events. State tour end of Winter quarter. Members are required to play at all public appearances of the band. Fall, Winter, and Spring quarters. One credit each quarter. (See 141, 142, 143). T. Th. 12-2. Limited Spring quarter to men students. Christiansen

44, 45, 46. BRASS AND REED GROUPS. Brass quartets, sextets, and saxophone quartets. Members will be selected from applicants. Fall, Winter, and Spring quarters. One-half credit each quarter. Time arranged.

80. OPERA APPRECIATION. An intensive study will be made of the world’s best operas. Particular attention will be given to the development of the orchestra as an essential part of the opera. By means of recordings the choicest musical selections will be learned. Two credits. Fall, T. Th. 2.

81. SYMPHONY APPRECIATION. Complete symphonies will be given by the phonograph method. A careful study will be made of their form and content. Two credits. Winter, T. Th. 2.

106. MUSIC HISTORY. The appreciation of music from its historical and biographical bases, the development of small and large forms from folk music through the opera and the symphony. Not open to Freshmen. Spring quarter. Three credits. M. W. F. 10.

111, 112, 113. ADVANCED HARMONY. Prerequisites, 12, 13. Modulation, embellishing chords, inharmonic embellishments and fig-
117. **Opera Production.** A thorough study of the details involved in the production of opera. Students admitted to this course will be assigned definite responsibilities in the actual preparation and presentation of the College opera. Consult instructor before registering, the earlier the better. Two credits. Winter, arranged.

118, 119, 120. **Symphony Orchestra.** Senior College credit will be given students of advanced standing. Prerequisite, two years in Orchestra and courses 12, 13. Time and credit as for Music 18, 19, 20.

124, 125, 126. **Advanced Chorus.** For Juniors and Seniors who have had choral experience. Consult director early. One credit each quarter. Men, M. W. F. 12. Ladies, T. Th. F. 12.

134. **Counterpoint.** Prerequisite, Harmony 13. Contrapuntal composition in the first four species, in two and three parts. Three credits. Fall, M. W. F. 10.

135. **Counterpoint.** All five species, in two, three and four part composition. Three credits. Spring, M. T. W. 11.

141, 142, 143. **Band A.** Rehearsals to be held jointly with 41, 42, 43. Senior College credit will be given students of advanced standing. Prerequisite, two years of band and courses 12, 13. One and a half credits each quarter. T. Th. 12-2, W. 12-2.

**NOTE:** The opera "Robin Hood" will be presented during the year.

**PRIVATE INSTRUCTION COURSES**

The following courses are given through private study only and a special fee is charged. Consult the instructor, and arrange time.

**NOTE:** Students taking one lesson a week in any private music study, and getting the required amount of practice and preparation, shall register for one and one-half credits per quarter. Students taking two lessons and getting the required amount of practice and preparation, shall register for three credits per quarter. Lesson appointments and fees shall be arranged with the teacher.

**NOTE:** Public Recital. A series of recitals will be given at the College during the year. Students registered in the Private Instruction courses are eligible to participate upon recommendation of their teachers. No additional credit is offered for this work.
PHYSICAL EDUCATION

50, 51, 52. PIANO. For students having less than two full years of piano instruction.

53, 54, 55. VOCAL. Conditions same as for piano.

56, 57, 58. WIND INSTRUMENTS. All the wind instruments of the band and orchestra. For students having less than two full years of previous training.

60, 61, 62. VIOLIN. For students having less than two full years of previous training.

150, 151, 152. PIANO. For students recommended by an associated teacher, and satisfying the departmental standards for the equivalent of two full years of previous study.

153, 154, 155. VOCAL. For advanced vocal students.

156, 157, 158. WIND INSTRUMENTS. For students satisfying the departmental standards for the equivalent of two full years of previous study.

160, 161, 162. VIOLIN. For students recommended by an approved teacher and satisfying the departmental standards for the equivalent of two full years of previous study.

PHYSICAL EDUCATION

JOSEPH R. JENSON, KATHERINE C. CARLISLE, W. B. PRESTON, Professors; E. L. ROMNEY, Director of Athletics; MAXINE HEISS, Instructor; RUDY VAN KAMPEN, KENNETH VANDERHOFF, Assistant Directors of Athletics; GEORGE NELSON, Instructor.

Physical Education 1 will count in the Arts Appreciation Group. Required courses for majors in Physical Education for men. Physical Education 1, 4, 5, 7, 8, 9, 10, 13, 16, 19, 20, 21, 30, 33, 55, 61, 63, 64, 67, 68, 70, 72, 73, 80, 82, 83, 84, 85, 106, 111, 155, 181, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192. Chemistry or Physics 5 hours; Physiology 4, 50, 107, 108, 114. Bacteriology 1.

Courses required for women who desire to major in Physical Education: Physical Education 40, 41, 42, 43, 48, 49, 50, 68, 69, 70, 71, 80, 81, 82, 83, 84, 91, 92, 93, 106, 111, 141, 142, 143, 154 or 155,
SERVICE COURSES

In the service courses of this department an opportunity is given each student to perfect skills in some form of physical activity which will help establish a permanent interest in healthful recreation of the active, rather than passive, type.

A physical examination is given all students at the beginning of each year in order properly to advise them as to the type of activity best suited to their individual needs.

Women students are required to take some physical education service course for six quarters. This work may be elected by each student. Men students not taking military are also required to take six quarters of some physical education service course.

Upon recommendation from the college physician the Attendance and Scholarship Committee may permit students to defer taking physical education, or in case of permanent disability grant permanent exemption from the physical education requirement. Deferment or exemption must be obtained during or previous to the quarter in question. If a student fails to register, or having registered fails to complete a course in physical education and does not obtain an exemption or deferment before the end of the quarter a deficiency will be recorded for that quarter and such deficiency must be made up before graduation.

THE COLLEGE HEALTH SERVICE

The Health Service is maintained primarily for the care of students who may become ill during their stay on the campus. This service is also looked upon as an educational department to teach preventive medicine and hygiene. Through consultations, examinations and advice, it attempts to point out the causes of ill health, and to present clearly the fundamental laws of good health.

PROFESSIONAL COURSES IN PHYSICAL EDUCATION

Because of the great demand for trained leaders in community recreation and playground management, directors of physical education in high schools, and for high school coaches, this department offers an opportunity to obtain a major or minor in physical education, and also to meet the state requirements for certification of teachers of physical education, and coaches in high schools.
INTRAMURAL SPORTS

Intramural sports are conducted as a part of the program of the Department of Physical Education. The department for women, in cooperation with the Women’s Athletic Association has charge of all women’s athletics and offers a wide program of intramural sports.

The department for men carries on an extensive organized intramural sports program which is separate and apart from intercollegiate athletics.

The function of the intramural program is to give every student moral, social, physical and educational values derived from competitive athletics. Competition is organized between organizations, clubs, individuals, classes and institutional departments. The program of athletics provides for both individual and team endeavor, “athletics for all,” which is the purpose of the establishment of intramural sports.

SERVICE COURSES FOR MEN AND WOMEN

9, 10. FENCING. One credit. 9. Fall or Spring, M. W. F. 1 or T. Th. F. 2. 10. Winter, M. W. F. 1 or 2.

Jenson

55. RED CROSS LIFE SAVING. A study of all material necessary in order to pass the Senior Red Cross Life Saving Test. One credit. Spring, M. T. Th. 1.

Carlisle

61, 62. ARCHERY. One credit. 61. Fall, M. W. F. 9 or T. Th. F. 2. 62. Spring, M. W. F. 9 or T Th. F. 2.

Heiss, Van Kampen

63, 64, 65. RECREATIVE GAMES. One credit. Fall, T. Th. 10; Winter, M. W. 12 or T. Th. 10; Spring, T. Th. 9 or T. Th. 10.

Heiss

67. TENNIS. One credit. Spring, M. W. F. 8, 9, 10, 11, 12, or 1; T. Th. 8, 9, or 12.

Staff

68, 69. ELEMENTARY FOLK DANCING. One credit. Fall and Winter, M. W. F. 11.

Carlisle

70, 71. ELEMENTARY TAP DANCING. One credit. 70. Fall or Spring, T. Th. 3-4:30. 71. Winter, T. Th. 3-4:30.

Heiss
72. **Social Dancing.** One credit. Any quarter, T. 10-12, Th. 10.

73. **Golf.** One credit. Spring, M. W. F. 11 or 2.

155. **Diving.** One credit. Spring, M. W. F. 11.

168, 169. **Advanced Folk Dancing.** One credit. Fall or Spring, T. Th. F. 12.

170, 171. **Advanced Tap Dancing.** One credit. Winter, T. Th. F. 12; Spring, M. W. F. 10.

172. **Leadership in Social Dancing.** One credit. Spring, T. Th. 8.

**SERVICE COURSES FOR MEN**

4, 5. **Elementary Boxing.** One credit. Fall and Winter, M. W. F. 9 or 2.

6. **Spring Activities.** One credit. Spring, M. W. F. 9 or 10, or T. Th. F. 12.

7, 8. **Elementary Wrestling.** Two credits each quarter. Fall and Winter, M. T. W. Th. 1, Daily 2.

11. **Football.** One credit. Fall, Daily 4.

12. **Track.** One credit. Spring, time arranged.

13, 14, 15. **Handball.** One credit. 13. Fall, M. W. F. 10 or 11, or T. Th. 12 or 2; 14. Winter, M. W. F. 10 or 11, T. Th. 12, M. T. W. 1, W. Th. 2. 15. Spring, M. W. F. 11 or 12, T. Th. F. 12.

16, 17, 18. **Elementary Swimming.** One credit. M. W. F. 9 or Daily 3.

22, 23, 24. **BASKETBALL.** One credit. Fall and Winter, M. W. F. 10 or 11; Spring, M. W. F. 9.

25, 26, 27. **RESTRICTED GYMNASTICS.** One credit. Students may register only after consultation with head of department. Time arranged.

30, 31, 32. **ELEMENTARY HEAVY APPARATUS.** One credit each quarter. M. W. F. 12.

33, 34, 35. **ADVANCED TUMBLING.** One credit each quarter. Fall and Winter, T. Th. 9; Spring, T. Th. 1.

**SERVICE COURSES FOR WOMEN**

40. **SOCCER AND VOLLEY BALL.** One credit. Fall, M. W. 12, T. Th. 9, T. Th. 1.

41. **BASKETBALL.** One credit. M. W. 9, 10, or T. Th. 9 or 1.

42. **BASEBALL AND SPEEDBALL.** One credit. Spring, M. W. 12, T. Th. 1.

43, 44. **TUMBLING AND STUNTS.** One credit. Winter and Spring, M. W. F. 8.

45, 46, 47. **RESTRICTED ACTIVITIES.** This course is given for those students physically unable to take the required work in physical education. Students may register only after consultation with the head of the department. One credit. Fall, M. W. F. 8; Winter, T. Th. S. 8; Spring, M. W. F. 8.

48, 49, 50. **ELEMENTARY CREATIVE DANCING.** A study of fundamental movement techniques, elements of rhythmic and musical
patterns, materials of design and composition, original composition of dance forms, history of the dance. One credit each quarter. M. 2-4, F. 2.


154. Advanced Swimming. One credit. Fall or Winter, M. T. Th. 1.

PROFESSIONAL COURSES

1. Orientation in Physical Education. A survey of the whole field of physical education, showing its relationship to art and enriched living. Two credits. Any quarter, T. Th. 8.

80. Nature and Function of Play. An analysis of the basic principles underlying play; the function of play in the growth, development, and social adjustment of the child and the adult. Two credits. Fall, T. Th. 9.


83. Playground and Community Recreation Leadership. For men and women. Consists of lectures and practical work. Lectures will consider selection of suitable material, and methods of handling
various groups. The practice hours will take up games and folk dances. Four credits. Spring, Daily 10.

Jenson and Carlisle

84. NORMAL GROWTH AND DEVELOPMENT. A study of the laws of normal growth and development of the child differences. Special emphasis on the age characteristics with sex and individual differences. Three credits. Spring, M. W. F. 2.

Jenson

85. METHODS IN INTRAMURAL ORGANIZATION FOR MEN. Designed to study the organization of intramural athletics. Three credits. Fall, M. W. F. 11.

Van Kampen

91, 92, 93. ORGANIZATION OF INTRAMURAL PROGRAMS FOR WOMEN. Includes practice in methods of coaching sports and athletics for girls. Baseball, basketball, archery, volleyball, tennis, track and field events, soccer, speedball, and swimming, arranged seasonally. Two credits. T. Th. 2.

Heiss

106. PHYSIOLOGY OF ACTIVITIES. Prerequisite, Physiology 4. Four credits. Fall, M. T. W. F. 11.

Carter

111. NUTRITION. A course planned for physical education majors. Three credits. (Not given 1936-37)

141, 142, 143. ADVANCED CREATIVE DANCING. A further development of skills in the use of tools of movement, rhythm, and music, improvisation and dance composition; principles and methods of teaching the modern dance; present trends in the dance in education. Two credits each quarter. W. 12, 2-4, F. 2.

Carlisle

130a. CORRECTIVE PHYSICAL EDUCATION. A study of those facts in body mechanics which contribute to the basic principles of posture. Analysis of postural deviations, their prevention and correction. Prerequisite, Physiology 4. Three credits. Winter, M. W. F. 9.

Carlisle

130b. PRACTICE IN CORRECTIVE GYMNASTICS. Practical application of 180a. Time and credit arranged. Consult head of department before registering. Spring, arranged.

Carlisle
181. Mechanical Analysis of Activities. An analysis of the techniques or mechanics of the movements in the classified groups of physical education activities; an analysis of the teaching explanations of how to make movements or coordinations; an analysis of skills; a study of the nomenclatures used and the formulation of a working nomenclature for all the activities. Three credits. M. W. F. 2. Fall.

Jenson

183. Interpretation of Physical Education Objectives. An analysis of the results and values of physical education activities under leadership in terms of development, adjustment, and standards and their relationships as objectives. Five credits. Fall, Daily 9.

Jenson


Carlisle

185. History of Physical Education. Two credits. Winter, T. Th. 9.

Jenson

186. Heavy Apparatus. A study of methods of teaching gymnastics such as parallel bars, side horse, and rings. Two credits. Every quarter. Arranged.

Bell


Vanderhoff


Vanderhoff

189. Methods in Basketball. The coaching and training of basketball teams beginning with fundamentals, passing, dribbling and pivoting with emphasis on the psychology of the game; various methods of defense and offense. Three credits. Winter, M. T. W. 12.

Romney
190. METHODS IN TRACK AND FIELD. How to train for various track and field events; their form and technique; conduct of the athletic meets; construction use, assembling of all equipment used by the participants on the field; development of certain types of individuals for certain events. Three credits. Spring, M. T. W. 12.

Van Kampen

191. INTERPRETATION OF THE HEALTH EXAMINATION. A study of examination procedures, the detection of physical defects, the general assessment of the health of the individual, and the follow-up program. Three credits. Spring, M. W. F. 11.

Preston


Jenson

PHYSICS


Physics 3 will count in the New Exact Science Group. May be replaced by Physics 6, 7, 20, 21 or 22.

Students majoring in Physics should take during the first two years, Mathematics 34, 35, 46, 97, 98, 99 and Physics 20, 21, 22. In addition for graduation, Chemistry 3, 4; Mathematics 120, 121, 122, and at least thirty hours of Senior College work in Physics. Pre-medical students must take Physics 20, 21, 22. Calculus and Physics 20, 21, 22 are prerequisites for all Senior College courses.

3. INTRODUCTORY PHYSICS. (This course replaces Physics 1 and 2. Credit in this course will not be given to students who have credit in Physics 1 or 2.) A lecture demonstration course designed for students not majoring in the mathematical sciences, Engineering or Forestry. Five credits. Fall, Daily 10 or 2; Winter or Spring, Daily 10.

Staff

6, 7. GENERAL PHYSICS. Physics 6 covers mechanics, constitution of matter, heat, and meteorology. Physics 7 includes primarily electricity and magnetism, with a survey of the fields of light and sound. Primarily designed for students in Forestry. Five credits each quarter. Winter and Spring, M. T. W. F. 11; Lab., Winter, any day 8-10; Spring, M. W. or F. 8-10; Quiz section T. or Th. 9.

Leon Linford, E. Gardner
20, 21, 22. Mechanics and Molecular Physics. Electricity and Magnetism. Heat, Light and Sound. Prerequisite: High School Physics and a working knowledge of trigonometry. Should be taken in the Sophomore year. Five credits each quarter. M. W. F. 9. Labs, M. W. 10-12, 1-3 or 3-5, or T. Th. 3-5; Quiz section, F. 10-12, 2-4, or 3-5.

Leon Linford, E. Gardner, L. H. Linford

104, 105, 106. Physical Chemistry. (See Chemistry 104, 105, 106) Prerequisites: the above and Chemistry 5. For Laboratory to accompany this course see Chemistry 109, 110, 111. Three credits each quarter.

Maeser

108. Advanced Laboratory Work. Recommended for students majoring in Physics. One credit. Any quarter, time arranged.

Staff

110. Electricity and Magnetism. Theory course. Three credits. (Given 1937-38)

E. Gardner


Leon Linford and E. Gardner


W. Gardner

119, 120, 121. Modern Physics. Four credits each quarter. M. T. W. Th. 1.

Leon Linford


W. Gardner


L. H. Linford, Leon Linford

170. Nuclear Physics. A brief survey of methods and results of recent investigations of nuclear processes. Three credits. (Given 1937-38)

L. H. Linford
1190, 1191, 1192. **Theoretical Physics.** An introduction to mathematical physics. Prerequisites: Physics 153, 154, 155. Three credits each quarter. (Given 1937-38)

*W. Gardner*

1193, 1194, 1195. (293, 294, 295) **Seminar in Physics.** Time and credit arranged.

*Staff*

2209, 2210, 2211. **Theoretical Mechanics.** Two credits each quarter. Time arranged.

*W. Gardner*

2212, 2213, 2214. **Hydrodynamics and Relativity.** Two credits each quarter. Time arranged.

*W. Gardner*

2215, 2216, 2217. **Mathematical Theory of Electricity and Magnetism.** Two credits each quarter. Time arranged.

*Leon Linford*

2218, 2219, 2220. **Atomic Structure, Thermodynamics, and Physical Chemistry.** Two credits each quarter. Time arranged.

*Leon Linford*

250, 251, 252. **Research Work.** Time and credit arranged.

*Staff*

**Physiology, Public Health and Hygiene**

E. G. Carter, W. B. Preston, Professors; C. E. Dancy, C. L. Anderson, Assistant Professors.

Physiology 4 will count in the New Biological Science Group.

4. **Anatomy and Physiology.** A study of the structure and functions of the human body. This course is prerequisite for all upper division courses in Physiology and Health. Five credits. Fall, Daily 9, 10, 2; Winter, Daily 8, 9, 2; Spring, Daily 9, 10, 2.

*Staff*

5. **Physiology Laboratory.** A course of laboratory exercises and demonstrations selected to illustrate the fundamental principles of physiology and hygiene. Should accompany Anatomy and Physiology 4. One credit. Any quarter, T. or W. 2-5.

*Carter, Anderson*

Carter, Anderson

*25. Home Hygiene and Care of the Sick. A course in home nursing and first aid to the injured. The first hour is devoted to discussion, the laboratory to demonstrations and practice. Reading of reference material and writing of special reports required. Laboratory apron needed. See instructor. Class limited to 18. Two credits. Any quarter, T. 3, Lab. Th. 3-5.

Dancy

50. First Aid. The standard American National Red Cross course in first aid with emphasis upon the practical use of the knowledge as applied to every day life in various occupations. Detailed demonstrations and practice. The American Red Cross First Aid Certificate may be obtained by students in the course who pass a satisfactory examination. Three credits. Winter, M. W. F. 11.

Preston

104. Mechanical Anatomical Analysis of Activity. A study of articulations and muscles with emphasis on movements and actions. The skeleton, manikan, and man himself will afford the laboratory material. Three credits. Spring, M. W. F. 10.

Anderson


Carter

107. Human Physiology. This course is planned for students desiring further study of the human mechanism than is offered in the elementary course. Special attention is given to the nervous system, sense organs and digestion. Three lectures and one demonstration per week. Prerequisite, Physiology 4. Four credits. Winter, M. T. W. F. 11.

Carter

108. Public Health and Hygiene. (May be used for High School Certification.) This course is designed to acquaint the student with a broad conception of the principles of hygiene and preventive medicine. The several approaches to positive health will be discussed
and the general field of public health activities will be outlined with emphasis on health in the secondary school. Prerequisite, Physiology 4. Five credits. Fall, Daily 8, 10; Winter, Daily 10; Spring, Daily 9.


110. PHYSIOLOGY. A lecture and discussion course dealing with present status and recent advances in the physiology of glands of internal secretion. Prerequisite, Physiology 4. Two credits. Spring, T. Th. 8.

114. METHODS AND MATERIALS IN HEALTH EDUCATION. Designed to meet the practical problems of health education in the public schools. It will include a study of curricula and methods of teaching for both elementary and secondary schools. Two credits. Winter, T. Th. 8.

115, 116, 117. JOURNAL CLUB. A study of current physiological literature including hygiene, with oral and written reports. Prerequisite: Physiology, 107 or 108. One credit each quarter. Time arranged.

125. MOTHERCRAFT. This course includes a study of the anatomy and physiology of the reproductive system, preparation for motherhood, and the physical care of mother and child from the prenatal period to the end of the first year of the child’s life. Prerequisite, Physiology 4. Three credits. Fall, M. W. F. 10; Winter, M. W. F. 10; Spring, M. W. F. 10.
146. MENTAL HYGIENE. See Sociology 146 for description of course.

150. PHYSIOLOGY LABORATORY. Recommended for majors and minors in physiology and students in foods and nutrition. Any quarter. Time and credit arranged.

Carter, Anderson


Preston

195. PHYSIOLOGY SEMINAR. Winter, M. 3-5. Two credits.

Anderson

*Does not satisfy Biological Science group requirement.

POLITICAL SCIENCE

F. D. DAINES, ASA BULLEN, Professors.

Political Science 60 and 70 will count in the New Social Science group.

Students majoring in this department should include the following Senior College courses either in the major or special group. Political Science 101, 102, 116, 117, 118, 124, 129, 145, 201, 202, 203; Psychology 101, Sociology 140. Nine hours each in Senior College history and economics.

11. COMMERCIAL LAW. A general survey of the nature, source, form, expression and classification of law. The place of law in business and commercial life. The course will be completed in one quarter and is intended as one of general information to students of the college outside the School of Commerce, as well as an introductory course to students intending to take any or all of the other Commercial Law courses. Open to all students of sophomore standing or above. Fall quarter. Three credits. M. W. F. 8.

Bullen

12, 13. COMMERCIAL LAW. A comprehensive study of the law of contracts and agency. Open to all students of sophomore standing or above. Winter and Spring quarters. Three credits each quarter. M. W. F. 8.

Bullen
60. **American Legislation.** A study of the American government and governmental problems by the method of organizing the class into a Student Legislative body, using Robert's Rules of Order and rules of legislative procedure of national and state legislative bodies. A laboratory period, with no additional credit, takes the place of two hours of preparation outside of the recitation period. Fall quarter. Five credits. Daily 10.

70. **Types of Political Systems.** A comparative study of the various forms and kinds of governments that have developed in the modern world, with an analysis of the forces in the United States tending toward a fascist or a communistic order of society. Spring quarter. Four credits. M. T. W. F. 10.

101. **American Foreign Policy.** The place of the United States in the family of nations as affected by our traditions, interests, and interpretations of international affairs. Prerequisite, one year of Social Science. Spring quarter. Three credits. T. W. Th. 1.

102. **International Relations.** Psychological, economic, racial and other obstacles to international cooperation, as exemplified in recent events. The Treaty of Versailles; the League of Nations; the present day world politics. Prerequisite, one year of Social Science. Winter quarter. Three credits. M. W. F. 9.

104. **Commercial Law.** A comprehensive study of the law of negotiable instruments. Prerequisites, Political Science 11, 12, 13. Fall quarter. Three credits. T. Th. 8, M. 12.

105, 106. **Commercial Law.** A comprehensive study of the law of bailments, sales of personal property, partnerships, corporations and bankruptcy. Prerequisites, Political Science 11, 12, 13, 104. Winter and Spring quarters. Three credits each quarter. (Not given 1936-37)

107, 108. **Commercial Law.** A comprehensive study of the law of real property. The nature and tenure thereof, estates, deeds, conveyancing, abstracts of title, mortgages and other liens, wills and decedent's estates. Prerequisites, Political Science 11, 12, 13, 104.
Winter and Spring quarters. Three credits each quarter. T. Th. 8, W. 12.


117. American Political Ideas. Fundamental theories underlying American Political institutions and governmental policies. Prerequisite, one year of Social Science. Three credits. (Not given 1936-37)

118. Political Parties. Their function in government; their organization and methods. Prerequisite, one year of Social Science. Fall quarter. Three credits. M. W. F. 11.

120. Relation of Government to Industry. An interpretation is sought of the present trends in regard to governmental regulation and control of important industries in the United States, the labor policies of the government, and governmental aids to industry. Three credits. (Not given 1936-37)


129. Public Administration. A general survey of national, state, and city administrative organization and practice, with a study of the principles enunciated by public administrators and independent observers. The course is designed to be helpful to students who contemplate a career in the public service. Prerequisite one year of Social Science. Spring quarter. Three credits. M. W. F. 8.
140. **ADVANCED AMERICAN LEGISLATION.** A continuation of Political Science 60, with the use of similar methods of approach. Fall quarter. Four credits. T. 1. (Lab. M. T. W. Th. 1-3)  

*Daines*

145. **PHILOSOPHY OF GOVERNMENT.** The study of attitudes, beliefs, and doctrines of various groups of individuals as they affect and are affected by various forms, kinds and functions of government. Prerequisite one year of Social Science. Spring quarter. Three credits. M. W. F. 11.  

*Daines*

201, 202, 203. **CURRENT POLITICAL PROBLEMS.** A course designed for senior and graduate students majoring in Political Science and related subjects. Required of those graduating in Political Science. Fall, Winter and Spring quarters. Two credits each quarter. T. Th. 8.  

*Daines*

**POULTRY HUSBANDRY**

**Byron Alder, Professor; Carl Frischknecht, Assistant Professor.**

1. **GENERAL POULTRY.** A study of breeds, judging, incubation, brooding, feeding, marketing. Designed to meet the needs of the students wishing a general knowledge of the poultry industry and the problems of production, and a foundation upon which other courses are built. Three credits. Winter, M. W. F. 11, or Spring, M. W. F. 9.  

*Alder*

2. **GENERAL POULTRY, LABORATORY.** Covers the same work as Poultry 1, with practical laboratory problems. One credit. Winter or Spring, M. 2-5.  

*Frischknecht and Alder*

3. **GENERAL POULTRY.** The course is planned to meet the needs of Home Economics students. Not given unless six students apply. Two credits. Spring, T. Th. 11.  

*Alder*

8. **TURKEY PRODUCTION.** A study of the breeds, breeding, brooding, feeding, and marketing of turkeys. Special problems involved in small farm flock or large commercial flock management are emphasized. Two credits. Winter, T. Th. 9.  

*Alder*

10. **POULTRY PRACTICE.** Elementary practice at the poultry
yards. Prerequisite, Poultry 1. Spring. Time and credit arranged.

Alder and Frischknecht

Poultry Diseases. (See Veterinary Science 70.)

*104. Incubation and Brooding. This course is designed to familiarize the student with the special problems involved in incubation or hatchery operation and the brooding, feeding, and rearing of chicks. The advantages and disadvantages of battery, hot water, electric, coal burning, and gas brooders are emphasized. Two credits. Spring, T. Th. 9.

Alder

105. Poultry Management. Problems of location of poultry farm, farm planning, renewing the flock, feeding, disease control, marketing, and other problems affecting labor income are studied in detail. Prerequisite, Poultry 1. Three credits. Winter, M. W. F. 9.

Alder

106. Breeds and Breeding. The origin and development of the breeds and varieties of poultry and their adaptability to inter-mounttain production. Problems in judging; production of hatching eggs for commercial hatcheries; R. O. P. breeding and the National Poultry Breeding program. Prerequisite: Poultry 1. Poultry 105 and 106 given alternate years. Three credits. (Not given 1936-37)

Alder


Alder

125. Special Problems. Special assignment to work out certain information on special problems. Prerequisites, Poultry 1, 104, and 105. Winter or Spring. Time and credit arranged.

Alder and Frischknecht


Alder and Frischknecht

127. Advanced Poultry Practice. Special practice at the poultry yards. Prerequisites, Poultry 1, 104, and 105. Winter or Spring. Time and credit arranged.

Alder and Frischknecht
3. **Elementary General Psychology.** A study of the general principles of human behavior, with applications to (a) understanding oneself as a personality, (b) improving methods of study and work, and (c) planning one’s educational and vocational careers. Intended for lower division students of all schools. Recommended to Freshmen. (Counts in the Social Science Group.) Five credits. Fall and Winter, Daily 9, 10, 2; Spring, Daily 9, 10.

**Peterson, Lewis, and Frandsen**

102. **Educational Psychology.** A professional course for prospective teachers, intended to increase understanding of personality and to develop greater insight into the conditions under which children acquire the mental and motor acquisitions comprising the curricula of the elementary and secondary schools. Prerequisite, Elementary Psychology. Five credits. Any quarter, except that secondary teachers are advised to register in Fall or Spring and Elementary Teachers in the winter quarter. Daily 10.

**Frandsen**


**Peterson**

104. **Psychology of Family Life.** Human mating, marriage and its anthropological and psychological basis; harmony in marriage through proper ideals. Adapted to the needs of all young people. Prerequisite, Elementary Psychology. Three credits. Winter, M. W. F. 11.

**Peterson**

107. **Psychology of Learning.** A study of the theories of learning and of the factors which condition learning. Applications to the school and to out-of-school situations will be made. Four credits. Spring, 1937-38.

**Frandsen**

110. **Psychology of Infancy and Childhood.** A study of the mental growth and behavior of infants and children. The methods
of measuring degrees of mental maturity will be considered. Prerequisite, Elementary Psychology. Three credits. Winter, M. W. F. 9.

Frandsen

120. Social Psychology. A study of social conduct: the basic principles of behavior; a genetic study of social behavior; and the general laws of social interaction in our own society. Four credits. Fall, 1937-38.

Frandsen

201. Systems of Psychology. A critical review of and an attempt to synthesize the several points of view on major problems of psychology. Schools to be considered are: behaviorism, functionalism, existentialism, gestalt, hormic, psychoanalysis, and eclecticism. Four credits. Winter, 1937-38.

Frandsen

202. Advanced Educational Psychology. A study of current research contributing (a) toward an understanding of the provision for individual differences and (b) toward an analysis and evaluation of methods of learning and teaching in the elementary and secondary curricula. Prerequisite, Educational Psychology. Four credits. Spring, Daily 8.

Frandsen

203. Clinical Psychology 1. Individual Intelligence Testing. A study of the individual method of diagnosing mental ability, including: practice in administering the Binet Scale to children; consideration of the theories of mental measurement; a survey of the results of intelligence testing; and an evaluation of the uses of mental tests in educational and vocational guidance. Prerequisite, Educational Psychology. Four credits. Fall, M. T. W. Th. 9.

Frandsen

RADIO, AVIATION AND AUTOMOTIVE ELECTRICITY

All courses taught by Sidney R. Stock, Associate Professor.

MA 11. Elements of Electricity and Magnetism. This course will cover all of the fundamental principles of electricity and will be taken up as follows: Ohm’s Law, Magnets and Magnetism, Electric Power and its various applications, induction, capacity, dry cells and storage batteries, A. C. and D. C. motors and generators and electrical measuring instruments. Three credits. Fall, M. W. F. 8-10.
MA 12. IGNITION, STARTING AND LIGHTING. For Winter quarter students only. The course is designed for short-term students who wish to learn enough about the electrical equipment on their cars to enable them to care for and locate electrical troubles and make minor repairs. It will include a study of all of the electrical equipment on the car, its operation, and systematic methods of locating the common troubles and repair of same. Three credits. Winter, M. W. F. 8-10.

MA 14. LOW AND HIGH TENSION MAGNETOS. A complete study of the operation of all types of magnetos. Each student will have the opportunity of going through at least thirty different magnetos. Methods of servicing, testing, and repairing are thoroughly covered with ample practical experience on all types. Three credits. Spring, T. Th. 8-10.

MA 15. IGNITION, STARTING AND LIGHTING FOR CAR OWNERS. The same material is covered as in course No. 12. Students meet for lecture only and demonstrations. This course is especially designed for students who can spend only a short time in the shops but who wish to learn enough about the electrical system on an automobile to enable them to locate and make minor repairs out on the road where expert help is not available. Two credits. Winter, T. Th. 8.

MA 111. STARTING, LIGHTING AND IGNITION SYSTEMS. A complete study of the modern starting, lighting and ignition systems. The operation of modern ignition systems, generators, starting motors and all automatic and electrical appliances used on the modern automobile. Ample practice is given in dismantling and assembling, testing, wiring and reading of wiring diagrams on all makes of automotive electrical equipment. About three weeks' time will be spent in storage battery repair, lead-welding, testing, and methods of charging storage batteries. Four credits. Fall, M. W. F. 8-10.

MA 112. GENERATOR REPAIR AND ARMATURE WINDING. Four credits. Winter, M. W. F. 8-10.

MA 113. AUTOMOTIVE ELECTRICAL EQUIPMENT AND SHOP MANAGEMENT. This course should prepare a student to handle an automotive electrical service station and repair shop. Considerable practice in the wiring, trouble shooting and repair of all kinds of electrical equipment. Shop kinks and the development of skill, accuracy and speed to prepare the student better to compete with those already in the commercial field, will be given. Business methods and com-
mmercial management, also costs and proper installation of shop equipment. Prerequisite, Starting, Lighting and Ignition 112. Four credits. Spring, T. Th. 10-12.

MA 123. PRACTICAL ELECTRICITY. Required of all students who prepare to teach in junior high schools. This course will include a consideration of the fundamental principles of electricity and their application in the construction of such projects as bell circuits, house wiring, electro-magnets, heating elements, motor generators, transformers. Four credits. Spring, M. W. F. 8-10.

RADIO

The Radio Department is offering a wide range of courses and training to meet the rapid growth of the radio industry and communications.

Ample training and practice in theory of operation and practical construction of radio receivers, transmitters, public address, and sound amplifiers are given.

Students who complete the courses should be well qualified as radio service men, sound technicians, and short wave licensed operators.

Forest Service Radio, a new line, was added to the department this year. Training in building, servicing and operating of forest transceivers was completed with excellent results.

All students are required to pay a laboratory fee of $3.00. The college will furnish necessary parts and materials to build all experimental models. Each student must have or will be required to purchase his own kit of tools, consisting of an electric soldering iron, one pair diagonal nose side cutters, one pair needle nose with side cutters 6 inch, one pair five inch combination thin nose gas pliers, one hand drill, one set of 8 twist drills from one-quarter inch to one-sixteenth inch. Prerequisites for radio course MA 11 or its equivalent. MA 11 may be taken at same time as first course in Radio.

MA 16, 17 Winter, 18 Spring. INTERNATIONAL CODE PRACTICE. This course will take the beginner with no code knowledge through the basic and correct methods of sending and receiving code to a reliable speed of ten words per minute. One credit each quarter. M. W. F. 1.

MA 23. ELEMENTARY RADIO PRINCIPLES. A general introductory course giving the fundamental operating principles of radio reception and transmission. Instruction covers kinds and types of antennae and their installation, the installation and operation of battery sets, function and operation of vacuum tubes, “A”, “B”, “C”, batteries, con-
densers, coils, transformers, etc., introduction to radio frequency, detection, audio frequency, and fundamentals of radio transmission. The course includes the construction of a one, two, and three tube receiver. Three credits. Fall, T. Th. 2-5. Winter, T. Th. 10-12.

MA 24. Radio Principles. A continuation of course MA 23, leading into more advanced work in radio frequency, detection and audio frequency amplification. The course will cover tuned radio frequency and superhetrodyne receiver systems along with their balancing and neutralizing principles. Operation of magnetic and dynamic speakers with their methods of testing and repair. Three credits. Winter, T. Th. 2-5. Spring, T. Th. 10-12.

MA 25. Elementary Short Wave Receivers and Transmitters. An introductory course covering the principles of short wave receivers and converters for communication and entertainment service. Students will construct their own short wave receivers and learn their proper operation. The principles of short wave radio transmitters with their basic methods of tuning, neutralization and adjustment. Three credits. Spring, T. Th. 2-5.


MA 85. Advanced Service and Repair. A continuation of MA 84 carrying on into the advanced circuits the modern radio receivers. Also a study of specialized service problems covering auto radio, high-fidelity receivers, etc. Work in this course deals with the actual problems in radio servicing, the principles and operation of a service business. Prerequisite MA 84. Four credits. Spring, M. W. F. 2-5.

MA 86. Forest Service Radio. Beginning course especially prepared for students in Forestry. Fundamental principles of radio reception and transmission. A study of the operation of vacuum tubes
and their uses in the radio receiver, covering radio frequency amplification, methods of detection, regeneration and audio frequency amplification. A one, two, and three tube receiver will be constructed by each student for the laboratory work demonstrating the application of the theory and principles involved. Three credits. Fall Quarter, M. W. F. 2-5.

International Code Training in sending and receiving up to 10 words per minute is included in these courses. Required of all Forest Service Radio students.

MA 87. FOREST SERVICE RADIO. A study of the construction and operation of the combination radio telephone receivers and transmitters as are used on the Forest Service at the present time. The laboratory work will consist of the construction of the portable and semi-portable Radio Telephone transceivers, the tuning and adjustment and operation of these units. Winter Quarter, T. Th. 2-5. Two credits.

MA 88. FOREST SERVICE RADIO. A continuation of course No. 87 with methods of locating trouble and repair. During Spring Quarter considerable operating practice and many field tests with the equipment are carried out. The forest service officials from Ogden will conduct final field operating tests together with forest service methods of operation and use of the equipment. Methods of location, setups, proper station operation the care and handling of the equipment will be covered. Three credits. Spring Quarter, M. W. F. 2-5.

MA 124. VACUUM TUBE THEORY AND APPLICATION. An advanced course dealing with the design, construction and characteristics of electronic vacuum tubes. The determination of their characteristics and a complete study in the use of tube characteristic curves. With the development of each principle work is introduced to show the practical application of these factors. Required for all students majoring in Radio. Four credits. Fall, M. W. F. 10-12.

MA 125. AUDIO FREQUENCY AMPLIFICATION AND SOUND SYSTEMS. An advanced course in the study of audio amplification theory and systems. Work covers the design of modern amplifiers, loudspeakers and heavy duty power supplies with their application to radio receivers, public address, sound pictures, sound recording, etc. The course will also include the associated equipment used such as microphones, pickups, photo cells, etc. Prerequisite MA 123. Four credits. Winter, M. W. F. 10-12.

MA 126. RADIO FREQUENCY AMPLIFICATION AND RADIO TRANSMITTERS. An advanced course in the study of radio frequency ampli-
Aviation Ground School

A standard Aviation Ground School has been established at the College. Considerable equipment has been secured from the government flying field for laboratory and training purposes.

Students who plan on entering the air service either as pilots or as airplane mechanics will do well to take the courses listed below. Complete instruction than a commercial school of aeronautics. Students will save much time, and receive much more detailed and

MA 26. Aerodynamics. The purpose of the course is to teach the principles and theory of flight of heavier than air machines. A detailed study of the types of modern planes, and their construction, will be covered. Methods of assembling, rigging, inspecting and preparing a plane for flight will be done in the laboratory. Methods of repair of landing gears, wings and fuselage will also be studied in the laboratory. Four credits. Fall, M. W. F. 10-12.

S. R. Stock

MA 27. Aviation Engines. A detailed study of all kinds and types of aviation motors will be taken up as to their installation, operation, design and efficiency. The laboratory work will consist of complete methods of overhauling, repairing, inspecting and testing of the different types of airplane motors. Four credits. Winter, M. W. F. 10-12.

S. R. Stock

MA 28. Avigation and Aerology. The course will include the study, use and application of various airplane instruments used in the modern plane to safely direct the pilot on his course. Methods of laying out and flying a course by air piloting, dead reckoning, astronomical avigation and radio avigation will be taken up. Some work in aerology weather maps and a study of weather conditions will also be covered. Four credits. Spring, M. W. F. 10-12.

S. R. Stock
RANGE MANAGEMENT

L. A. STODDART, Professor; __________________ Instructor

Upon completion of the prescribed course, students are granted the degree of bachelor of science in Forestry. (See general write-up, page 61.)

An opportunity is given to take special instruction in Soil Conservation with the election of certain courses before the Senior year. The course in Range Management should acquaint the student with proper methods of maintaining the production of native range lands and the proper methods of managing range livestock. Studies in Soil Conservation should acquaint the student with the problems of soil erosion and the method of conserving water and of managing lands, especially lands under native vegetation, in such a manner that productivity will be maintained.

The degree of master of science in Range Management will be granted upon completion of a prescribed course of study. A period of one to two years and a total of forty-five residence credits, at least ten being individual research, will be required. Students desiring this advanced work should obtain permission from the major professor at least twelve months before the degree is to be granted, at which time a program of research and study will be outlined. A bachelor’s degree in Forestry or a related subject is a prerequisite for graduate work in this field.

162. RANGE MANAGEMENT. A basic course dealing with all problems met in managing native range lands, including a study of grazing regions and the problems of each; revegetation of range lands; maintenance of production; utilization of range forage; and range livestock management as it affects range vegetation. Prerequisites, Botany 21, 22, 23. Four lectures, one Lab. Field trips. Five credits. Fall, M. T. W. F. 10, Lab. F. 2-5.

164. ADVANCED RANGE. Technical problems in field methods, grazing reconnaissance, management plans, quadrating, range planting, and systems of grazing for range improvement. This course is especially designed to train men in range research and technical problems of administration. Prerequisite, Range 162. Must be preceded or accompanied by Botany 126. Four credits. Winter, M. T. W. F. 10.

Stoddart
167. **Soil Conservation.** This course is designed to acquaint the student with the entire field of soil conservation, including the history, causes, results, and methods of controlling soil erosion. Special emphasis is placed upon conservation of native range lands but attention is also given to erosion on farm and forest lands. Should be preceded or accompanied by Agronomy 6, Range Management 162, and Botany 126. Four lectures, one Lab. with field trips. Five credits. Fall, M. T. W. F. 11, Lab. S. 9-12.

Stoddart

175. **Range Plants.** A course designed for Range Management majors only. A detailed study of the distribution, characteristics, identification, and economic value of native browse and forb plants. Includes a discussion of poisonous plants and vegetative associations and distribution. Must be accompanied or preceded by Botany 108 and Range Management 162. Three lectures, one Lab. Four credits. Winter, M. W. F. 11, Lab. W. 2-5.

Stoddart


Staff

182. **Erosion Control.** A course designed to acquaint the student with the problems of erosion control. The development of methods, especially vegetative methods, for controlling erosion on range, forest, and farm will be included. Both water and wind erosion will be given attention. Prerequisite Range 167. Three credits. Winter, M. W. F. 9.

Staff

193, 194. **Range Seminar.** Current range management research and problems, including a systematic review of the field of range management and related fields. Prerequisite, Range 162. One credit each quarter. Fall and Winter, T. Th. 1.

Staff
195. **Range Problems.** Individual study and research upon a selected range problem approved by the instructor. This course is designed to obtain data for the preparation of a thesis, and must be followed by English 111. Open to Range Management seniors or to others by approval of instructor. 1 to 3 credits. Fall or Winter. Time Arranged.

196. **Erosion Problems.** Individual study and research upon a selected erosion problem approved by the instructor. This course is designed to obtain data for the preparation of a thesis, and must be followed by English 111. Open to Soil Conservation seniors or to others by approval of instructor. 1 to 3 credits. Fall or Winter. Time arranged.

200. **Thesis.** Original research and study on a problem in range management or range and soil conservation followed by the preparation of a formal thesis. This course is open only to graduate students and must be approved by the major professor. One to 15 credits. Any quarter. Time arranged.

205. **Graduate Seminar.** Current scientific papers in range management, Soil Conservation, and related subjects. Not open to undergraduate students. One credit. Fall and winter quarter. Time arranged.

206. **Research Methods.** A study of research methods in range management and related subjects. A review of scientific literature in the field and an analysis of results. Graduate students by approval. Two credits. Fall quarter. Time arranged.

(See page 61 for basic courses)

**JUNIOR (Range Management)**

<table>
<thead>
<tr>
<th>Botany 120</th>
<th>Physiology</th>
<th>F.</th>
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<tbody>
<tr>
<td>A. H. 10</td>
<td>Feeds and Feeding</td>
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<tr>
<td>Forestry 132</td>
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<tr>
<td>Ag. Econ. 106</td>
<td>Land Econ. &amp; Util.</td>
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<td>A. H. 110</td>
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**Range Management**

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<td>Wildlife 150</td>
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<td>Forestry 106</td>
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<td>Agronomy 103</td>
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<td>Forestry 114</td>
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<td>Wildlife 155</td>
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<tr>
<td>Sheep Husbandry</td>
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<td>Agrostology</td>
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<tr>
<td>Gen. W. L. Mgmt.</td>
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<tr>
<td>Measurements I</td>
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<tr>
<td>Forage Crops</td>
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<tr>
<td>Silviculture I</td>
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<td>Wildlife Mgt. III</td>
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Junior Soil Conservation majors omit A. H. 110, For. 106, Fall; A. H. 10, For. 132, A. H. 125, W. L. 155, Winter; and take Geo. 104, Agron. 108, Fall; Ag. Ec. 53, Range 175, For. 115, Winter Quarter.

**SENIOR**

*(Range Management)*

<table>
<thead>
<tr>
<th>Course</th>
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**SENIOR**

*(Soil Conservation)*

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Required: Social Science, 10 credits.
English or Language, 17 credits.
SECRETARIAL SCIENCE

P. E. Peterson, Professor; Thelma Fogelberg, Assistant Professor; L. Mark Neuberger, Instructor

Elementary Stenography and Elementary Typewriting are prerequisites to the Secretarial Course, but will not count in the major.

In order to qualify for a B. S. degree in Secretarial Science the following courses must be taken in addition to those courses which fulfill the group requirements. (N. B. Mathematics 15, which fulfills in part the Exact Science group requirements, is required of all Secretarial Science majors. It is advisable to take it during the Freshman year.)

It is suggested that minors be chosen in fields closely related to Secretarial Science: Accounting, Business Administration, Political Science, Economics, Sociology, History, English and Modern Languages.

The special group should consist of 15 hours of Accounting and 13 hours of Business Administration.

<table>
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<tr>
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<th>Freshman Comp. (Eng. 10)</th>
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<tr>
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<td>College Grammar 105</td>
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<td>Reporting Shorthand</td>
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</table>

If one wishes a teaching certificate in Secretarial Science, the following courses are required in addition to the above: Methods of Teaching Typewriting; Methods of Teaching Stenography; Psychology 3 or 101 and 102; Principles of Education 111; Education 121; Education 114 (Junior year); *Education 115; Education 117; Education 129; Physiology 108.

*Education 115 should preferably be taken in the spring.
A two-year course is also offered in Secretarial Science for students who do not wish to qualify for a B. S. degree, but who wish to fit themselves for stenographic positions as quickly as possible.

**TWO-YEAR COURSE**

**I. FALL**

<table>
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<tr>
<th>Subject</th>
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<td>Anat. &amp; Phys.</td>
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<td>English</td>
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<td>Typewriting 1</td>
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**II. FALL**

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<td>Typewriting 1</td>
<td>Typewriting 1</td>
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<tr>
<td>Gen. Econ. 51</td>
<td>Typewriting 1</td>
<td>Typewriting 1</td>
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<tr>
<td>Total</td>
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<td>17</td>
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</table>

*Girls may substitute Sociology 61 for the course in Social Relations.

30. **BUSINESS ENGLISH.** This course aims to give the student practice in the writing of different kinds of business letters including Sales, Credit, Collection, Adjustment Letters and Letters of Application. Prerequisite, Freshman Composition. Three credits. Winter or Spring, M. W. F. 9.

*Neuberger*

75, 76, 77. **ELEMENTARY STENOGRAPHY.** This course is designed for students who have had no previous training in shorthand, and includes a thorough drill in the fundamentals of the Gregg system of shorthand. Three credits each quarter. M. W. F. 9.

*Fogelberg*

80, 81, 82. **ADVANCED STENOGRAPHY.** This course is designed for students who have had one year of shorthand at this Institution
or elsewhere. It includes: An intense review of the theory of Gregg Shorthand with the development of new vocabulary; the study of letter forms and arrangements; transcripts. Special attention will be directed toward the attainment of speed in taking dictation together with the making of perfect transcript.

Students must have had two years of typewriting or must be registered in a course of advanced typewriting simultaneously with this course. Three credits each quarter. M. W. F. 10.

86. **First Quarter Typewriting.** For students who have not had any typewriting. This course is designed to develop correct technique in:

- Position—Syllable, Word and Sentence Drills.
- Stroke—Rhythm, Number, and Shifting Drills.
- Mechanical Features—Acceleration and Concentration Drills.
- Mastery of Keyboard—Introduction of "Time" Writing.
- Finger Exercises—Analysis of Errors.

Average Speed, end of the quarter, 20 words a minute.

Students must arrange for three hours practice a week in addition to the regular class hours. One credit. Fall, M. W. 11 or 3; T. Th. 8; Winter, M. W. 11; Spring, M. W. 11.

87. **Second Quarter Typewriting.** This course continues with the advanced development of those features of the beginning course and in addition includes:

- Care of the Machine—Centering.
- Setting-up Copy—Frequency, Phrase and Word Combination Drills.
- Sentence and Paragraph Practice.
- Analysis of Errors—Control Drills.
- Introduction to Letter Writing.

Students must arrange for three hours practice a week in addition to the regular class hours. One credit. Fall, T. Th. 9; Winter, T. Th. 8 or 3; Spring, T. Th. 2.

88. **Third Quarter Typewriting.** This course continues with
the advanced development of the features developed in Typewriting 86 and 87, and in addition includes:

Letter Writing stressing Placement, Essentials, Styles, Tabulating.
Post Cards and Filing Cards.

Students must arrange for three hours practice a week in addition to the regular class hours. One credit. Winter, M. W. 10; Spring, M. W. 10, T. Th. 8.

89. **Advanced Business Typewriting.** This course is designed to give special attention to the development of accuracy, and includes:

- Advanced Letter Writing.
- Telegrams.
- Continuance of all Drills and Exercises.
- Invoicing and Billing.
- Advanced Tabulation.
- Speed and Accuracy Tests.
- Average speed, end of the quarter, 45 words a minute.

Students must arrange for three hours practice a week in addition to the regular class hours. One credit. Fall, T. Th. 2, M. W. 10.

90. **Advanced Legal Typewriting.** This course is designed to give special attention to the development of accuracy and includes:

- Continuance of Concentration, Acceleration, Rhythm and Corrective Drills.
- Advanced Legal Forms.
- Speed and Accuracy Tests.
- Average speed, 50 words a minute.

Students must arrange for three hours practice a week in addition to the regular class hours. One credit. Winter, T. Th. 9 or T. F. 11.

91. **Finishing Course in Typewriting.** This course is designed to give special attention to the development of accuracy, and includes:

- Continuation of all Drills.
- Review of Machine and Short Cuts in Typewriting.
Rough Draft Work.
Tabulation.
Care of the Machine.
Average speed, 55 words a minute.

Students must arrange for three hours practice a week in addition to the regular class hours. One credit. Spring, T. Th. 9.

Neuberger

92. MIMEOGRAPHING. Study and practice in setting up letter forms, report forms, booklets, programs, etc., by means of the mimeographing machine. Practice will be given in the preparation of stencils, use of the drawing board, lettering devices and stylus. Two credits. Spring, T. Th. 2-5.

Neuberger

93. ELEMENTARY CALCULATOR OPERATION. Instruction and practice in addition, multiplication, subtraction, accumulation and fixed decimal point work by the use of the Burroughs Calculating Machines. One credit. Fall, M. F. 10-12, 2-5; Winter, M. 2-5; Spring, M. 2-5.

Neuberger

94. ADVANCED CALCULATOR OPERATION. Application of Burroughs Calculating Machines to various business computations such as division, percentages, chain discounts, prorating, decimal equivalents and inventories. One credit. Winter, W. 2-5. Spring, W. 2-5.

Neuberger

98. COMMERCIAL POSTING. Instruction and practice in the application of Burroughs Posting Machines to bookkeeping procedure in commercial institutions. One credit. Fall, M. or W. 2-5 or T. 10-12.

Neuberger

99. BANK POSTING. Instruction and practice in the application of Burroughs Posting Machines to bookkeeping procedures in banks and financial institutions. One credit. Fall, Th. 2-5; Winter, Th. 2-5; Spring, F. 2-5.

Neuberger

175. OFFICE MANAGEMENT. This course is designed to familiarize students with all phases of business practice which the office assistant is called upon to perform. Aside from the general office routine, attention will be given to office management itself, office lay-out and equipment with the view of preparing the student for some of the duties
of the office manager. Prerequisites, two years Typewriting and Stenography, Elementary Psychology, Introductory Accounting, and General Economics. Three credits. Fall, M. W. F. 9.

Neuberger

176 a, b, c. REPORT WRITING. The ability to write clearly and concisely is of such importance to business men that it has been thought desirable to offer special instruction in Report Writing. Instruction will be given in the organization and writing of the various types of reports: Fact-finding; Issue of Problem-determining; Problem solution; and performance. Two credits each quarter. Fall, Winter and Spring, T. Th. 1.

Fogelberg

178 a, b. SECRETARIAL SCIENCE. This course is designed to give the student intensive drill for the attainment of a high rate of speed in shorthand and the acquisition of the technical vocabulary of all general business establishments as for example, the textile industry, the shoe, and the furniture business. Attention will also be given to the necessary moral, mental, and physical characteristics necessary to the successful office worker; the business organization, personal application, and letters of application. Prerequisites, two years Shorthand and Typewriting, Elementary Psychology, General Economics, Introductory Accounting, Business English, and Business and Office Practice. Winter and Spring quarters. Three credits each quarter. M. W. F. 11.

Fogelberg

179. THE TEACHING OF TYPEWRITING. A study of recent developments and practices in the teaching of Typewriting. A course for those preparing to teach Typewriting and for those engaged in teaching who wish to render their teaching more effective. (Not given 1936-37)

180. THE TEACHING OF STENOGRAPHY. An analysis of objectives, laws of learning, organization of materials, texts, standards of achievement, and for those engaged in teaching who wish to render their teaching more effective. Three credits. Fall Quarter, M. W. F. 11.

Fogelberg

183, 184, 185. ADVANCED SPEED COURSE IN GREGG SHORTHAND. This course is open to students who have had the first two years of Shorthand. Attention will be paid to reporting short-cuts and speed phrases. This work is designed to give the student intensive drill in order to prepare him for reporting work. Fall, Winter and Spring. Three credits each quarter. (Not given in 1936-37)
Sociology

JOSEPH A. GEDDES, LOWRY NELSON, F. D. DAINES, Professors; CAROLINE M. HENDRICKS, Associate Professor; JOSEPH N. SYMONS, J. E. HULETT, Instructors

Sociology 70 and Sociology 10 for students in the School of Agriculture will count in the New Social Science Group.

Sociology 70 is prerequisite for all upper division courses in Sociology.

Students majoring in this department may emphasize any of the following five fields: (1) General Sociology; (2) Rural Welfare; (3) Social Work; (4) Family Welfare, and (5) Social Research.

Nuclei courses about which the choice of major and special group courses should revolve are suggested as follows:

Rural Welfare—Sociology 101, 140, 185, 190, 191, 192.
Social Work—Sociology 100, 140, 161, 170, 171, 172, 173, 176, 190, 191, 192, 203.
Family Welfare—Sociology 170, 140, 150, 171, 172, 173, 176, 190, 191, 192.

General Sociology—By consultation with department.
Research—Mathematics 15 or 34, and 75; Economics 131; Sociology 140, 190, 191, 192. Graduate work in this field, open to seniors, includes Sociology 201, 202, 204, 205, 206, 207.

The special group may be filled from the following list of subjects through consultation with the department: Zoology 111, 112, 131; Psychology 101; Public Health 108, 190; Economics 131, 145, 205; Political Science 124, 125; Child Development 125 (for women).

10. RURAL SOCIOLOGY. In this course a study is made of the problems of rural life as a basis for constructive action in developing and maintaining an efficient and wholesome civilization in the country. Three credits. Fall, M. W. F. 9; Winter, Spring, M. W. F. 2.

GEDDES
SYMons

52. THE CRIME PROBLEM. This course is concerned with the broader aspects of crime as a serious contemporary problem. Such topics as the extent, nature, causes of, theories concerning, techniques for coping with, programs for prevention, etc., furnish the course content. Three credits. Winter, M. W. F., 8, 11; Spring, M. W. F., 9.

SYMons
61. **Women and Culture.** Open to women students only. A study is made of woman's contribution to culture. Traditional forms of individual refinement are observed, with the purpose of becoming familiar with inherently harmonious, balanced-types of personality. The richly varied, yet unified, life is emphasized. Two credits. Fall, T. Th. 10; Winter, T. Th. 9; Spring, W. F., 2.

   *Hendricks*

70. **Principles of Sociology.** The foundations of sociology are studied in order that a plan of social progress may be formulated. The problems of social origins, social structures, public opinion, social activities, social organization, and social evolution are carefully considered. Prerequisite for all upper division classes. Five credits. Fall, Daily 2; Winter, Daily 9, 10; Spring, Daily 8, 10.

   *Staff*

71. **Family Relations.** In this course the relations of the family with outside groups, agencies, and institutions are stressed. Attention is also paid to the inter-relation between the different members of the family. Home life is treated as a changing, developing, basic organization which should be in constant reciprocal relation with outside agencies. Three credits. Fall, M. W. F. 10, 11; Winter, M. W. F. 11; Spring, M. W. F. 11; T. Th. 9; W. 12.

   *Hendricks*

100. **Applied Educational Sociology.** The social viewpoint is used in this course as a means of appraising curriculum and materials. The socialization of attendance, discipline and methods receives attention. An attempt is made to relate the teaching population and the student population to the social order. Three credits. Spring. (Not given 1936-37)

   *Geddes*

111. **Heredity and Eugenics.** See Zoology and Entomology 111 for description of course. Does not count in Social Science group.

   *Henderson*

124, 125. **Public Opinion.** See Political Science 124, 125, for description of course.

   *Daines*

126. **Social Aspects of Industrial Relations.** An attempt is made in this course to become acquainted with the social results of the productive system as it is operating in the United States at the
present time. Approaches to the problem of adjustment through: (1) Government, (2) Labor, (3) Liberal Employers, are made. Three credits. Spring. (Not given 1936-37)

140. **Social Psychology.** The influence of the "groups" in the formation of the "norms" of life and in exerting pressure on the personality is stressed. Five credits. Fall, Daily 8.

146. **Mental Hygiene (Social Aspects).** Mental and emotional conflicts and maladjustments resulting from faulty social conditioning are the major concern of the course. Parent-child relationships, the school and the child, the play-group, the playing of a role and the obtaining of status, etc., are given consideration. (Mental Hygiene 145 is recommended for students expecting to take this course. See Public Health.) Three credits. Spring, M. W. F. 10.

150. **Environmental Factors in Child Life.** Home conditions are dealt with briefly in this course in natural and adopted homes. The principal emphasis is on community influences and pressures which assist in the development of the personality. Field trips will supplement lectures as a means of coming into contact with societies, organized agencies and institutions. Three credits. Spring, M. W. F. 9.

153. **History of Social Thought.** The emergence and development of social thought from early periods is traced to August Comte. From this point important developments in Europe and America are studied. Particular emphasis is given to the American field. Five credits. Spring, Daily 10.


155. **Personality and Social Adjustment.** The personality treated from the standpoint of the interaction of the individual with the surrounding groups, especially the family, play-group, neighborhood, school, church, and various community groups. Critical reading of the literature on problem children, adolescence, problems
of social adjustment of the adult. Four credits. Winter, M. T. W. Th. 8.

161. Modern Social Problems. A selection of a series of social problems is made. These problems are studied with the two-fold object of ascertaining the present situation and of arriving at commonsense solutions. Three credits. Winter, M. W. F. 9.

Hulett


Hendricks

170. Juvenile Delinquency. A study of juvenile offenders. The causes of delinquency are considered with the purpose of arriving at intelligent remedies. Various methods of home, social, and institutional treatment are studied; parental cooperation, personal supervision allied with probation and parole, institutional treatment, etc. Three credits. Spring, M. W. F. 11.

Symons

172. Poverty and Dependency. A study is made of the extent of poverty, its causes, remedies now in use and others which give promise. Social methods of caring for dependents are examined. Emphasis is placed on programs which look to prevention and to minimization as well as to adequate care. Three credits. (Not given 1936-37)

Hendricks

173. Social Case Work I. This course deals with means of assisting people in distress. Emphasis is placed on laying a satisfactory basis for helpfulness through adequacy of investigation, study and diagnosis. Three credits. (Not given 1936-37)

Symons

176. Social Case Work II. A continuation of Social Case Work I. Treatment is the central theme in this course. The interview is studied, the personal relationship is stressed, environmental influences are examined and case records are appraised. Prerequisite, Social Case Work I. Three credits. (Not given 1936-37)

Symons

185. Community Organization and Leadership. A course dealing with the efforts of communities to organize the various fields
which have to do with the chief interests of life. The coordination of agencies, the opportunities for leadership, the effects of disorganization are studied. Three credits. Spring, M. W. F. 8.

Geddes

190, 191, 192. Seminar in Sociology. One credit each quarter. Fall, W. 4; Winter, Spring, time arranged.

Staff

201. Research in Sociology. For advanced students only. A project is organized and field work is carried on under supervision. Original studies are made. Prerequisites, Soc. 70, Math. 75. Time arranged.

Staff

202. The Study of Society. An advanced course in Sociological theory. Sociology is studied as a classified body of facts and as a method of investigation. Prerequisites, Soc. 70. Five credits. Fall. (Not given 1936-37)

Geddes

203. Social Service Field Work. Through a cooperative arrangement with the Family Welfare Department of the L. D. S. Relief Society and the Family Service Society of Salt Lake City, six weeks of field work in family case work is provided. This work is done under the joint direction of the head of the department and the supervisors of the agencies. Three hundred hours of supervised field work is contemplated. Open to graduate students and seniors by permission. Eight credits. (Not given 1936-37)

Geddes

204. Methods in Social Research. A study of present methods of carrying on social research. Exploration, the interview, the survey, the diary, the letter, the life history, interpretation of data are stressed. Prerequisites, Sociology 70, Math. 75. Two credits. (Not given 1936-37)

Geddes

205, 206, 207. Graduate Seminar. Required of graduate students. In this course short subjects falling within the field of and pertinent to it but not available in regular courses are selected for study. Two credits each quarter. Fall, Spring, T. Th. 9; Winter, T. Th. 10.

Geddes, Nelson
To fill the New Language Group one may elect Speech 1. Speech 60 will count in the New Arts Appreciation Group.

Students desiring to major in Speech must complete all requirements of the five Lower Division Groups before being allowed to register for any upper division courses (courses numbered above 100). It is intended that junior and senior speech students be able to devote the maximum amount of time to their major field.

Before a student may begin upper division work with a view to majoring in Speech, he must have completed satisfactorily the lower division courses in his particular field; must have completed all requirements of the five Lower Division Groups; and must have applied to the department for permission to take an entrance examination preparatory for his major work, and have successfully completed that examination. The examination will serve as a review of the subject matter (theory and practice) covered in the lower division speech courses, and it will serve as a basis for judgment as to the student's ability to major successfully in Speech. The test will be both written and oral.

Enrollment in all classes is limited. Students must register personally with the instructor of the course.

All students majoring in Speech must complete the following courses: Speech 2, 3, 4, 5, 7 or 171, and 58a.

It is recommended that all Speech minors complete all the above courses.

Speech majors must select one of the following groups and complete all the courses of that group:

Drama: Speech 50 a, b, c, or 150 a, b, c; 152 a, b, c; 156. Recommended 180.

Platform Reading: Speech 6 or 8; 103 or 108; 114, 152a, or 158b; 10; 104; recommended 112 and 180.


All students expecting departmental recommendations for teaching Speech must complete Speech 111 and 113.

*On leave.
The following allied subjects are recommended as electives in the fields indicated:


**Platform Reading:** Any of the above named courses. Any English (literature) Courses, Modern Languages, English and American History, Principles of Sociology, History of Art, Music History and Appreciation, Creative and Folk Dancing, Swimming, Fencing, Personal Hygiene, Principles of Nutrition, Clothing Appreciation and Selection, Principles of Psychology.


**COURSES**

1a. **Fundamentals of Speech.** Foundational elementary speech training beginning with the specific needs and abilities of the student as determined through individual diagnosis. Includes training and application in common daily speech and speaking situations, voice improvement, and clear distinct utterance. Clinic assistance available to the students of this course who desire it. Students will be assigned to sections meeting M. W. F. or T. Th. F. Three credits. Fall, at 2; Winter, at 9.

   **Staff**

1b. **Fundamentals of Speech.** Continuation of Speech 1a., except for meeting on T. Th. and M. W. Completion of 1b satisfies five hours requirement for the Language Arts Group. Two credits. Winter at 2; Spring, 9.

   **Staff**

2. **Oral Interpretation.** A beginning course aimed to de-
velop the ability to interpret and appreciate good literature both for one's self and for others. Theory is minimized and emphasis is placed upon practical application through oral delivery. A foundational and cultural course preparatory to later courses in interpretation. Five credits. Fall, Daily 8; Spring, Daily 8.

Morgan and Bell

3. Extemporaneous Speaking. Practical application and discussion of the basic principles of effective extemporaneous speaking, including a brief consideration of delivery and composition. A general course designed to fit the needs of beginning untrained students desiring basic work in public address and personal daily communication. Three credits. Fall, M. W. F. or T. Th. F. 10; Winter, M. W. F. or T. Th. F. 10; Spring, M. W. F. or T. Th. F. 10.

Morgan and Bell

4. Principles of Reading. An analysis and study of the printed page; its mechanics, technique, and how to read it. Of particular benefit to those who wish to read effectively and correctly either orally or silently. Also of value to teachers of reading. Five credits. Fall, Daily 9; Spring, Daily 2.

Morgan and Bell

5. Speech Delivery. A course designed to give the speaker the command of the forces necessary for effective delivery. Considers at length the practical elements of voice, body and mind, practical demonstration and participation are carried throughout the entire study. Individual difficulties will be considered. Five credits. (Not given 1936-37)

Goates

6. Dialect. A study of the most prominent dialect forms—their principles and uses. The dialect work of such writers as Burns, Kipling, Drummond, Riley, Dunbar, Harris, and Kirk will be studied, discussed and learned. Prerequisites, Speech 2, 4, 7. Five credits. (Not given 1936-37)

Myers

7. Voice and Phonetics. The study of correct speech sound formation, pronunciation and diction, based upon considerations of vocal structure and function, the physics of voice, and phonetics. Students are given opportunity for special application of the subject in connection with clinic work. Five credits. Fall, Daily 10.

Mr. ..........
8. Story Telling. The story as an educational factor; analysis and classification of typical stories with reference to each period of the child's development. Study of sources; adaptation of material; and actual practice in story telling. The work is designed to meet the needs of student, teacher, librarian, and parent. Five credits. Fall, Daily 9.

Myers

9. Speech Organization. A specific course dealing almost entirely with the principles of effective composition of speeches. The fundamentals of preparation, selection of material, outlining, etc., are considered in detail and applied to speeches given before the class. Four credits. (Not given 1936-37)

Goates

10. Advanced Interpretation. An intense study of the intellectual and emotional components of oral or silent interpretation. Through analysis and application the course aims at an understanding of the elements, materials, and problems of interpretation and how to meet them for both one's self and others. Considers the factors of atmosphere, emotion, values, rhythm, etc. Prerequisites, Speech 2, 4, and 7. Five credits. Spring, Daily 10.

Myers

12. Private Instruction. Individual attention given in private to particular needs of the student in an effort to eliminate personal defects, develop skill, and solve individual speech problems. Recommended for anyone needing personal speech attention and to freshmen and sophomores majoring in speech. Special fee. Two to four credits. Any quarter, time arranged.

Staff

50 a, b, c, or 150 a, b, c. Drama Production. Study and application of the fundamental principles of scenic design and construction, stage lighting, costuming; equipment, organization, management and handling of the stage and theatre. Consideration of the elements of a play; play classification and selection; types, styles, and schools of drama. Lectures, research, and practical work with the College and local Little Theatre productions. Practical work and participation are emphasized. Evening or afternoon crew work is required. The course runs through three consecutive quarters. Three days each week and crews arranged. Five credits each quarter. Fall, Winter and Spring, M. W. F. 11. Crew work arranged.

Mr. ________
58 a, b, or 158 a, b. **ACTING.** Technique of the actor, reading of lines, make-up, handling of body, stage procedure, wearing of costumes, rehearsal routine. A study of the actor and his place in comedy, farce, tragedy, melodrama, pageant and other dramatic forms. The work is effected through demonstration, study, and production of plays. Four lectures, two-hour laboratory. Five credits each quarter. M. T. W. F. 10 and M. F. or T. F. 11. Fall and Winter.

**Morgan**

60. **DRAMA APPRECIATION.** A brief course especially planned for those who desire to enlarge their understanding of the Drama—who enjoy plays or who want more fully to enjoy them—who want a non-technical introduction into the theatre. The course briefly deals with the story of the drama; the plan and structure of the play—kinds of plays and types of drama; the theatre and motion picture studio at work; today’s theatre—plays, works, and people. Course open to any student. (Not credited toward a Speech Major.) Three credits. Spring, M. W. F. or T. Th. F. 10.

**Mr.**

103. **PERSUASION.** The study of the nature of individual and audience response; suggestion and rendering groups suggestible; belief sources; audience types; instincts and motivations; rousing of interest; securing of audience’s attention, holding it and winning response; mental states of audiences and methods of adapting spoken appeal to them; emotional and logical persuasion. Three credits. (Not given 1936-37)

**Goates**

104. **PLATFORM READING.** By mastering significant selections from the great writers for audiences on important occasions, the student sees himself as an interpreter of permanent literature. Reading from manuscript and from memory. Five credits. Winter, Daily 9.

**Pedersen**

107. **FORMS OF PUBLIC ADDRESS.** A study and analysis of the various forms of public address used on specific formal and informal occasions. Consideration is also given in some detail to parliamentary procedure. Students are required to deliver speeches of the various type and also to conduct meetings correctly under parliamentary rule. Three credits. (Not given 1936-37)

**Goates**

108. **RADIO SPEECH.** A study of Speech in radio presentation.
Preparation and presentation of various types of radio programs will be part of the work. Attention will be given to the writing of radio continuities. An attempt will be made to place the best programs with some commercial radio station. Prerequisites, Speech 2, 4, 7, 6 or 8. Three credits. Spring, M. W. F. 8.

Myers

109. ADVANCED PUBLIC ADDRESS. Practice and criticism in the delivery and composition of speeches adapted to audiences and conditions. Extensive work in the development of skill in speaking and applying the principles of effective speech. Analysis and study of certain effective and great speeches, including those of contemporary speakers. Three credits. (Not given 1936-37)

Goates

110. PROGRAM BUILDING. A study of types of interpretative material suitable for presentation before various kinds of audiences. Reading of short stories, plays, and novels, etc., to determine suitability. The cutting of literary types and material to suitable form and length for public reading. Five credits. Fall, Daily 10.

Myers

111. PSYCHOLOGY OF SPEECH. A study of speech as a psychological problem. Consideration is given to the problems of conception, purpose, memory, imagination, belief, thought, personality, audience technique, and audience-speaker relationships. The course considers the physical and psychological basis of human behavior as relates to speech and the speaking situation. Five credits. Winter, Daily 10.

Myers

112. PROFESSIONAL READING. Advanced specialized work in the individual desires and needs of the student. Special attention is given to the student’s deficiencies in speech. Research work is done in such as story, drama, novel, poetry and the various literary forms. Each student will present at least one public recital. Prerequisites, Speech 6 or 8, and 10. Special fee. It is recommended that all speech majors have five hours. Two to eight credits. Any quarter, time arranged.

Staff

113. PEDAGOGY OF SPEECH. A study of the methods and problems peculiar to the teaching of Speech. A study of the organizations of courses and lesson plans is included. Students may register only
with the permission of the instructor. Two credits. Spring, T. Th. 8.

Myers

114. CHILDREN’S THEATRE. Creative dramatics for children. A course in educational dramatics for students who wish to prepare to direct children in dramatic work. A study will be made of plays suitable for primary and intermediate schools. Courses in dramatics will be outlined, stories dramatized, and plays produced. The College Training School will afford opportunity for this work. Of special interest to those working in platoon systems. Prerequisite, Speech 58. Five credits. (Not given 1936-37)

Myers

For Argumentation and Debate see English 107-108.

152 a, b, c. DIRECTING. Lectures and laboratory demonstrations of principles of directing for professional, semi-professional, or amateur productions. Considerations of composition, picturization movement, rhythm, pantomimic dramatization, and technical and theme values. The relation of actor and director; theories of subjective and objective acting; directing of tragedy, comedy, farce, melodrama, pageant, etc.; interpretation of roles; advanced body expression; responsiveness; period technique. Treats the elements, means and methods in interpreting the emotional and intellectual concepts of a play in terms of dramatic sound and action. The course runs through three consecutive quarters. Five credits each quarter. (Not given 1936-37)

Goates

156. DEVELOPMENT OF DRAMA. Origin and development of the various drama forms in the different countries and through the successive movements from the beginnings to the present time. Material and information will be presented which is absolutely necessary background for all work in drama and dramatic literature and which will make drama appreciation more comprehensive and enjoyable. Extensive reading and lectures. (Not given 1936-37)

Goates

171. INTRODUCTORY SPEECH PATHOLOGY. A comprehensive presentation of the generally known facts regarding the symptoms, nature, causes and management of the types of defective speech and deviations from the normal speech. Lectures, demonstrations and case studies are included. Five credits. Winter, Daily 10.

Mr. __________

173. SPEECH CLINIC. Application and discussion of methods
applied to speech correction in the clinic. Demonstrations and discussions during meetings. Training and practice through the supervised handling of selected cases. Prerequisite or corequisite Speech 171. Meeting time, laboratory time and credit arranged. Consult the instructor for permission to register. Any quarter.

Mr. __________

180. PROBLEMS IN SPEECH. Especially selected work, individually assigned, handled and directed in consultation with the student. Consult the instructor for permission to register. Any quarter. Time and credit arranged.

TEXTILES AND CLOTHING
JOHANNA MOEN, Professor; SADIE O. MORRIS, Assistant Professor; ALTA O. CROCKETT, Instructor; LOIS HOLDERBAUM, Assistant.

Students who elect Textiles and Clothing as their major are required to complete the following courses: Textiles and Clothing 10, 11, 20, 105, 115, 125, 160, 161, 162 and 175. Closely related courses such as Art 1, 2, 3, 17 and 32, and Economics 145 are recommended for Textiles and Clothing majors. Students who wish to prepare for positions in the commercial field should, in addition to courses in Textiles and Clothing and Art, elect courses in Economics and Merchandising.

1. CLOTHING CONSTRUCTION. A service course for students from other schools of the college. Emphasis on the relation of personality to dress through the study of art principles applied to clothing construction, pattern study, selection and construction of cotton, wool and silk dresses. Lectures and laboratory work. Three credits. Fall, M. W. 2-5; Spring, M. W. 9-12.

Crockett and Holderbaum

5. CLOTHING APPRECIATION. This course aims to develop appreciation of appropriateness, good color and design in dress. Clothing Economics and Clothing Hygiene will also be discussed. Selection and care are emphasized. Two credits. Fall and Spring, T. Th. 1.

Crockett

10, 11. CLOTHING SELECTION AND CONSTRUCTION. A study of the fundamental principles of pattern making, design, selection and construction of wool, silk, and cotton dresses. Outside work required. Prerequisites or parallel Art 1, 2, and 3. Lectures and laboratory work. Three credits each quarter. Fall, M. W. 9-12 or W. F. 9-12 or M. W.
2-5 or T. Th. 2-5. Winter, M. W. 2-5 or T. Th. 8-11. Cl. 11, M. W.
9-11 or W. F. 9-11 or M. W. 2-5. Spring T. Th. 8-11 or M. W. 2-5.

Staff

15. Clothing Appreciation and Selection. (For Men). This
course is organized to meet the needs of men from all schools of the
College. A study of the importance of dress in the business world;
development of fabric and fashion in men’s clothing; a brief study of
wool, silk, cotton and rayon fibers with emphasis on hygienic and
economic factors. Two credits. Winter, T. Th. 1.

Crockett

20. Household Textiles. A study of standard textiles from
the standpoint of growth, structure, preparation, design and relative
value of materials for clothing and house furnishing. The aim of this
course is to form a basis for intelligent purchase and use of materials.
Prerequisite or parallel, Economics 51. Five credits. Winter, M. T.
W. F. 11. Lab. Th. 3-5.

Moen and Holderbaum

30. Millinery. Special study of individual problems in selection
of hats; blocking felt and straw hats; designing in paper. Application
of principles of making hats; flower making. Prerequisites or parallel
courses, Art 1, 2, 3; Textiles 10, 11 or their equivalents. Two credits.
Spring, W. F. 10-12.

Crockett

55. Children’s Clothing. A study of styles, materials and
decoration suitable for different ages of children. Construction em-
phasizing comfort, beauty, convenience, and self-help for the rapidly
growing child. Prerequisites: Clothing 10 and 11. Two credits.
Spring, T. Th. 8-10 or M. W. 1-3.

Moen

105. History of Costume. A survey of ancient Egyptian,
Grecian, Roman, early and modern French costume. It aims to give
practical information for the use of students and teachers of Clothing
and Costume Design and Physical Education majors. Three credits.
Fall, M. W. F. 11.

Moen

115. Costume Design. Art structure in its application to dress.
Studies of personality and types of people; harmonies in spacing, rhythm,
balance, color theory. Designing for various occasions. Outside work
required. Prerequisites, Art 1, 2 and 3. Three credits. Fall or Winter,
T. Th. 8-11.

Crockett
125. **Applied Costume Design.** Practical training in the application of the principles of costume design, color harmony, texture, for different individuals and purposes. Practice in constructive design is given by modeling in cloth on the dress form. Outside work required. No laboratory fee. Three credits. Winter or Spring, T. Th. 2-5.

Crockett

140. **Applied Decoration.** A study of principles of design in relation to decoration of fabrics. Various means will be used in developing simple decorations for all types of garments and household furnishings. Outside work required. Prerequisites, Textiles and Clothing 10 and 11 and Art 1, 2 and 3. No laboratory fee. Three credits. (Not given 1936-37)

160, 161, 162. **Advanced Problems in Clothing.** Special application of principles of design and construction to tailored garments, afternoon and evening dresses. Demonstrations and laboratory work. Prerequisites, Textiles and Clothing 10, 11, 20, 105, 115, 125. Two credits each quarter. 160, Fall, T. Th. 8-10 or 1-3. 161, Winter, T. Th. 8-10 or 1-3. Spring, T. Th. 1-3.

Moen

175. **Textiles Chemistry.** This course includes a study of the chemical and physical properties of household textiles. It emphasizes laboratory and household tests and the care of fabrics from the consumer’s point of view. Prerequisite: Inorganic and Organic Chemistry. See instructor. Three credits. Spring, M. W. 1-3, F. 2.

Morris

190. **Special Problems.** Open to qualified students majoring in Textiles and Clothing upon consultation with instructor. Any quarter. Time and credit arranged.

Staff

210. **Research.** Special investigations in problems concerned with Textiles and Clothing. Open to seniors and graduate students. Any quarter. Time and credit arranged.

Staff

For closely related courses see: Sociology 61—Women and Culture; Sociology 171—Social Problems of the Family; Economics 145—Economics of Consumption. Personal Finance and Budgeting; Accounting 107—Household Accounts; Art 122—Home Planning Construction and Design; Art 123—Interior Decoration; Art 126—History and Appreciation of Architecture; Sociology 140—Social Psychology.
Courses in Veterinary Science are designed not for training specialists in this field but as essential links for complete instruction in Animal Husbandry, Dairy Husbandry and Poultry Husbandry studies. Animal hygiene and practical control of disease are stressed. Premedic courses, for those wishing to later obtain Veterinary degrees elsewhere, may be conveniently taken at this school. Such students should see Dr. Madsen for required premedic courses.

*10. VETERINARY ELEMENTS. An introductory course to anatomy and physiology and the common ailments of domestic animals; the most prevalent diseases, their distribution, causes, symptoms, course, diagnosis, and treatment. Three credits. Fall, M. W. F. 8; Winter or Spring, M. W. F. 10.

*40, 41, 42. COMPARATIVE VETERINARY PHYSIOLOGY. The vital functions of the different species of domestic animals and those of the human body are compared; the physical and chemical laws as related to physiology, the general properties of animal cells, their origin, development, and growth; special physiology of the various organs and tissues of the animal's body. Fall, Winter, and Spring quarters. Any or all quarters may be taken. Three credits each quarter. M. W. F. 9.

*52. CLINIC. Students are given practical experience in common operations on farm animals; castration, treatment of wounds, premise disinfection, testing procedures and autopsy of livestock and poultry are considered. One credit. Spring, M. 2-5.

*60. HORSE SHOEING AND SOUNDNESS. The anatomy and physiology of the horse's foot; variations in the flight of the foot; styles of going; shoeing of normal and irregular feet; winter shoeing; correction of defects in gait and methods of shoeing hoofs defective in form or diseased. Recognition of unsoundness in the limbs and bodies of horses. Three credits. Winter, T. Th. 9, F. 1.

*70. POULTRY DISEASES. The common diseases affecting poultry in this region. Symptoms, diagnosis, prevention and treatment. Lec-

Frederick

*107. HYGIENE AND INFECTIOUS DISEASES. A discussion of water and food supply, disinfection, care and management of animals and feeding sick animals. The common infectious diseases prevalent here. Methods which should be adopted in their control and eradication. Tests applied for diagnosis; vaccination, and serum therapy of animals. It is recommended that this course be preceded by Veterinary Science 10, 40, 41, and 42. Three credits. Winter, M. 1. T. Th. 8.

Frederick

WILDLIFE MANAGEMENT

H. H. Hoyt, Assistant Professor; D. I. Rasmussen, Associate Professor and Associate Biologist, U. S. Biological Survey.

Upon completion of the basic courses and the major work as outlined in wildlife management, students are granted the degree of bachelor of science in Forestry. (See general write-up, page 61.)

Through the cooperation of the Bureau of the Biological Survey of the U. S. Department of Agriculture, the Utah State Fish and Game Department and the College, one of the nine federally sponsored Wildlife Research Stations was established at Utah State College in 1935. Through the establishment of this Wildlife Research Station facilities are now provided enabling a limited number of students to do graduate work leading to a master of science degree in Wildlife Management. Graduate work will consist primarily of individual research problems and field work. Funds are available for two to four graduate research fellowships paying $500 to $720 per year for students doing work in this field. A bachelor's degree in Biology, Forestry, or Agriculture from a college of recognized standing is the prerequisite for graduate work in this field. Candidates for fellowships will be chosen from applicants who submit formal application with transcript of college credits and references on or before May 1.

150. GENERAL WILDLIFE MANAGEMENT. A study of the general problems of wildlife management. Theory, methods, distribution and life histories of important game and fish species. No credit allowed

*Open to students taking short course.


270. Wildlife Management. Wildlife Thesis (graduate students). Individual research is assigned to qualified students in problems of wildlife management. Five to ten credits per quarter. Any quarter. Time arranged.
WOODWORK

All courses taught by D. A. Swenson, Assistant Professor.

The elementary courses in woodwork give training in the use of woodworking tools and lay a foundation for advanced woodwork. They also enable the student to do the innumerable jobs in repairing which come up on every farm and in every home. Time spent in this kind of training will prove valuable to anyone, no matter what the eventual choice of profession or occupation may be.

The aim in advanced woodwork is to prepare the student for specialized work in house building, mill work, pattern making, cabinet work or whatever his selection may be in the line of woodwork.

All courses except as otherwise specified are repeated each quarter and they are all open to vocational students.

MA 61, 62, 63. ELEMENTARY WOODWORK. The different methods of joining, splicing and gluing; also practice in saw filing, tool grinding and the proper handling and use of woodworking tools. 61. Two credits, M. W. F. 10-12. 62. Three Credits. M. W. F. 2-5. 63. Two credits. M. W. F. 2-4.
MA 64, 65, 66. MILL WORK. Use of the planer, shaper, jointer and the various sawing machines and sharpening of cutters and saws, as well as proper adjustment for different kinds of work is taught in these courses. 64. Three credits. M. W. F. 9-12. 65. Two credits. T. Th. 9-12. 66. Three credits. M. W. F. 2-5.

MA 67, 68. ELEMENTARY WOOD TURNING. Practice in care and use of the turning lathe, sharpening and control of turning tools by the making of progressive projects in elementary turning. 67. Two credits. M. W. F. 10-12. 68. Three credits. M. W. F. 2-5.

MA 69. GENERAL WOODWORK. Projects in bench work, turning, or mill work as the student may elect. One to five credits. Time and credit arranged.

MA 70. FARM WOODWORK. This course is planned to meet the needs of students specializing in agriculture. Information as to the kind and quality of tools to buy for farm woodwork and practice in sharpening same and saw filing is given. A study is made of suitable farm buildings and methods used in building. How to make and repair farm appliances and the economy of keeping buildings painted and machinery well housed is also emphasized. Two credits. T. Th. 2-5.

MA 71. WOOD CARVING. Simple problems in straight and curved lines, conventional design and ornamentation. Two credits. T. Th. 9-12. Prerequisite, Elementary courses in woodwork.

Courses 61 to 68 or their equivalent are prerequisite to the advanced courses in woodwork.


MA 164, 164b. FUNDAMENTALS OF PATTERN MAKING. Making of simple patterns to illustrate suitable materials for the work, also the care and precision necessary in making of usable patterns. Prerequisite, 67. 164. Two credits. T. Th. 8-11. Fall quarter. 164b. Two credits. T. Th. 8-11. Winter quarter.

MA 165. ADVANCED PATTERN MAKING. Making of practical patterns for use in the foundry. Teaching the principles of shrinkage, core print and core box work, master patterns, double shrinkage, etc. Prerequisite, MA 164. Two credits. T. Th. 8-11. Spring quarter.
MA 166. BUILDING CONSTRUCTION. The successive steps in
the construction of houses and farm buildings are taken up by lecture
and in practice. The course is designed to give practice in actual
building operations from the laying of the foundation to that of roof
covering with full size dimensions and materials. Three credits. M.
W. F. 2-5.

MA 167. BUILDING CONSTRUCTION. Continuation of MA 166,
including principles of architecture and design. Three credits. M.
W. F. 9-12.

MA 168. SMITH-HUGHES TEACHERS COURSE. A course de-
signed to meet the needs of teachers in Smith-Hughes work. Projects
in leather and rope work. One credit. M. W. F. 12-1. Spring quarter.

MA 168b. ADVANCED GENERAL WOODWORK. A course pro-
vided for those who can not fit into the regular schedule. Work may
be selected from any of the advanced courses listed. One to five
credits. Time and credit arranged.

MA 169, 169b. WOOD FINISHING. The use of different kinds
of stains, paints, primers and fillers; rubbing, polishing and french
Two credits. T. Th. 9-12.

MA 170, 170b. ADVANCED WOOD TURNING. Wood turning
in original design, face turning including finishing, staining and polish-
Th. 2-5.

MA 171. ADVANCED WOOD CARVING. Use of carving in the
construction of high class furniture and pattern work. Two credits.
T. Th. 8-11. Spring quarter. Prerequisite MA 71.

ZOOLOGY AND ENTOMOLOGY

W. W. HENDERSON, Professor; C. J. SORENSON, G. F. KNOWLTON,
Associate Entomologists; J. SEDLEY STANFORD, H. H. HOYT,
Assistant Professors; J. F. CHRISTENSON, Instructor.

Zoology I will count in the New Biological Science Group. May
be replaced by Zoology 3 and 4.

Students specializing in Zoology and Entomology must select
either Zoology or Entomology as a major.

For a major in Zoology students must take the following courses:
3, 4, 13, 112, 116, 117, 119, 124, 125, 126, 131, and 135. For
a major in Entomology students must take the following courses: 3, 4, 13, 14, 101, 102, 103, 106, or 107, 111, 116, 124, 125, 126, and 135.

1. **Principles of Zoology.** This is a course in fundamental biological principles with illustrations and examples from animal life. It is not so much a study of animal life, or Zoology itself, as of biological generalizations having important significance in human thought and human institutions. The course is intended primarily for those who are not interested in technical Zoology and wish only a general survey of biological principles, as these are helpful in other knowledge. Four lectures and one Lab. Five credits. Any quarter, M. Th. W. F. 11, or M. T. W. Th. 2; Lab., any quarter, T. or Th. 8-10, or T. 10-12, or T. or Th. 3-5.

Christenson

3 **Invertebrate Zoology.** A type study of the phyla of the animal kingdom except the Chordates. General classification and the relationship of groups of animals to each other. Emphasis is placed upon structural characteristics, development and functions. This course is well adapted for premedical students. Five credits. Fall, M. W. F. 9; Lab., M. W. F. 10-12 or 3-5. Winter, M. W. F. 10; Lab., M. W. F. 8-10 or M. W. Th. 1-3.

Stanford and Christenson

4. **Vertebrate Zoology.** The same general plan as given in course 3 is followed in the study of the vertebrates. Some attention is given to the local fauna. Five credits. Winter, M. W. F. 9; Lab., M. W. F. 10-12 or M. W. F. 3-5. Spring, M. W. F. 3; Lab., M. W. F. 8-10) or M. W. Th. 1-3.

Stanford and Christenson

13. **General Entomology.** The structure, classification, interrelationships and life histories of insects are studied. Some field trips are taken. This is a fundamental course and is required of all department majors. Five credits. Fall, M. W. F. 8; Lab., M. T. Th. 3-5.

Stanford

14. **Agricultural Entomology.** The recognition, life histories and control of the major insect pests of agricultural crops are studied. Particular attention is given to the injurious and the beneficial insects of Western North America and of Utah. Four credits. Winter, T. Th. 9; Lab., M. W. 3-5.

Sorenson and Knowlton
101. Insect Morphology. A comparative study of insect anatomy with emphasis placed on the structures used in taxonomy. Prerequisite, Entomology 13. Required for courses 102, 103, and 104. Four credits. Fall, T. Th. 9; Lab., T. W. Th. 1-3.

102. Systematic Entomology. Course 101 is prerequisite. Each student must collect, mount and label a representative collection of insects. The collection must contain at least 300 specimens, at least 100 species and at least 15 orders. The whole collection must be arranged in phylogenetic sequence. Classification will include only a correct placing of all specimens in orders. Graduate credit may be allowed. Any quarter. Three laboratory periods. Three credits. Time arranged.

103. Systematic Entomology. Continuation of course 102. The collection arranged for course 102 must be enlarged to 500 specimens, 150 species and 18 orders. Classification will include a correct placing of all specimens in families. Graduate credit allowed. Any quarter. Three laboratory periods. Three credits. Time arranged.

104. Systematic Entomology. Continuation of course 103. Permission to take this course depends on the student’s collection for courses 102 and 103. If his collection justifies further study, he may select one or two orders of insects and classify them to species. Graduate credit allowed. Any quarter. Three laboratory periods. Three credits. Time arranged.

105. Forest Entomology. A study of the principal insects attacking forests and forest products. Considerable attention is given to the principles of biological control. A brief study is made of forest vertebrates with emphasis on insect-eating birds. Four credits. Winter, T. Th. 8; Lab., T. Th. 3-5.

106. Entomological Literature. Each student reports on the literature of some insect. The historical development of entomology, current entomological literature and bibliographies are discussed. Prerequisites, Entomology 13, 14, and 102. Graduate credit may be allowed for this course. One lecture and one Lab. Two credits. Spring. Time arranged.
107. Entomological Technique. A study of methods of collecting, preserving and rearing insects, designed to fit students for specialized work in entomology. Graduate credit may be allowed for this course. Prerequisite, Entomology 13. One lecture and one Lab. Two credits. Spring. Time arranged.

Stanford

111. Heredity and Eugenics. A non-technical study of the more evident behavior of the germ cells in reproduction, experimental hybridization, and the simpler principles underlying the inheritance of traits. Consideration is given to the eugenic value of human races, inferior and superior families, sexual selection and marriage, birthrate, immigration and other principles having eugenic significance. Four credits. Fall, Winter, or Spring, M. T. W. Th. 1.

Henderson

112. Principles of Genetics. A technical study of the cytological and experimental bases underlying heredity and variation. This course is a fundamental requirement for all students of plant breeding, animal breeding or human heredity. It considers qualitative and quantitative traits, factor independence, interaction, linkage relations, gene and somatic mutations, sex determination and modification, and related subjects. Students taking this course must have had course 111 or some good general course in Biology. Graduate credit allowed. Five credits. Fall and Spring, Daily 10.

Henderson

116. Parasitology. The classification, morphology and life histories of parasites of man and the domesticated animals. The Arthropods as external parasites and carriers of pathogenic organisms receive major attention. The disease producing worms and protozoa are also studied. Courses 3 and 13 should precede this course. Five credits. Spring, M. W. F. 9; Lab., M. W. F. 10-12.

Stanford and Christenson

117. Histological Technique. In this course the student prepares various animal tissues for mounting on slides. This process involves fixing, dehydrating, infiltrating, embedding, sectioning, staining, and mounting. The slices prepared must be suitable for later study. Required of pre-medical students. Three credits. Fall, F. 2; Lab., F. 3-5, and two 2 hour Labs. arranged.

Stanford

118. Cytology and Embryology. This is a course in funda-
mental principles dealing with cells and cell division, germ cells and their formation, maturation, fertilization, cleavage and the primary germ layers. Required of premedical students. Prerequisite, 117. Three credits. Winter, F. 2; Lab., F. 3-5, and two 2 hour Labs arranged.

119. VERTEBRATE EMBRYOLOGY. A continuation of course 118 in which the developmental stages of Amphioxus, the frog, and the chick are studied. Prerequisite, 118. Three credits. Spring, F. 2; Lab., F. 3-5, and two 2 hour Labs arranged.

121. ORNITHOLOGY. A course in bird study planned to acquaint the students with our native birds and with the class Aves (birds) in general. Identification, relationships, structure, habits, and distribution will be studied in classroom, laboratory and field. Four credits. Spring, T. Th. 9; Lab., T. Th. 3-5.

122. MAMMALOLOGY. This course is designed to introduce the students to the large and very important class, Mammalía (animal), with particular reference to Utah and North American species. Identification, distribution, structure, habits, and economic importance will be stressed. Four credits. Winter, T. Th. 9; Lab., T. 10-12, and one arranged.

124, 125, 126. SEMINAR. The students and the faculty of the department meet for one hour each week and hear reports from the members of the seminar on topics of mutual interest. Students specializing in Zoology must attend and participate in the activities of this seminar for at least three quarters. One credit each quarter. Time arranged.

131. ORGANIC EVOLUTION. A critical study of the facts of evolution as obtained from a careful study of comparative anatomy, embryology, geographical distribution, blood tests, and other fields upon which the doctrine of evolution is based. Factors causing evolution will be considered and discussions will be undertaken on other bodies of related thought. Prerequisite, some thorough course in biology. Graduate credit allowed. Three credits. Winter or Spring, M. W. F. 8.

135. MUSEUM. This is a course in the preparation, display and
care of animal specimens for the museum or for visual education. Each major in Zoology and Entomology must spend the equivalent of an hour a day in this work for three quarters, preferably in his senior year. Expense involved in the preparation of specimens will be met by the department, in which case the material will be left in the museum as a contribution of the student. Students will be expected to describe displays intelligently to visitors and assume charge of the museum on arranged periods. Graduate credit allowed. One credit each quarter. Any quarter. Time arranged.

140. Animal Ecology. Distribution and behavior of animals as affected by environment. Physical factors, food relationships, animal numbers distribution of species and biotic communities. Prerequisite, Botany 126. Three credits. Fall, T. Th. 8; 1 Lab. arranged.


201. Zoological Research. The student who wishes to engage in some line of original research and is qualified to do so may elect and study some topic from eugenics, ecology, morphology, or other branch of Zoology. Open to undergraduates only by special arrangement with the department. Thesis required. Time and credit arranged.

210. Entomological Research. Students may select or will be assigned certain problems dealing with different phases of entomology. The amount of credit will depend on the nature of the problem and the time spent. Thesis required. Open to undergraduate students only by special permission. Prerequisites, Entomology 13, 14, and 102. Time and credit arranged.
Forty-Third Annual Commencement

LIST OF GRADUATES 1935-36

Graduates With the Degree of

MASTER OF SCIENCE

SCHOOL OF ARTS AND SCIENCES

EVANS, ROBERT JOHN
Thesis: "Some Factors Influencing the Sulphur Content of Alfalfa."

GALBRAITH, TED W.
Thesis: "The Influence of Diet on the Microflora of the Intestinal Tract of Albino Rats."

IVIE, JAMES O.

LEE, ORVILLE SMITH

NIELSEN, HAROLD M.
Thesis: "The Vitamin D and Provitamin D Content of Some Varieties of Utah Wheat."

PETersen, Victor E.
Thesis: "The Geology of a Part of the Bear River Range and Some Relationships that it Bears with the Rest of the Range."

STEWART, ERNEST I., JR.
Thesis: "The Influence of Increasing Concentrations of Common Salt Upon the Albino Rat."

SCHOOL OF EDUCATION

LEWIS, LENORE

MAESER, EARL

MORRILL, EUGENE LABAN

SANFORD, RALPH B.
Thesis: "Vitalized Commencement in Secondary Schools in the United States."

SORENSEN, LAWRENCE JAMES
SCHOOL OF ARTS AND SCIENCES

SCHOOL OF HOME ECONOMICS
CARLISLE, Verna Spencer
Thesis: "Preference of a Group of Nursery School Children at the Utah State Agricultural College for Colored or Uncolored Picture Books."

SCHOOL OF COMMERCE
LARSON, J. STANFORD

PITZER, JOHN H.
Thesis: "Problems of Armament Control."

PRICE, ASAEL W.

UNDERGRADUATE DIVISION
Graduates with the Degree of Bachelor of Science

SCHOOLS OF AGRICULTURE AND FORESTRY

AGRICULTURE

Adams, Louis J.
Anderson, Clarence A.
Bailey, Lotta Julius
Ball, Raymond Compton
Baugh, Wm. Jr.
Bennett, William Hunter
Bertelson, F. Dwight
Bowman, Claudius
Broadbent, Dee A.
Bunten, Ernest
Cutter, Edwin H.
Dickerson, Wesley R.
Elder, Lloyd Stanley
England, George Eugene
Frandsen, Vernon Otto
Frichtel, Robert D.

Hansen, Clyde Winston
Harris, Charles Marion
Heaton, Junius Floyd
Holland, Vernal Thomas
Hunt, Dalton Edward
Johnson, Cale Clarence
Larsen, Clyde W.
Lowe, Ray D.
Madsen, Donald E.
Magleby, Karl Jacob
Moore, J. Reed
Murdoch, Raymond Nelson
Nelson, Glendon A.
Nelson, Z. George
Pearson, Marden D.
Petersen, Henry E.

FORESTRY

Allen, Floyd J.
Andrews, Horace M.
Baugh, Frederick Ray
Brewer, Alden Norris
Clark, Lewis
Couch, Joseph A.
England, Edwin S.
Eriksson, Carl G.
Finliason, Rich L.

Floyd, J. Whitney
Grossenbach, Paul
Hull, Alvin C. Jr.
Jones, Jay Pritchard
Jones, Mark Francis
Manning, Wallace Alfred
McDermaid, Ferris E.
Rampton, Leonard H.
Rohwer, Lamont

Peterson, Keith Henry
Piranian, George
Pond, Chase G.
Proud, Robert G.
Rich, Russell Rogers
Rundquist, Eric A.
Sant, Franklin
Sjoberg, Morris B.
Stahle, Ralph J.
Stevens, Owen F.
Swalberg, Fred August
Taylor, Allen E.
Thompson, William Howard
Toone, Conrad B.
Tucker, Ned A.
ZoBell, Henry D.

Smith, Arthur Dwight
Snyder, Nathan
Stokes, Victor N.
Swainston, George D.
Swenson, Mont A.
Taggart, John Seaman
Townsend, William J.
Tucker, Bert H.
Woods, Lowell G.
# SCHOOL OF HOME ECONOMICS

- Anderson, Pearl Taylor
- Beames, Velda C. A.
- Brown, Vera
- Butters, Hedvig
- Carlisle, Evelyn
- Carlson, Minette Rosalind
- Carlson, Stella
- Child, Florence
- Cook, Zelpha
- Fife, Blanche
- Fisher, E. Fern
- Fletcher, Esther Williamson
- Fowler, Frances Harriet
- Hurst, Vera Mae
- Johnson, Anna
- Johnson, E. Myrle
- Kemp, Ellen
- Kirk, Margaret
- Larson, Dora
- McDonald, Helen
- Nelson, Beth
- Nielson, Barbara Maida
- Orwin, LaRue
- Patterson, Norma
- Pedersen, Troy Helen
- Peterson, Elsie
- Poulter, Eloise
- Richards, Phyllis
- Smith, Ila
- Smith, Melba
- Sorenson, Alta Laver
- Sorensen, Lillian Edith
- Stephenson, Mabel
- Stewart, N. Jean
- Swalberg, Helen Richards
- Waite, Wilda
- Woodland, Eloise

# SCHOOL OF ARTS AND SCIENCES

- Adams, Claud Whitney
- Anderson, Rudolph Faraday
- Barker, Lorene Myrtle
- Barlowe, Raleigh
- Barrus, Merle
- Braithwaite, Verlan J.
- Burrup, Clyde L.
- Burrup, Marjorie Mae
- Cardon, Lucy Elizabeth
- Christensen, D. Clair
- Cutler, Lucy
- Daines, J. Gordon
- Daniels, Willa
- Densley, Aaron Duane
- Evans, John Coffin, Jr.
- Ford, Jennette
- Geddes, Paul Lowe
- Gerend, Wanda LaRue
- Goodey, Barson A.
- Greaves, Vera D.
- Griner, Lynn A.
- Gubler, Horatio
- Gunderson, John Douglas
- Hall, Melvin M.
- Heyrend, W. Wendell
- Hickman, Amar
- Hirst, Russell N.
- Hunter, Don J.
- Jamison, Vernon C.
- Jensen, Gordon Melvin
- Jensen, Irwin
- Jepsen, Darwin Howard
- Johnson, Howard D.
- Jones, Lewis W.
- Keller, Cyrstle
- Kendall, Maureen
- King, Carroll
- Larsen, Walter C.
- Lenkersdorfer, Sophia Jean
- Lockyer, William T.
- Lyman, LaMar
- Mangan, Hyra Hatch
- Matheson, Margaret
- Merrill, Hyrum Waldo
- Morgan, Edith Welch
- Murray, Mabel Shipley
- Neibaur, Benola Elizabeth
- Ostler, Eila LaVee
- Passey, Earl F.
- Petersen, Roy A.
- Peterson, Virginia
- Phillips, Vella
- Poulsen, Tilda
- Purdy, David James
- Reese, Evelyn Florence
- Rice, Moyle Q.
- Rich, Ellen
- Rigby, Vera
- Ritie, Margaret
- Riter, Kersey Clyde
- Roskelley, Rigby Clyde
- Roundy, Kenneth John
- Simpson, Norman H.
- Sims, Archie
- Smith, Samuel Wayne
- Sorenson, C. Wallace
- Spackman, J. LaVell
- Stone, Ernest C.
- Tanner, Gilbert L.
- Thorley, Heromone
- Tucker, Eunce Edna
- Williamson, David O.

# SCHOOL OF EDUCATION

- Adamson, Delsa
- Allen, Jean
- Andersen, Anna Merle
- Barrus, Verla
- Bauer, Rex
- Bowen, Beth J.
- Bright, Lynn Taggart
- Cain, Julia
- Evans, Ruth
- Finlinson, Norda O.
- Fluckiger, Alvin C.
- Gourley, Roland M.
- Hales, Dawson
- Hansen, Elma Johnson
- Henderson, Dean
- Hull, Emma
- Hull, Wealthy
- Sharp, Emma Maxine
- Hutchinson, Linn
- Johnson, V. Dick
- Jones, E. Ronald
- Knowles, E. Howard
- Kroksh, Fred G.
- Mabey, Joseph L., Jr.
- Miller, William P.
- Myers, J. Levi
- Parington, Arthur
- Porter, Burdell
- Porter, Fred V.
- Poulsen, Eva
- Price, Verla
- Rasmussen, Floyd D.
- Rencher, Ray R.
- Sandberg, Howard B.
- Shumway, Richard Franklin
- Smith, Edith Doral
- Smith, Stratford Jones
- Swensen, Lorenzo
- Swensen, Lydia
- Taggart, Spencer Laird
- Thornock, William LaMont
- Tingey, Aleda
- Tripp, Lyle
- Wardell, Clayton D.
- Weston, Emma Lou
- Whatcott, Clemoht L.
- Whitesides, Joe Edward
- Wilcox, Hugh Barber
- Wintle, Eldon G.
- Young, George Earl
SCHOOL OF COMMERCE

Aegerter, Hettie
Alderr, Karl G.
Andrews, Oertel Lucile
Blaser, LeRoy Alfred
Blaser, Maxine Kunz
Bluth, Gordon J.
Bonham, J. Kenneth
Bullen, Philip Asia
Byington, Leo Irving
Cardon, Edna
Carr, James Edward
Chugg, Nile Russon
Clawson, Roy Vincent
Dance, Roland W.
Dickson, Annie S.
Dunford, Stephen Love
Dunn, John Eldon
Evans, Joshua T.
Favero, Alfred
Garff, Wayne Brimhall
Geddes, David Paul
Gowans, Dee James
Gowans, Robert Noel
Gunn, James F.
Gunnell, Ernest B.
Hartvigsen, Lester A.
Hawkins, John Fairfield
Hendricks, George B.
Hentie, Veryl C.
Holbrook, Lamoni Dale
Holmgren, Lyle Everett
Hyde, Thelma
Jackson, Della
Jenson, Ralph, Jr.
Kanuth, LeRoy Jerome
Kidd, Lloyd T.
Larson, LaVern E.
Lundahl, Ernest W., III
Maughan, Nona
Miles, Leonard E.
Neilsen, Ray Leon
Nielsen, Alta
Owens, Ruth
Parrish, Welden Collings
Petty, Cleo M.
Reed, Lemuel Burton
Ririe, Boyd H.
Ritchie, Joseph H.
Roberts, Helen Harriman
Robinson, Julian L., Jr.
Sandberg, Jay
Simpson, May P.
Spencer, Kenneth
Stevens, Marjorie
Swapp, Iris
Thompson, Fred Hemingway
Tolley, Wallace Sperry
Wangsgaard, Dee Ford
Wanlass, Ralph Page
Woodfield, Janette

SCHOOL OF ENGINEERING

CIVIL ENGINEERING

Armstrong, Ellis Leroy
Barrus, Winford Melvin
Cheney, Orval

Felsted, LaNay Edwin
Lawrence, Clifford Dean
Morrill, Laren D.

DECKER, CLYDE MORRIS
GAZ, JOHN ARCASTEGO
LARSEN, ELDRID STUART

Lundberg, Horace W.
Merkley, Charles Nelson
Simmons, Carl G.

MECHANIC ARTS

Warnick, Parley Waldo
Wood, Harvey S.

OFFICERS' RESERVE CORPS OF THE ARMY OF THE UNITED STATES

SECOND LIEUTENANT, OFFICERS' RESERVE CORPS, COAST ARTILLERY

Ball, Raymond Compton
Ballard, Willard Russell, Jr.
Bullen, Philip Asia
Clay, Evan Phillips
Elder, Lloyd Stanley
Garff, Wayne Brimhall
Geddes, David Paul

Hanson, Eldon Grant
Heitz, William Sneddon
Lockyer, William Theodore
Lund, Merlin Boden
Lundahl, Ernest William
Mabey, Joseph Lamoni, Jr.
Rasmussen, Floyd Dee

Reed, Lemuel Burton
Rundquist, Eric Armand
Simmons, Carl George
Sorensen, Charles Cole
Spackman, Justin LaVeil
Tripp, Lyle
Whitesides, Joe Edward

CANDIDATES FOR THE NORMAL DIPLOMA

Brown, Rachel
Hendricks, Bessie T.
Magleby, Ronella S.
Mandry, Elinore D.

Read, Blanche R.
Theurer, Beth
Webb, Evelyn
Webb, Helene Carol

Webb, Phyllis Gayle
Westball, Helen Lois

CANDIDATES FOR THE TWO YEAR CERTIFICATE IN AGRICULTURE

Tormey, William Henry, Jr.
The following students were awarded the Johansen Scholarships for 1936-37:

Thain Carlisle
Norma Nalder
William Scholes

The following students were awarded the 1927 Class Research Scholarships for 1936-37:

Ernest Morrison
Lucile Hepworth
Raymond Malouf

Rhodes Scholarship—Fred Somners.

The Rolla M. Rich Memorial Scholarship was awarded to Hyrum Steffen for 1936-37.

The Phi Upsilon Omicron Scholarship was awarded to Ardella Putnam for 1936-37 with Lola Nilsson as 1st Alternate.

The Chi Omega Fraternity Scholarship was awarded to Marguerite Fonnesbeck.

The Bear River Mutual Fire Insurance Company Awards. Given
for the three best papers written on Fire Insurance were awarded to: first, Wendell B. Anderson; second, Woodrow Rigby; third, Alexander Alchin.

'The Lambda Rho Editorial Awards. Given for the two best editorials written on the need for school dormitories were awarded to: first, Naida Richardson; second, Erwin Clement.

'The College Awards. Two certificates given for distinguished College Citizenship were awarded to: Raleigh Barlowe and Anna Johnson.

'The Reserve Officers' Training Corps Medal. Given to the member of the R. O. T. C. who best represents the ideal of the Corps, awarded to Wayne B. Garff.


'The Sons of American Revolution Medal. Given to the student who gives the best prepared patriotic speech, won by Keith Tangren.

'The Sons of American Revolution Military Medal. Given to the non-letterman, who is a member of the R. O. T. C., and who has shown the most interest in the Military Department, was awarded to William S. Heitz.

'The American Legion Military Medal. Given to the letterman exhibiting the most wholesome attitude toward military training during the football season, awarded to Floyd Rasmussen.

'The American Legion Scholarship Medal. Given to the letterman maintaining the highest scholastic standing during the football season, won by William T. Lockyer.

The Home Economics Award. Given to an outstanding senior in the School of Home Economics was awarded to Phyllis Richards.

The Alpha Kappa Psi Medallion. Given to the male commercial student of junior standing who possesses the highest scholastic average, won by Arnold Owen.

The Myers Dramatic Award. Given to the senior student who is considered the most outstanding in Speech and Dramatics, awarded to Edith Welch Morgan.

The Leadership Challenge Cup. Given to the senior student in Agriculture that has exhibited the greatest measure of constructive organization and leadership in the School of Agriculture throughout his college course, awarded to Russell Rich.

The Alpha Zeta Fraternity Cup. Given to the Sophomore student
in Agriculture who maintained the highest scholastic average in his freshman year, won by William Scholes.

The John K. Madsen Trophy. Given to the student who ranks the highest in judging sheep, won by Glen Hudson.

The John M. Ritchie Trophy. Given to the student who ranks the highest in judging horses, won by Fred Sorensen.

The Ogden Union Stock Yards Trophy. Given to the student who ranks the highest in judging beef cattle, won by Hyrum Siteffen.

The Salt Lake Union Stock Yards Trophy. Given to the student who ranks the highest in judging swine, won by Bruce Jensen.

The American-Hawaiian Steamship Trophy. Given to the student who ranks the highest in judging wool, won by Louis Adams.

The Danforth Foundation Fellowship. Awarded to Bliss Crandall.
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<th>Arts &amp; Sciences Men</th>
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<th>Education Men</th>
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(Men 1802, Women 854)

Six v weeks Summer Session 1935—(365 Men, 252 Women) 617

Less names Repeated—(57 Men, 53 Women) 3273

Net Total Resident Enrollment 3163

Correspondence Department—(211 Men, 140 Women) 351

Extension Classes—(72 Men, 125 Women) 197

548

Names Repeated:

Correspondence and Extension—(10 Men, 9 Women) 19

Resident and Non-Resident Groups—(107 Men, 78 Women) 185

204

Grand Total Enrollment 3507

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