Summer 1946

General Catalogue 1946, Summer

Utah State University

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Utah State Agricultural College

BULLETIN

SUMMER SCHOOL

ANNOUNCEMENT FOR 1946

June 10 — August 24

FIRST SESSION

June 10 — July 19

SECOND SESSION

July 22 — August 24

Please Bring This Bulletin With You

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Brigham Young University

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Football Coach, Notre Dame University

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University of Utah

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Denver University

ALLEN TATE
University of the South

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Federal Extension Headquarters, Department of Agriculture

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Certification of Teachers—Professors McClellan, Bell, Nielsen.

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Registration—The Academic Deans, Professors Hayward, Bell, Jeppsen, H. B. Hunsaker.

Summer School Entertainment—Miss Mildred Thomas, Professors Chase, Mortimer, Hunsaker, Bennion.

Teacher Placement—Professors Jacobsen, Humpherys, Carlisle, Phillips.
Utah State Agricultural College

SUMMER SCHOOL

Summer quarters have achieved a significant place in American collegiate institutions, partly because they are organized to meet the needs of so many different groups of people. There are always a few students who carry on with their regular scholastic program, there are the elementary and secondary teachers meeting certification requirements or proceeding toward advanced degrees as they continue their regular teaching duties, and finally there are many special groups who use a week or two weeks or longer for special work specifically adapted to their professions or avocations.

The Utah State Agricultural College Summer School is organized to meet these diverse needs. This year, 1946, there will be more regular students than ever before in its history. Returning service men and women either entered the regular year a quarter or two late, immediately following release from service, or they feel the necessity of making haste with their educational training because of the time they have spent in the service. The College program is designed to meet this need. There will be a full quarter of work for those who want it. During the period June 10 to August 24 students may earn as much credit as during any quarter of the year. Some classes will continue through the eleven weeks, others will carry through the first session only but they will be followed by courses which continue through the second session.

Teachers will be returning in greater numbers this year. There is the pressure for degrees, stimulated by generally adopted salary schedules which give monetary recognition to degrees. Many teachers worked in some war-related service during the war years and many of these now face the necessity of acquiring additional credits for re-certification.

Visiting Faculty

Several interesting personalities from other parts of the country and other institutions will supplement the regular faculty by giving courses during the Summer School period. Included in this group is Dr. Ernest G. Osborne of Teachers College, Columbia University. Dr. Osborne is one of the foremost authorities in the field of adult education and family life education. In addition, he is an exceedingly friendly and popular teacher. He has been at the College previously during the summer and his return is anticipated by all who heard him then.

Dr. Shirley Cooper of the National Education Association will be
one of the leaders of the rural education institute which will be conducted for three weeks. Dr. Cooper is first chief assistant in the Division of Rural Education in the Association and his experience over the country makes him particularly valuable in this connection.

President Aaron Jones of Carbon College will be at the College through the six weeks of the first session. He has had wide experience as a teacher and administrator. Dr. E. C. Lorentzen of the University of Utah will teach courses in business administration through the first session. Dr. Lorentzen, a former graduate of the College, returns after many years at the University of Utah. He is on exchange from the University with Professor V. D. Gardner of this Institution teaching there during the summer.

Several members of the State Department of Education will teach courses and cooperate in the development of various special programs. Mr. N. J. Barlow, Assistant Superintendent of Public Instruction, will work with the program in rural education. Mr. Mark Nichols, State Director of Vocational Agriculture, will be associated with the Smith-Hughes training program. Miss Winifred Hazen, Director of Adult Education, will give work in adult education and will be associated with other phases of Dr. Osborne’s program. Mr. Kenneth Warner of the Department of Agriculture will be associated with the extension workers’ conference and will teach the course in extension methods.

Several other visiting faculty members will give special lectures and participate in the Writers’ Conference.

Lecture Series

Through the first session of six weeks the 11 a. m. hour is reserved for general lectures. The program scheduled this year should be exceptionally stimulating. During the first week a science lecture series will be conducted with President A. Ray Olpin of the University of Utah, Dr. Sherwin Maeser of the College, Dr. Leon B. Linford on leave to the Federal Government from the College, Dr. Wayne B. Hales of Brigham Young University, and Dr. Charles B. Hunt of the U. S. Geological Survey, participating.

Dr. J. B. Hutson, Undersecretary of Agriculture, is scheduled for two lectures during the second week. Dr. Claude Buss, distinguished scholar and former State Department official, will deliver five lectures on international affairs. In addition, he will conduct several seminars for interested students during the afternoons while he is here. The Honorable Alexis Kerensky, former premier of Russia, is another eminent figure scheduled for several lectures. Others to be included are Allen Tate of the University of the South, Carey Mc-Williams, well known writer and lecturer from California, Dr.
Shirley Cooper of the National Education Association, Dr. E. C. Lorentzen of the University of Utah, President Aaron Jones of Carbon College and Dr. Ernest G. Osborne of Teachers College of Columbia University.

Registration

Registration for the Summer Quarter will take place Monday, June 10 in the Main Reading Room of the Library, beginning at 8 a. m. and continuing to 3 p. m., with the exception of the 11 o'clock hour. President A. Ray Olpin of the University of Utah will deliver the first lecture of the quarter at that time. Students who fail to complete registration on Monday may do so any succeeding afternoon from 1 to 4 p. m. in the Summer School office (M125). The first step in registration is to call at the Registrar's Office to obtain registration forms and instructions. No classes except the coaching school are scheduled for Monday.

Seven and one-half credits per session are considered a normal load. The maximum load for which students may register in either the first or second session without special action of the attendance and scholarship committee is nine credits, five credits for three weeks, or three credits for two weeks. If excess credit is granted by the committee, a special fee of $2 per additional credit will be charged. A reduction of one and one-half credits per week will be made in the maximum credits allowed late registrants, as well as those students who register for less than the six weeks' period. Scheduled courses, whether regular or second session, may not be given if less than eight students register.

All graduate students must register with the Dean of the Graduate School, Dr. B. L. Richards. The Dean will be in the Main Reading room of the library on Monday, June 10: thereafter, at his office in the Plant Industry building.

CLASS SCHEDULE

Classes will begin at 7 a. m. throughout the Summer Quarter. Four periods are scheduled during the morning hours: 7, 8, 9, and 10. Bells ring on the hour and classes begin immediately and continue for fifty minutes to 7:50, 8:50, 9:50, and 10:50. The 11 a. m. hour is kept open as a lecture period during the first session and no classes are scheduled at that time. Afternoon classes begin at 1 p. m. and continue on the hour until 5 p. m. During the second session hours for some classes will be arranged by agreement of students and teacher.
Graduate Work

For detailed information on graduate work see the general catalog. Those who expect to register for the first time for work leading to an advanced degree should submit their credits to Dr. B. L. Richards, dean of the graduate division, 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. Registration cards of all graduate students working towards a degree must be signed by Dr. Richards. For a more complete statement of requirements for the Master of Science degree, consult the 1945-46 general catalog, pages 229-233.

Students in agriculture wishing to do graduate work during the Summer Quarter may register regularly for summer school work and be assigned to specific duty with members of the Experiment Station staff. Credit will be given for this work towards an advanced degree. Students who anticipate taking advantage of this opportunity should apply early so that the particular work in which they are interested may be arranged in connection with the summer program. Registration for such work should follow the regular order.

Smith-Hughes Teachers

Smith-Hughes teachers of the State will meet in convention on the campus during the period June 17 to June 28. Prior to the war this gathering on the campus was an annual affair. During the war years district meetings replaced the annual visit to the College. Special courses in particular fields are being scheduled for these teachers. Their program will be directed by Mark Nichols, state director of vocational agriculture for the State Department of Education, and Professor L. R. Humpherys of the College staff.

Extension Workers' School

Special graduate courses for extension workers, both men and women, will be conducted through three weeks, June 10 to June 23. The two principal courses listed for the group, which will include more than half of all the extension workers of Utah as well as several from surrounding states, are Extension Methods and Extension Journalism. Dr. Kenneth Warner of the Federal Extension headquarters in the Department of Agriculture, will direct the work in Extension Methods. Professor Doyle Green of the College staff will teach the course in Extension Journalism.

Fees

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<th>Service</th>
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<tr>
<td>Registration for Summer Quarter</td>
<td>$15.00</td>
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<td>Auditor’s Fee (Per Course)</td>
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<td>Excess Credit (For Each Credit)</td>
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<td>Second Session Fee</td>
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<td>Library Fee for Children's Literature</td>
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<td>Writers' Conference Fee</td>
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<td>Attendance at all sessions (no manuscripts)</td>
<td>7.50</td>
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<td>Attendance Daily Sessions</td>
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<tr>
<td>Writers' Conference Fee</td>
<td>10.00</td>
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<tr>
<td>(This fee entitles attendance at all sessions and a limited amount of manuscript to be considered. A small additional reading fee will be charged for additional manuscripts.)</td>
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<tr>
<td>Attendance at all sessions (no manuscripts)</td>
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<tr>
<td>Attendance Daily Sessions</td>
<td>2.50</td>
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<tr>
<td>(Students who are regularly registered may attend the Writers' Conference without additional charge.)</td>
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</tbody>
</table>

A special fee of $5.00 per credit hour will be charged for all students taking laboratory courses.

Students who pay regular fees will be admitted without additional charge to all lectures, entertainments, and special features.

**LIVING ACCOMMODATIONS**

The College Residence Hall on the campus will be available for Summer School students. Reservations should be made immediately. The College cafeteria will serve meals through the day. Other board and room accommodations can be obtained near the campus at reasonable cost. Some small apartments are also available for the Summer Quarter. Recently acquired facilities will be available for armed service personnel, both married and unmarried. The College maintains a Housing Bureau which is prepared to aid students in making satisfactory living arrangements. Mr. C. L. Pocock is director of this Bureau.
NURSERY SCHOOL ENROLLMENT

The College nursery school will operate chiefly for the benefit of College students who bring their young children with them. Enrollment will be limited to fourteen and will be made up of two, three, and four-year-old children. The school will be in session five days a week from 9:00 to 1:00 for all registrants and until 3:00 for any whose parents have afternoon classes. Tuition will be $7.50 for six weeks. Admission will be by application only. Application may be made in writing or in person to Mrs. Esther Skeels before or on registration day at the College nursery school.

Family Life Institute

For several years the Summer School has sponsored a two-day Family Life Institute. During the war attendance was limited to people living in the immediate vicinity of the College. This year the invitation to parents will be broadened and there is expected to be a corresponding increase in interest and attendance. The State Department of Education operating through the director of adult education, Miss Winifred Hazen, is cooperating in the program.

In view of the importance of this year’s Institute, it is appropriate that the visiting leader will be Dr. Ernest Osborne of Teachers College of Columbia University. There is not a better leader in the country, in the opinion of the experts; and the College and the Department feel extremely fortunate that he could come. Tentative dates for the Institute are Thursday and Friday, June 20 and 21.

Writers’ Conference

A conference of writers will be held for ten days, July 8 to 17, under the direction of the staff of the English Department and a distinguished group of visiting writers. Sections will be conducted in Short Story, Poetry, the Novel, and in Non-fiction Prose (radio writing, newspaper and magazine feature writing, folklore) and Children’s Fiction. All sessions except an evening lecture series will be held in the Rural Arts building, where living quarters will also be available at nominal cost to out-of-town visitors.

In addition to regular daily sessions, excursions will be conducted to Logan Canyon (evening, July 11) and to Bear Lake (Sunday, July 14).

Visiting Staff

ALLEN TATE: Poet, novelist, critic, and editor of Sewanee Review; former holder of the Chair of Poetry, Library of Congress; Poetry editor, Henry Holt & Co.
CAREY McWILLIAMS: Author of well-known book, Factory in the Fields, and others; agricultural writer, reviewer, and critic.

BREWSTER GHISELIN: Poet and short story writer, author of Against the Circle, Poetry editor Rocky Mountain Review.

ALAN SWALLOW: Publisher, poet, and editor; poetry editor New Mexico Quarterly Review, author of two volumes of poetry, editor of yearly anthology, American Writing.

GEORGE SNELL: Novelist, short story writer, critic, and radio writer; producer and writer for NBC; co-editor Rocky Mountain Review.

Resident Staff

Ray B. West, Jr.          Wallace J. Vickers
N. A. Pedersen            Carlton Culmsee
Ira N. Hayward            King Hendricks
Doyle Green               Moyle Q. Rice
Veneta L. Nielsen

Professor Ira N. Hayward will be available to assist writers participating in the Utah Centennial program.

Fees

A fee of $10.00 will be charged for regular membership in the conference, and this fee will entitle members to attend all sessions and to submit a limited amount of manuscript (short story of no more than 12 pages, 5 pages of verse, or a single chapter of a novel) for the consideration of the visiting and resident staff. Additional manuscripts may be submitted, however, by the payment of reading fees as follows: $10.00 for a novel manuscript of 500 pages or less; $3.00 for each additional story of 15 pages or less; $1.00 per manuscript page for verse.

Participating members (who do not wish to submit manuscripts) may attend all sessions of the conference by paying a fee of $7.50 or they may attend daily section meetings by paying a fee of $2.50. The general sessions in the evening are open to the public.

Credits

Members who desire to earn a maximum of two quarter hours of college credit may do so by making special arrangements with the head of the English Department and the conference director.

Registration

Registration of regular members (those submitting manuscripts), June 20-July 1. All manuscripts must be in by July 1, and must be
accompanied by a deposit of $5.00. They may be sent by mail and addressed to Ray B. West, Jr., Chairman, Writers' Conference, U.S.A.C., Logan, Utah.

Registration of participating members, Monday, July 8.

Living Quarters

Living accommodations for out-of-town visitors may be had in the Rural Arts Building on the campus at a modest rate per day. A limited number of private rooms will be available in the nearby Girls' Residence Hall at a somewhat higher rate. Meals will be available at reasonable cost at the College cafeteria.

Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 AM (daily)</td>
<td>General Session</td>
</tr>
<tr>
<td>10:30 AM (daily)</td>
<td>Poetry Section</td>
</tr>
<tr>
<td>10:30 AM (6 days)</td>
<td>Non-fiction (folklore, radio, etc.)</td>
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<tr>
<td>10:30 AM (3 days)</td>
<td>Children's Fiction</td>
</tr>
<tr>
<td>1:00 PM (daily)</td>
<td>Short Story Section</td>
</tr>
<tr>
<td>2:30 PM (daily)</td>
<td>Novel Section</td>
</tr>
<tr>
<td>8:00 PM (daily)</td>
<td>General Lecture Sessions</td>
</tr>
</tbody>
</table>

Private conferences with staff members will be arranged.

SECOND SESSION

Regularly scheduled Second Session classes will begin Monday, July 22, and continue for five weeks. The same rules as apply in the first session operate on the amount of credit a student may take. Second session classes meet on Saturday in addition to the usual meeting days. Any regular college course which is not definitely scheduled for the second session will be given in that period if ten students petition the Summer Quarter Dean and join the class. Credit in the second session is computed on the basis of one hour of credit for 12 one-hour lecture periods or 12 three-hour laboratory periods. Registration forms will not be accepted after the close of any second session period in which the classes are given.

Students who desire to register for credit in research problems or field studies must make the necessary arrangements with the Registrar's Office at the beginning of the second session period. Credits allowed and fees charged for this type of study will depend on the time spent and the work accomplished.
Forestry Summer Camp

The School of Forest, Range, and Wildlife Management owns or controls 8,000 acres of forest and range land approximately 25 miles from the campus within the Cache National Forest, where summer camp facilities are established. Eleven weeks of field instruction is given at the Tony Grove Summer Camp and is required for graduation for all students in the School of Forest, Range, and Wildlife Management. Attendance at this camp is required between the sophomore and junior year and is pre-requisite to the technical courses of the junior and senior year.

There are five field instruction courses offered at summer camp with a total of 16 credits, and students in the School of Forest, Range, and Wildlife Management are required to take all five courses. This summer camp opens on the second Monday following the close of the Spring Quarter (June 17) and continues for a period of 11 weeks (August 31).

Coaching School

The annual summer coaching school at Utah State Agricultural College is unquestionably the best in the Rocky Mountain area and it is probable that over the years it is equal to any offered in the country. The visiting coaches selected for 1946, Frank Leahy of Notre Dame and Henry Iba of Oklahoma A. and M. College, assures another quality school. It may be the best in a long series because both men are young, enthusiastic, vigorous men who have only recently reached the heights and who are intent on staying there. The largest enrollment in the history of the program is expected because of the many service men returning to coaching. They will want to get acquainted with the developments in football and basketball and get partially acclimated after an absence in some cases of several years. Football is scheduled for the morning, basketball for the afternoon. Registrants in the school have free playing privileges at the Logan Golf and Country Club. The dates are June 10-June 14.

RECREATION AND ENTERTAINMENT

Summer Quarter students will be offered many recreational and cultural features during the first six weeks. Several dancing parties, canyon parties, and conducted tours to adjacent regions of special interest are scheduled.

TEACHERS' CERTIFICATION

By attending the Summer Quarter of Utah State Agricultural College, it is possible to meet any of the requirements for Utah certification with the exception of practice teaching; and, since the College is on the Accredited List of the Association of American Universities, credit will be allowed for any subject completed in the Summer Quarter that forms part of the certification requirements of any state.
TEACHERS' PLACEMENT BUREAU

A Teachers' Placement Bureau, directed by Dean E. A. Jacobsen, functions in connection with the Summer School. All teachers seeking employment may register in this bureau. Superintendents and others who employ teachers will find it to their advantage to consult the list of applicants which will be furnished upon request. Interviews with applicants will also be arranged.

KEY TO BUILDINGS

M—Main
A—Mechanic Arts
E—Engineering
P—Plant Industry
L—Animal Husbandry
G—Gymnasium
N—Library
F—Forestry
W—Widtsoe Hall or Chemistry
H—Home Economics and Commons
MS—Military Science
FH—Field House

Agricultural Economics and Marketing

W. P. Thomas, Professor; George T. Blanch, Associate Professor.


102. Principles of Farm Management. The principles underlying the organization, management, and financial success of farms. Rates of production, labor efficiency, combination of enterprises, and farm layout will be discussed. Three credits. Second session, daily 8 and one hour arranged, M178. Blanch

113A. Farm Cooperatives. A course in principles underlying the organization, operation, and management of cooperative associations. Three credits. First session, daily 8 and one hour arranged, M178. Thomas

120. Agricultural Prices. The relationship between agricultural and non-agricultural prices and income, together with the state and national economic situation, will be given consideration. Three credits. First session, daily 8 and one hour arranged, M178. Thomas
Agronomy and Soils

R. J. Evans, Professor; H. B. Peterson, Assistant Professor


118. Weeds. Identification of weed seeds and plants, the weed problem in agriculture and methods of weed control. Two credits. First session, M.T. Th. 9, T. 2-5. Evans

Animal Husbandry

Louis L. Madsen, Professor; James Bennett, Assistant Professor

15. Fundamentals of Animal Breeding. The principles of livestock improvement, including physiology of reproduction heredity, variation, selection, inbreeding, cross breeding and other closely related phases of the subject. Three credits. First session, daily 8, Fri. 1 Bennett

150. Animal Nutrition. Attention is given to various fundamental phases of animal nutrition, including protein, carbohydrates, fat and mineral metabolism, vitamins, content and deficiencies of range forage, and feed and forage poisoning. Prerequisites: Chem. 10, 11, 12 (or equivalent), and An. Hus. 10 or Bact. 111. Four credits. First session, daily 9, M T W 1. Madsen

200. Problems in Animal Breeding. Special assignments, reports and discussions. Students will be expected to review literature in various phases of animal breeding, and to prepare a comprehensive and critical review of at least one phase of the subject. First session, time and credit arranged. Bennett

210. Problems in Animal Nutrition. Same as A. H. 200, except work will be in animal nutrition. First session, time and credit arranged. Madsen

Art

Calvin Fletcher, Professor; H. R. Reynolds, Associate Professor; Everett Thorpe, Instructor.

51. Drawing for Public Schools. Methods of teaching drawing and painting on the elementary school level. Two and one-half credits. First session, daily 1, M330. Fletcher

52. Handwork for the Elementary Grades. Methods of teaching various types of crafts work on the elementary level. Many types of materials will be considered for use in crafts problems, wood, cloth, paper, metals, etc. The proper relationship of planning, construction, decorative design, materials, and tools used in the various crafts will be stressed. One and one-fourth credits each three weeks. First session, daily 8, M330. Reynolds
53. Design for Elementary Grades. Methods of teaching design and color on the elementary level. One and one-fourth credits each three weeks. First session, daily 2:30, M3300. Reynolds

104. Creative Expression. A. Elementary or advanced drawing from still life, cast and pose, or animals. B. Painting. Oils, water color, pastel, egg tempera or gouache. A special class in portrait painting and figure drawing will work daily from 9 to 11 a.m., during the first session. C. Illustration. Advertising, book, fashion or magazine and newspaper work may be taken up. Note: In all this above except the portrait group the work is individual and is open for junior or senior college credit. Students choose the line, or lines of work they desire. Thirty hours of practice is required for each credit desired. Criticism and help is given daily 9 and 10 a.m. and 3 p.m. Out-of-door criticism Thursday 5 to 8 p.m. in announced locations for landscape study. Other sketching trips may also be arranged to suit desires of individuals or groups. First session, Fletcher, second session, Thorpe, M330D.

105. Scientific Drawing or Painting. Work coordinated with various science departments. A. Botanical; B. Zoological; and C. Geological. Credit arranged. First session, criticism daily 2, M330D. Fletcher

106. Sculpture. A. Carving in stone; B. Carving in Wood, flat or round; C. Modeling and casting. First session. Time and credit arranged, M330D. Fletcher

110. Lettering and Commercial Art. A. Show-card writing; B. Window and gold signs; C. Illuminating and manuscript lettering. First session. Credit arranged. Criticism daily 2, M330D. Fletcher


114. Minor Crafts. A. Leather work; B. Basketry; C. Polychrome and gesso; D. Textile decoration, including block printing, stenciling, batik, etc. First session, credit arranged. Criticism daily 9 to 11. M330E. Reynolds

Bacteriology and Biochemistry

J. E. Greaves, Professor

1. Elementary Bacteriology. Deals with the biology and significance of bacteria and other micro-organisms; their morphology; and introduces the fundamental principles governing the bacteria of water, sewage, milk, food sanitation, communicable diseases. First session. Two and one-half credits, daily 9, P302. Greaves.

Botany

B. L. Richards, Professor; W. Sydney Boyle, Assistant Professor

23. General Botany. A general course in the fundamental principles of plant biology dealing with the structure, nutrition, growth, reproduction, and relationships of plants. Continuous through three
quarters. Consideration will be given successively to: anatomy and functions of the flowering plants; comparative study representatives of plant kingdom from an evolutionary point of view; inheritance; and recognition of important vascular plant families. Three credits. Both sessions, T. Th. 1, Lab. Th. 2-5.

Business Administration

V. D. Gardner, Professor; Alfred W. Swinyard, Instructor
Visiting Faculty Member: E. C. Lorentzen

20. Small Business. A general survey of the problems encountered in starting a small business is made. Consideration is given to problems encountered before operations are started, such as selecting the right type of business, form of business, permits, licenses, choosing a location, credit and financing. In addition, the problems and details of actual operating procedures such as accounting controls, insurance, taxes, buying and selling are considered in relation to various types of small business operations. Two and one-half credits. First session, daily 8, M351.

100. 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, School of Home Economics and other non-Commercial students. Five credits. First session, daily 7 and 10, M351.

133. Industrial Organization and Management. An introduction to scientific management as applied in American business and industry. Attention will be given to local applications. Five credits. First session, daily 9 and 2, M352.

141. Real Estate. The fundamentals of the real estate business. Analysis of urban land problems, real estate merchandising, real estate selling and the function of the appraiser. Two and one-half credits. First session, daily 8, M352.

157. Problems in Advertising. The aim of the course is to lead the student to judge the possibilities of advertising as a sales tool for any type of product or size of firm and to formulate effective plans of sales strategy cooperatively with other sales promotional agencies. Actual cases will be studied and analyzed. Five credits. Second session, daily 8 and 9, M351.

Chemistry

R. L. Hill, Professor


121,122. Organic Chemistry. An introductory course in the fundamentals of the chemistry of the carbon compounds. Prerequisites: Chemistry 5 or a grade of B or better in Chemistry 12. Ten credits. Both sessions M.W.F. 8, M.W. 1-4.
Civil Engineering

C. H. Milligan, Associate Professor; E. M. Stock, Assistant Professor; S. H. Daines, Instructor


CE 83. Descriptive Geometry. Principal and auxiliary views; points, lines, and planes; developments, intersections, and warped surfaces; mining problems. Prerequisite; CE 61. Three credits. Both sessions, daily 8, E404.

The departments of Civil and Agricultural Engineering will give any other course listed in the catalog if there is sufficient demand.

Economics

W. L. Wanlass, Professor; E. B. Murray, Associate Professor

51. General Economics. For the general college student regardless of his field of specialization. The emphasis is on an understanding of the principles and institutions that underlie the operations of the economic system. Two and one-half credits. Daily 7, M356.


125. Labor Economics. The emphasis is on the theory and practice of collective bargaining. Special attention is given to recent legislation that has promoted the growth of organized labor. Current issues in industrial relations are critically analyzed. Two and one-half credits. Daily 9, M356.

All of the above are scheduled for the first session.

Education

E. A. Jacobsen, C. E. McClellan, John C. Carlisle, Professors; L. G. Noble, Assistant Professor.

Visiting Faculty

N. J. Barlow, Shirley Cooper, A. E. Jones, Kenneth C. Warner

107. The Improvement of Reading. The importance of reading to effective living in a democracy will be the underlying theme of this course. Objectives, standards of attainment, and methods of read-
ing instruction will be considered. Diagnostic and remedial techniques at the elementary and secondary levels. Two and one-half credits. First session, daily 8, M204.

113. Guidance and Personnel. An analysis of the needs for guidance in the secondary school, together with a consideration of types of organization and services necessary to meet these needs. The role of the teacher, the counselor, and other guidance workers in the school will be considered. Two and one-half credits. First session, daily 2, M206.

116. Articulation of the Educational Program. A survey of existing needs for closer articulation of the various educational units and agencies. Discussion of the factors conditioning nature and extent of articulation and of the unifying principles upon which a well articulated education program rests. Two and one-half credits. First session, daily 2, M204.

129b Practice Teaching in Secondary Schools. Required for Secondary School Certificate. Open only to seniors and graduate students. Prerequisites, Educational 129a, Psychology 102, Education 111, and Education 113; also eighteen hours of credit in the field in which student expects to do practice teaching. Three credits. Time arranged.

145. Safety Education. Emphasis (a) the needs for safety education in the modern world; (b) the role of the school in a program of safety; (c) methods and materials for teaching, discussions, and readings. Two and one-half credits. First session, daily 10, M354.

161. Audio-Visual Aide in Education. Emphasizes the importance of Audio-Visual Aids in the school program. The latest methods and techniques as revealed from experience carried on by the Armed Forces will be analyzed. Workable programs for the public schools will be outlined. Two and one-half credits. Second session, daily 9, M279.


178. Workshop in Rural Education. The purpose of the workshop is to study the major problems of rural life and education. It consists of lectures by specialists on various aspects of rural life and of committee work designed to formulate general policies and practices for rural education. Four credits. First three weeks, daily 8-10, M280. One hour arranged.

181. School Finance. A study of the importance of finances in a school system and the principles and practices involved in the collecting and distributing of school revenues, with special reference to the conditions in Utah. Two and one-half credits. First session, daily 10, M358.
201. **Backgrounds of Modern Education.** An integration of the history and philosophy of education as a basis for the understanding of modern education. The evolution of educational thought, the sources of great philosophies of education in relation to their times. Two and one-half credits. First session, daily 2, M279. McClellan

202. **Contemporary Philosophies of Education.** Current philosophies of education will be studied in order to discover the basic factors in psychology, in social outlook and in conception of the good life which are involved in these contrasting programs for American education. Two and one-half credits. First session, three weeks, second session, daily 9, M204. Jacobsen

203. **Evaluating the Elementary School.** Studies evaluating in changing elementary school will be analyzed. Particular attention will be given to organization and curriculum. Newer methods utilized in evaluation will be considered. Enrollment open only to experienced teachers or prospective teachers who have completed their courses in practice teaching. Two and one-half credits. First session, daily 9, and one hour daily arranged, M358. Second three weeks.—Carlisle

204. **Comparative Education.** This course deals with a careful study of the educational programs of the various nations with emphasis upon the aims and methods. Careful consideration will also be given to educational philosophies and outcomes as reflected in national and international policies. Two and one-half credits. Second session, daily 8, M279.

219. **The Principal and His School.** The course will deal with the practical problems confronting the principal in the administration and supervision of his school in terms of the changing social scene and changing concepts of school administration. Problems of administration, supervision, curriculum, pupil personnel, school-community relations, as they apply to the work of the principal all will be given consideration. One and one-half credits. First session, M.W.F. 1, M358. Noble

221. **Problems in School Administration.** A general study of the work of the school administrator and the principles upon which the profession of school administration is founded and efficiently practiced. Consideration will be given to major educational problems with which the school administrator is confronted. Two and one-half credits. First session, daily 8, M358. Jones

241. **Social Education.** The implications for education involved in social conditions and social change. The social significance of current educational theories and practices. Two and one-half credits. Second session, daily 10, M279. Noble

267. **Introduction to Research.** An inquiry into the nature and sources of research problems with a study of the underlying principles and the method 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 and one-half credits. First session, daily 1, M354. McClellan
English

N. Alvin Pedersen, Professor Emeritus; Wallace J. Vickers, King Hendricks, Professors; Ray B. West, Associate Professor; Moyle Q. Rice, Assistant Professor

10. Sophomore Composition. Required of all students not offering its equivalent. May not be taken in the freshman year. This course will stress correctness and effectiveness in sentence, paragraph and theme; give practice in organization and outlining of material, and in expository writings; demand clear, forceful expression, and require a full third of a student's time. Daily 1, N310.

First Session, Rice. Second Session, West.


22. Contemporary Poetry. A study of the principal British and American poets since 1900. The purpose of the course is to help students to enjoy and understand poetry as a living art. Two and one-half credits. Second Session, daily 9, N314.

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. Four credits. First Session, M. T. W. Th. 7-9, N106, Moore Library.

33. 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. Two and one-half credits. First Session, daily 10, N310.

95. Contemporary Novels. The reading and interpretation of the best in twentieth century novels from England, America, France, Germany, and Russia as they mirror the social and literary forces of our times. Two and one-half credits. First Session, daily 9, N310.

111. Technical Writing. Emphasis is placed upon bibliography, research methods and final form of technical report. May be taken in lieu of 110. Four credits. First Session, M. T. W. Th. 3 and 1, N314.

150. Rocky Mountain Writing. A study of the primary writers of the Rocky Mountain area with emphasis on contemporary authors in the novel, short story, and verse. The course also includes a consideration of the particular esthetic problems of the writer in the Rocky Mountain area. Two and one-half credits. Second Session, daily 10, N310.
180. The Eighteenth Century. A comprehensive study of the
literature from 1680 to 1798. Two and one-half credits. First Session,
daily 9, N314.

**JOURNALISM**

Carlton Culmsee, Professor; Doyle Green, Extension Editor

120. Agricultural Journalism. Lectures, practice and practical
experience in preparing agricultural homemaking material for the
press, radio, reports, circular letters, demonstrations, and lectures.
Intended to cover the general field of extension information.
Graduate credits allowed. Two and one-half credits. June 10-28.
Daily 2-4 p. m., M359.

**Forestry**

Lewis M. Turner, J. Whitney Floyd, T. W. Daniel, Professors; G. H.
Kelker, D. W. Bensend, Associate Professors

90. Forest Improvements. Practical field problems in trail and
telephone construction, the use of field radios, methods of fire
prevention, detection and suppression. Care and use of woods tools.
Care and use of horses in Forest, Range, and Wildlife work. Problems
in building construction, planning recreational areas and water
development. Three weeks. Two credits. Summer Camp. Turner

96. Forest Surveying. Practical field problems in surveying meth-
ods commonly employed in Forest, Range, and Wildlife Management.
Type mapping. Special problems for majors in each of the three fields.
Four credits. Three Weeks. Summer Camp. Floyd and Daniel

97. Forest Practice. Study of timber types and successful stages.
Timber cruising, log scaling, inventories and growth of immature
stands; stem analysis, taper measurements, sample plots, milling
and utilization studies. Three credits. Two weeks. Summer Camp.
Daniel and Bensend

98. Range Practice. Field work in range management involving
training in making range reconnaissance, estimating utilization, and
conducting technical range research. In addition, time will be devoted
to range improvement and management planning. Three credits.
Twelve days at Summer Camp. Staff

99. Wildlife Practice. Lake and stream surveys and mapping for
improvement purposes and for restocking, the use of census methods
for big game, game birds, and rodents; cover mapping, preparation
of animal skins; and study of deer and elk ranges. Three credits.
Twelve days. Summer Camp. Kelker

**Geology**

J. Stewart Williams, Professor

1. Introductory Physical Geology. A general survey course of the
whole field of physical geology for arts students and others who desire
only a broad introduction to the subject. Five credits. First Session,
daily 8 and 9, M283.

Williams
History

Joel E. Ricks, Professor; J. Duncan Brite, Associate Professor.


126a. The French Revolution. A study of the background of the revolution as expressed in the Enlightened Despotism and the Age of Reason of the 18th century. The events of the Revolution will be traced from beginnings in 1789 to the rise of Napoleon in 1799. Two and one-half credits. Second Session, daily 9.


135a, 235a. History of the Far West. Deals with the region from the Rockies to the Pacific coast with special emphasis upon the Intermountain West. Two and one-half credits. First Session, daily 8. N312.


188. The Pacific and the Far East. Surveys the civilizations of the Pacific and Asia. Present-day problems of the Pacific and Far East are stressed. Two and one-half credits. First Session, daily 10. N312.

HOME ECONOMICS

Ethelyn O. Greaves, Professor; Almeda P. Brown, Professor Emeritus; Esther L. Skeels, Ethelwyn Wilcox, Bertha F. Johnson, Virginia Phillips, Associate Professors; Edna Page, Clarice E. Lindsay, Assistant Professors; Lillian Brehm, Instructor; Ann Burns, Assistant.

Visiting Faculty
Ernest G. Osborne, Winifred Hazen.

CHILD DEVELOPMENT AND FAMILY LIVING

The following offering is at the request of homemaking teachers in Utah who wish to work toward meeting the certification requirements in the area of home and family. In order that the summer’s work may be reflected in enriched high school teaching in this area, students who enroll for six weeks will have the opportunity to develop units of work, under guidance, during the Second Term. To
earn the specified credit, the student should plan on four hours of study each evening and individual or group conferencing for a part of each Saturday during the first three weeks.

W60-160S. Workshop in Child Guidance. An opportunity to study the needs of young children with respect to learning in the routine situations of daily social living, i.e., eating, sleeping, dressing, playing, etc. (Enrollment limited to 25 vocational homemaking teachers.) $1.00 fee to cover cost of meals eaten in the nursery school. 7-8 daily group discussion, 9-11 or 11-1 daily nursery school observation, 4-6 daily group or individual conference, 9-12 Saturday conference for the first three weeks. Two credits for three weeks, four credits for six weeks. Skeels and Phillips

50-160AS. Required of all home economics transfer students who have had only two or three credit hours in child study. One credit will be earned by three hours of observation weekly in the nursery school (see statement regarding this in Child Development 60); the other hour will be earned through one conference weekly. Two credits. Nursery School. Skeels

70-170S.—Includes a study of the anatomy and physiology of the reproductive system, preparation for motherhood and the physical care of the family. Demonstration and practice of nursing procedures in the home. One and one-fourth credits for three weeks. Two and one-half credits for six weeks. Burns Sociology 160S or 260S. Family Relationships. The interaction among members of the family group geared to effective living. One and one-fourth credits for three weeks. Two and one-half credits for six weeks. Daily 10. H207. Osborne and Phillips

Education 146S or 246S. Adult Education. Centers around the development of programs in Family Life Education for adults with special emphasis given to problems of organization, financing, method, philosophy, community cooperation, subject matter and materials. Students are encouraged to work on individual problems. One credit for three weeks, two credits for six weeks. Daily 2:30-4:00. H202. Osborne and Hazen

199S or 299S. Special problems in Home Economic Education. Developed around individual needs of students which are not otherwise provided for in the curriculum. Time and credit arranged.

Phillips

CLOTHING, TEXTILES AND RELATED ARTS

26S. Pattern Study and Dress Construction. Includes pattern study and construction of one garment. The Pattern Study consists of the alteration of commercial patterns, the fitting of a basic pattern in muslin, and techniques of designing from a basic pattern; the Garment is constructed with emphasis upon selection, fitting and finishes. Prerequisite for clothing majors and Home Economics education major: Clothing, Textiles and Related Arts 9, 20 and pre-
requisite or parallel Art 2. For others, clothing construction sufficient to satisfy instructor. Two and one-half credits. Six weeks. M. 2-4, T. Th. 1-4. H214.

335. Home furnishing. Open to anyone. Planned to develop skill in selection and techniques in making, remodeling, and caring for home furnishings. The laboratory includes, instruction on making draperies, curtains, lamp shades, use of sewing machine attachments, refinishing and upholstering furniture. Two and one-half credits. First three weeks only. M. T. W. Th. F. 8-11 and 1 hour arranged. H216.

115S. Art Applied to Costume and the Home. How to bring art into daily living through a study of design and composition as applied to dress and arrangements within the home. Prerequisites for Home Economics Education Majors: Art 1, 2 Clothing and Textiles and Related Arts 9, 20, and 25; for others see instructor. Two and one-half credits. Six weeks. M.T.W.Th. 9-11, H206.

125S. Problems in Fitting. Open to anyone having some experience in dressmaking satisfactory to instructor. Purpose of the course to learn techniques of fitting and to prepare a dress form whereby student may be able to do own fitting. The course involves making a French lining to fit figure and padding out a commercial dress form to fit lining. Two credits. Six weeks. T. 1-4, Th. 1-3, H206.


190 or 290. Special Problems. Independent study under direction of instructor of a problem in textiles, clothing or related art in which an upper division or graduate student has special interest or need. Suggested problems: recent developments in textiles, economics of clothing, selection of children's clothing from the standpoint of physiological and psychological development, postwar trends in the needle trade and fashions business. Consult head of department before enrolling. Time and credit arranged. H204E.

Johnson, Brehm, Lindsay

FOODS AND NUTRITION


106. Meals for the Family. The planning, preparation and serving of nutritionally adequate family meals at different levels of income. Prerequisites: Foods 20, 21. Two and one-half credits, M.F. 12, T.W.Th. 12-2, H201.
146S. Conservation and Technology of Food. A lecture and labor- 
atory course in approved scientific, practical methods of food 
processing, preservation and storage and its influence upon the 
nutritive value of the foods. Two and one-half credits. T.W.Th.F. 9, 
M. 2-5, H203. 

160S Special Problems in Foods and Nutrition. Individual prob- 
lems in nutrition, including metabolism studies, and dietary investi- 
gation. Open to students majoring in Foods and Nutrition, or by 
permission of the instructor. One or two credits. Time arranged. 
H104B. 

185. Nutrition Refresher Course. A review of the principles of 
the newer knowledge of nutrition with attention given to its application 
to the school and public health field. Daily 8. Conferences arranged. 
Two and one-half credits. H203. 

HOUSEHOLD ADMINISTRATION 

150S Household Administration. Provides six weeks of directed 
experience in practical homemaking; is open to groups of six mature 
students with similar training and background. Precedence is given 
to applications from teachers in the field of home economics. The 
course may be applied on State Certification requirements. Applica- 
tions should be received at the college not later than May 20. Three 
credits. Cottage. Brown 

INDUSTRIAL EDUCATION 

Ernest C. Jeppsen, D. A. Swenson, Frederick Preator, Associate Pro- 
fessors; S. R. Egbert, Joseph Coulam, William E. Mortimer, Alexander 
Gilbert, Assistant Professors; LeRoy France, Antone B. Kemp, Clyde 

VISITING FACULTY 

Howard B. Gunderson, State Director, Trade, Industrial, & Distribu- 
tive Education 

Donald B. Greenwood, State Supervisor of Industrial Arts Education 

Von H. Robertson, State Supervisor of Trade and Industrial Education 

Royal D. Madsen, State Specialist, Course of Study Development 

Winston M. Crawford, State Specialist, Supervisory Personnel De- 
velopment 

Industrial Arts Education 

I. E. 42. Plastics. To acquaint students with the new and im- 
portant group of plastics materials now being produced and to teach 
them the fundamental operations used in working, these materials. 
Students will complete projects in hand and machine work that apply 
to the Industrial Arts program. Two credits. First term, daily 1-3. 
Mortimer
I. E. 110. Shop Organization and management. To teach students to organize and manage an Industrial Arts shop of the unit, or multiple activity type. Each student will prepare for one type of shop, a complete plan of organization and management dealing with the necessary equipment, materials, supplies, methods of purchasing, financial control, and problems of shop arrangement. Three credits. First term, daily 8, including Saturday. A114

Mortimer and Greenwood

I. E. 123. Industrial Arts Laboratory. To teach industrial arts instructors the application of the skills and knowledge they have acquired in their basic shop courses. Students will construct projects that are suited to the work recommended by the State Department of Education for junior high schools. They will also prepare the necessary lesson plans and teaching aids that will supplement and aid teachers in carrying out the program. The course this year offers work in the crafts, wood, metal and electrical units. Two credits. First term, daily 9-11 or daily 3-5. A114. Mortimer

INDUSTRIAL ARTS AND TRADE AND INDUSTRIAL EDUCATION

I.E. 109. Course of Study Building in Industrial Arts. To teach students to prepare and use a course of study consisting of the outline, analysis, progress chart, lesson plans, instruction sheets, references, tests, and instructional schedule. Each student will complete this work for one unit of instruction. Three credits. First term, daily 9, including Saturday. A101. Jeppsen

I.E. 121. Instructor Training (Methods). To teach students the latest methods and techniques of teaching as applied to individual and group instruction. Each student will have the opportunity of using these different methods in presenting lessons before the class. Three credits. First term, daily 7, including Saturday. A101. Jeppsen

I.E. 201. Administration of Industrial Education. A study of the laws, regulations, and policies effecting Industrial Education Programs; organizations and management necessary for the successful operation of these programs; and pertinent problems and their solutions. Students will prepare a plan of administration suitable to their school or district. Three credits. First term, daily 7, including Saturday. Gunderson

I.E. 202. Supervision of Industrial Education. Latest methods in the supervision of Industrial Arts Education and Trade and Industrial Education, for administrators, supervisors, and teachers in service who are responsible for the improvement of industrial arts and vocational education through supervision, or for students who wish to prepare for supervisory work; special attention to supervision of all-day, part-time, and evening programs of industrial arts and vocational education. Students will prepare a plan of supervision suitable to their situation. Three credits. First term, daily 8, including Saturday. Robertson
TRADE AND INDUSTRIAL EDUCATION

I.E. 104. Occupational Analysis. Principles and practice in analyzing occupations for the purpose of determining teaching content. Students will complete an analysis of one unit of a trade or occupation. Three credits. First term, daily 2, including Saturday. Madsen

I.E. 210. Diversified Occupations. A study of the content, methods, and special devices to be used in the teaching of diversified occupations. Emphasis will be placed upon pertinent problems and their solutions. Students will prepare a syllabus covering the essential materials for one unit of instruction in diversified occupations. Three credits. First term, daily 10, including Saturday. A101.

I.E. 211. Part-Time Education. A study of the content, methods, and special devices to be used in Part-Time Education programs. Emphasis will be placed upon pertinent problems and their solutions. Students will prepare a syllabus covering the essential materials for a course in Part-Time Education. Three credits. First term, daily 9, including Saturday.

I.E. 212. Personal Relations. Problems of handling people, management, and safety as they affect employers and employees. Students will present, analyze, and work out solutions to each of these types of problems. Three credits. First term, daily 10, including Saturday. Crawford

I.E. 216. Related Instruction. The content, methods, and special devices to be used in the teaching of related subjects in Vocational programs. Emphasis will be placed upon pertinent problems and their solutions. Students will prepare a syllabus covering the essential materials for one unit of related instruction. Three credits. First term, daily 1, including Saturday.

Technical Courses

The following courses in Aeronautics, Automotive, Metalwork, and Woodwork will be taught through the Summer Quarter.

AERONAUTICS

Aero 5, 5a. Composite Aircraft Structures. (Technical, Shop and Related). Training in design, construction, and repair of composite aircraft. Units include wood structures, steel structures, fabric work and finishing, control systems, landing gears, engine mounts, and pertinent Civil Air Regulation. This is an introduction to aircraft: a study of airfoils, types of aircraft, aircraft structures, parts and fittings, design factors, methods of fabrication, materials and processes, stress and strain. Technical, five credits, daily 1. Shop, five credits, daily 2-5. Related, five credits. Gilbert and Holden

AUTOMOTIVE

Auto 33, 33a. Commercial Refrigeration — Single Systems. (Technical, Shop, and Related.) Training in the construction, opera-
tion, servicing and repair of single system commercial refrigerators. The units of this course include commercial boxes, commercial compressors, condensers, evaporators, pressure reducing devices, and controls. The course will emphasize the calculation and selection of proper size units so that a complete commercial refrigeration system will operate correctly. Special work will be done in studying and testing commercial refrigerators in actual operation in relation to capacity, efficiency, and operating characteristics. Technical five credits, daily 1. Shop, five credits, daily 2-5. Related, five credits. Refrigeration Shop.

Auto 51. Automobile Chassis. Principles and practice in the construction, operation, and servicing of the modern automobile chassis. The units of the course include axles, wheel suspension, steering gears, frames, springs, universals, drive shafts, and brake. Open to any college student. Three credits. Lecture, T. Th. 2; Lab., T. Th. 3-5. A109.

Auto 52. Automobile Power Plants. Principles and practice in the construction, operation, and servicing of the modern automobile power plant. The units of the course include cylinder block assemblies, piston assemblies, crankshaft assemblies, valve assemblies, clutches, transmissions, overdrives; fuel, cooling and lubricating systems. Open to any college student. Three credits. Lecture, M. W. 2; Lab., M. W. 3-5.

Auto 53. Automobile Electricity. (Prerequisite, Auto 52.) Principles and practice in the construction, operation, and servicing of the electrical systems used on the modern automobile. The units to be covered include starting, generating, lighting, ignition, and special accessory systems. Three credits. Lecture T. Th. 2; Lab., T. Th. 3-5. A101.

Auto 81. Forge Practice. Training in the fundamental operations of forging such as shaping, bending, drilling, hardening, tempering, and forge welding. This course will prepare the student to do successfully the forging jobs in repair shops, construction camps, and industrial maintenance shops. This training is necessary for all acetylene and electric welders and other metal workers entering present-day industries. Open to all students in agriculture, engineering, industrial arts, and trades and industries. Five credits, daily 2-5. A103.

NOTE: Two and three credit courses in Forge Practice are scheduled each quarter. See regular College Catalog.


Auto 96. Engineers Welding Laboratory. Exploration in the modern field of welding. Students will receive basic instruction and practice in the use of Oxy-acetylene Welding and cutting, electric arc
welding, and spot welding equipment. Two credits. Time arranged. A110.

Auto 191. Electric Welding. (Prerequisite, Auto 91). Principles and practice in the use of the latest types of electric-arc welding equipment. Safety measures and methods used in arc welding of steels, cast iron, and non-ferrous metals. Three credits. Lecture T. Th. 2; Lab. T. Th. 3-5. A110.

METALWORK

M.W. 51. Machine Practice. This course gives training in the use of hand tools and in bench work, together with elementary training on the drill press, lathe, shaper, planer, and milling machine. Tools and machine parts are made that give practice in the operations that are essential in machine shop work. Included are assignments of reading on machine work subjects, and the application of mathematics to machine work. Five credits. Daily 2-5. A102.

NOTE: Two and three credit courses in Machine Practice are scheduled each quarter. See Regular College Catalog.

M.W. 91, 92, 93. Shop Drawing. The use of instruments and types of lettering on template drawings and graphic solutions; standard elements and symbols which make up mechanical drawings used in industry. The theory of shape and its representation in orthographic projections, sections, auxiliary views, revolutions, and size description. Isometric drawings and the translation of orthographic into pictorial drawings. Two credits each course. Time arranged. E307.

WOODWORK

W.W. 8. Shop Problems. This course deals with shop mathematics, placing emphasis upon the use of fractions, decimals, the metric system, percentage, ratio and proportion, showing their application in the solution of shop problems. Applied Geometry problems developed for the shop students. Areas, volumes, speed relations, cutting speeds, thread and gear calculations, flooring, roofing, board measure, the use of the steel square, estimating and cost of materials, all find application. Three credits. Daily 10. A215.

W.W. 61, 62, 63. Joinery and Millwork. These courses give the necessary basic training for students preparing to enter various fields of the woodworking trades, and also for students who wish a knowledge of woodwork for their own needs. They include a thorough study in the proper use, care and sharpening of hand tools, machine processes, safety measures, machine operation, care and repair of machines, and sharpening of machine cutters. Assigned reading and application of mathematics to woodwork problems are integral parts of the course. Problems are also assigned in the form of projects in bench work and wood turning to give practice in the fundamentals of wood construction. Five credits each, daily 2-5. A209.
NOTE: Two and three credit courses in Joinery and Millwork are scheduled each quarter. See Regular College Catalog.

NOTE: Any course listed in the Industrial Division section of the regular catalog will be taught during the Summer Quarter if five or more students register.

**Landscape Architecture**

Laval S. Morris, Associate Professor

3. Elements of Landscape Architecture. Principles of design as applied to different types of landscape projects. The planning of home grounds emphasized. Course designed for women as well as men and is of particular value to those wanting a general knowledge of landscape architecture. Field trips required. Three credits. Daily 1, plus one hour per week.

**Library Science**

Edith Rich, Associate Librarian

102L. First Quarter Cataloging and Classification. Classification of books according to the Dewey decimal system and cataloging instruction adapted primarily to use of school and public libraries. Two and one-half credits. First session, Daily 10. N 108.

150L. School Library Administration. The theory of school library work with special emphasis on demonstration and practical application. Two and one-half credits. Daily 2, N108.

205L. Reading and Conference. Experienced librarians who are advanced students may work on special projects under supervision of the instructor. Time and credit to be arranged. First session, N108.

**Mathematics**

V. H. Tingey, Professor; Marion T. Bird, Associate Professor; Ralph L. Calvert, Assistant Professor.

Mathematics A. This is a preparatory course for students deficient in high school algebra or who wish a review of elementary algebra. No credit. First session, daily 9, M351.

34. Mathematics. Prerequisite to all college mathematics. Three credits. First session, daily 9 and one hour arranged, M359.


50. Astronomy. This course is non-mathematical. It is given to acquaint the student with the relation of the earth to other members of the solar system and the relation of the solar system to the sidereal universe. Three credits. Daily 10, M359.

Note: Upon request of ten students, any course listed in the regular catalog will be given.

Music

N. W. Christiansen, Professor; W. H. Manning, Associate Professor

11-111. Harmony. Beginning students register for 11; those who have had an elementary course, register for 111. Attention will be given to individual needs. Two and one-half credits. First session, daily 10, M252A. Christiansen

27S. Summer School Chorus. Open to all students of summer school. A concert program will be prepared for the closing week of the session. One and one-half credits. First session, MWF 12, Auditorium. Manning

40-140. The Art of Enjoying Music. A general introductory course of wide popular appeal. Previous music training or study not required. Two and one-half credits. First session, daily 9, M252A. Christiansen

53S-153S. Class Voice Training Problems. Training of adult voices, care of children's voices, cause and correction of vocal faults, breath control, correction of monotones and ear training for children. One laboratory each week will be devoted to working with children's voices. Two and one-half credits. First session, daily 2, M53. Christiansen

121A. Band and Orchestra Instruments. A study of string and brass instruments and the essential points in teaching them. No previous experience required. One and one-fourth credits. First three weeks, daily 1, M252A. Christiansen

121b. Band and Orchestra Instruments. A study of woodwind and percussion instruments and the essential points in teaching them. No previous experience required. One and one-fourth credits. Second three weeks, daily 1, M252A. Christiansen

130A Teaching Music in Elementary Grades. Materials and procedures that will build the proper attitudes and skills in the field of music. The interpretation and application of the Utah course of study in teaching Music. The use of recordings for aiding teachers who have not the help of music specialists. Two and one-half credits. First session, daily 8, M53. Manning

Private Instruction Courses

155. Voice Instruction. For beginners, advanced students and teachers of voice. Work in tone production, diction, and repertoire. One credit for six lessons; two credits for twelve lessons. First session. Arranged. Manning

160. Piano Instruction. For beginners, advanced students, and teachers of piano. Appointments and fees to be arranged with
the teacher. One credit for six lessons; two credits for twelve lessons. First session. Arranged.

165 Woodwind Instruments. For beginners, advanced students, and teachers of brass and woodwind instruments. Appointments and fees to be arranged with the teacher. One credit for six lessons; two credits for twelve lessons. First session. Arranged. Christiansen

167. Violin Instruction. For Beginners, advanced students and teachers of violin. Appointments and fees to be arranged with the teacher. One credit for six lessons; two credits for twelve lessons. Arranged.

Physical Education

H. B. Hunsaker, Professor; Mildred Thomas, Vaughn Hall, Instructors

25. Tennis. Men and women. One credit. Section 1, daily 10; Section 2, daily 1. Tennis Courts. Thomas

54. Elementary Swimming. Women. One credit. Section 1, daily 12. Thomas

54 Elementary Swimming. Men. One credit. Section 2, daily 3. Staff


73. Golf. Men and women. One credit. (see Phy. Edu. Dept.) Staff

85. Intramural Sports. A course for men and women physical education teachers desiring to study organization and supervision of junior and senior high school intramural programs. Two and one-half credits. Daily 8. Hunsaker

89. Intramural Sports. Teams will be organized. Softball, badminton, tennis and horseshoes tournaments will be conducted. Students registering for this course will be placed on teams for tournament participation. One credit. Daily 12. Hall

163. Recreative Games. Men and women. The study and practice of leisure-time activities. Clock golf, badminton, shuffleboard, croquet, archery, volleyball, table tennis will be presented, and an intramural program planned. Two and one-half credits. Daily at 2. Gym 27. Hall


241. Modern Dance. Designed to develop skills in the use of body movement, rhythm, music, improvisation, and dance composition. A study of the principles and methods of teaching modern dance, and
the present trend of the Modern dance in Education and American culture. Men and women. Two and one-half credits. Daily. Thomas

258. Current Techniques of Physical Education. Designed as a refresher course for teachers of physical education. Teaching techniques will be offered in Calisthenics, heavy apparatus, tumbling, stunts, wrestling and boxing, softball, track and field, swimming, and elementary diving. Men. Two and one-half credits. Daily at 9. G 27. Hunsaker

284. Social Recreation. Deals with the principles and techniques of leadership in recreation activities for the home, school, and community; methods of promoting, organizing, and directing social games, social mixers, community outings, hikes, picnics, and parties. Students will be offered opportunities for practical experiences in leading various recreation activities. Men and women. Two and one-half credits. Men's Gym 7:30-9:30 p. m. M.W.F. Hunsaker, Thomas, Hall


All of the above except 176, Camping and Hiking, are scheduled for the first session.

COACHING SCHOOL

E. L. Romney, Director of Athletics; Visiting Faculty, Frank Leahy, Football Coach, Notre Dame University; Henry Iba, Basketball Coach, Oklahoma A. & M.

120. Methods of Coaching for Men. A theoretical and practical consideration of training and coaching men's athletic teams.

120B. Basketball Coaching. June 10 to 14 inclusive. Daily 2:30-5:00 p. m. One credit. Iba

120F Football Coaching. June 10 to 14 inclusive. Daily 7:30-11:00 a. m. One credit. Leahy

Physiology

William A. Scholes, Instructor

4 General Physiology. For the student who desires a survey of physiology and who is not planning on advanced intensive study in the field. It deals with the functioning of the human body with emphasis upon broad, general biological principles. Five credits. First Session, daily 8 to 10. H212. Scholes.

114. The Elementary School Health Program. This course is designed to meet the practical needs in health and health training
in the elementary school. It will include methods and materials in health training and instruction. (Meets state Elementary School certification requirements in health education.) Two and one-half credits. First Session, daily 10. H212.

**Physics**

Willard Gardner, Professor

3. **Introductory Physics.** (Credit in this course will not be allowed students who have previous college credit in Physics.) An essentially non-mathematical lecture demonstration course designed for students not majoring in the Sciences, Engineering, Agriculture, or Forestry. Students who have had high school physics should elect Physics 6 to 7. Five credits. Both Sessions, daily 10, W106.

21. **Electricity and Magnetism.** Designed for science majors, engineers, and students preparing for medicine. Recommended for majors in Agriculture who intend to do graduate work. Prerequisite: high school physics and a working knowledge of trigonometry. Five credits. Both Sessions, M.W.F. 7, T.Th. 1-3, W106.

**Political Science**

M. R. Merrill, F. D. Daines, Professors

Visiting Faculty Member: Alexis Kerensky

10. **American Government.** All the time in this course will be spent in an analysis of the national government. Two and one-half credits. First session, daily. 9. M357.

110. **Post-War Problems and International Relations.** Particular attention will be given to the various proposals for organization in the effort to promote peace. Some time will be given to other strains and pressures resulting from the war. Two and one-half credits. First session, daily. 1. M357.

124. **Public Opinion.** This course will comprise a study of the sources of public opinion, methods used and accomplishments achieved. Two and one-half credits. First session, daily 10. M357.

195. **International Problems.** Discussion of the basic forces in international affairs with special attention directed toward the major events of the present. Two and one-half credits. First session. M.W.F. 2-4. M357.

**Poultry Husbandry**

Byron Alder, Professor; C. I. Draper, Associate Professor

1-101. **General Poultry.** A study of breeds, judging, incubation, brooding, feeding, and marketing. Designed to meet the needs of the students wishing a general knowledge of the poultry industry and problems of production, and a foundation upon which other courses are built. Two and one-half credits. First session, daily 8, L305.
2-202. General Poultry Laboratory. Covers the same work as Poultry 1 with practical laboratory problems. One credit. First session, M.W. 1-4, L303. Draper

107. Poultry Feeds and Feeding. Nutrition problems, the feeds and methods of feeding. Developing rations for special needs and home mixing. Prerequisite: Poultry 1. Two and one-half credits. First session, daily 9, L305. Draper

Psychology
Arden Frandsen, Professor

110. Child Psychology. A study of the roles of maturation, learning, and environmental conditions in the motor, mental, social and emotional development of children from birth to adolescence. Generalisations with respect to individual differences, emotions, how children learn, observe, and think will be applied to understanding and guiding children's development and behavior in home, school, and community. Two and one-half credits. First session, daily 8, Main 279. Frandsen

112. Educational Psychology of the Elementary School Curriculum. A study from the point of view of psychological theory and research, of the aims, selection and sequence of content, methods of teaching, provisions for individual differences, and measurement of outcomes in the elementary school curriculum. Two and one-half credits. First session, daily 10, Main 279. Frandsen

200. Advanced Educational Psychology. Applied especially to teaching and guidance in high schools. The contributions of modern psychological theory and research to the following practical problems of teaching and guidance will be studied: motivation, conditions for effective learning, improvement of study habits, uses of tests in guidance and in measurement of achievement, development and problems in social behavior, personality problems. Concrete applications in the school will be suggested and problems for master's degree theses will be indicated. (The course is intended for teachers with some experience; but it may be also used to meet teacher-certification requirements.) Two and one-half credits. First session, daily 1, Main 279. Frandsen

102b. Applications of Statistics to Education and Psychology. An elementary study of the statistical procedures used in handling test scores in the schools and of the concepts needed to read current educational and psychological literature. Two and one-half credits. First session, daily 2, Main 279. Frandsen

Secretarial Science
V. D. Gardner, Professor; L. Mark Neuberger, Assistant Professor; Clara West, Instructor.

30. Business Communications. Fundamental principles of business letter writing will be studied. Practice will be given in writing sales, order, collection, adjustment, and application letters. A review
of correct English usage in business writing is included. Two and one-half credits. Second session, daily, 10, M305.

69. Transcription Practice. Intended to develop skill and speed in the transcription of letters from shorthand notes. Students must be able to take dictation at not less than sixty words a minute and type at least forty words a minute. One credit. First session, daily 9, M304.

80. Intermediate Shorthand. Designed for students who have had one year of shorthand. The course includes a review of the theory of Gregg shorthand with the development of new vocabulary. Special attention will be given to the attainment of speed in taking dictation. Two and one-half credits. First session, daily 8, M305.

Students wishing to make the most possible progress in stenographic skill should include both Intermediate Shorthand 80 and Transcription Practice 69 in their program.

97. Office Appliances. Designed to give students a knowledge of the operation of two machines widely used in the modern business office. The following machines will be studied:

Burroughs Calculating Machine. Application of the calculating machine to various business computations such as addition, multiplication, subtraction, division accumulation, fixed decimal point work, percentages, chain discounts, prorating, decimal equivalents, constants, and inventories.

Burroughs Commercial and Bank Posting Machine. Instruction and practice in the application of the posting machine to bookkeeping methods in commercial business houses and banks.

Two and one-half credits. First session, daily 10, M303.

86. First Quarter Typewriting. For students who have had previous training in typewriting. This course is designed to develop correct technique in: position, syllable, word and sentence drills; stroke, rhythm, number; shifting drills; master of keyboard; introduction of "Time" writing; finger exercises; analysis of errors. Special attention will be given to the development of typewriting for personal use. One credit. First session, daily 1, M304.

87. Second Quarter Typewriting. Continuation of 86. Speed-building practices and application of typewriting skill to business problems including letter writing and tabulation. One credit. Second session, daily 9, M304.

*179. Methods of Teaching Typewriting. A study of recent developments and practices in the teaching of typewriting. The analysis of objectives, laws of learning, organization of materials, texts, standards of achievements, speed and accuracy will be considered. A

*Either 179 or 180 (but not both) may be used as an elective in Education.
course for those preparing to teach typewriting and for those engaged in teaching, who wish to render their teaching more effective. Two and one-half credits. First session, daily 8, M304. Neuberger

189. Methods of Teaching Shorthand. A study of the newest methods and trends in the teaching of shorthand and transcription classes. Consult instructor before registering. Two and one-half credits. First session, daily 10, M305. Doty

Smith-Hughes Program

230. Economic Problems in Agriculture. A course designed to consider some economic problems confronting agriculture and sources of economic information. Agricultural Economics. Two credits. June 17 to 28, daily 1:30. Thomas and Blanch

150. Planting Design. Identification of plants, pictorial compositions of plants, pictorial compositions and planting plans developed together. This course is designed to develop the student's ability to visualize the finished landscape. Landscape Architecture. Two credits. June 17 to 28. Daily 2. Morris

180. Animal Sanitation and Disease Control. Diseases of dairy cattle, calves and poultry will be considered together with their prevention and control. Class limited to 15. Veterinary Science. Two credits. June 17 to 28, daily 1:30. Staff

Sociology

Joseph A. Geddes, Professor; Joseph N. Symons, Associate Professor.

Visiting Faculty

Ernest G. Osborne.

70. Principles of Sociology. The foundation 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. Two and one-half credits. First session, daily 9, M206. Symons.

Two and one-half credits. Second session, daily 9, M206. Geddes

170. Juvenile Delinquency. 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. Two and one-half credits. First session, daily 7, M206. Symons

201. Research in Sociology. For advanced students only. A project is organized and field work is carried out under supervision. Original studies are made. Time and credit arranged. First session—Symons, Second session—Geddes.

**Speech**

Chester J. Myers, Professor

12-112. **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 training and to all those who are majoring in speech. Special fee. Time and credit arranged. M201.

18s. **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, adoption of material, and actual practice in story telling. Consideration is given to stories of western pioneer life. The work is designed to meet the needs of student, teacher, recreational leader, church activity leader, librarian, and parent. Two and one-half credits. First session, daily 8, M205.

24s-124s. **Oral Interpretation.** Various literary forms are studied for platform presentation... The mastering of significant selections from great masters. Reading from manuscript and from memory. Two and one-half credits. First session, daily 9, M205.

107s. **Speech Hygiene.** The techniques of normal speech and the development of normal and abnormal speech. Major consideration will be given to the prevention and correction of speech abnormalities. This course is primarily designed to fulfill the speech hygiene needs of prospective elementary school teachers. It is recommended for all secondary teachers. Two and one-half credits. First session, daily 7, M205.

183. **Problems in Speech.** Especially selected work, individually assigned, handled, and directed in consultation with the student. Special speech problems of merit and of mutual interest to student and instructor are investigated and reported upon in this course. Consult the instructor for permission to register. First session Credit and time arranged, M201.

**Zoology**

D. M. Hammond, Professor; J. S. Stanford, Associate Professor

3. **Invertebrate Zoology.** This course is an introduction to the invertebrate animals. Classification and relationships, structural characters, development and functions are emphasized. Some attention is also given to parasitism. This course is well adapted for premedical

118. Vertebrate Embryology. An introduction to the principles of development of the vertebrates, including the formation of gamets, fertilization, cleavage, gastrulation, formation of the germ layers, establishment of body form, and organogenesis. In the laboratory the development of the frog, chick and pig is studied. Required of premedical students. Prerequisite Zoo. 4 or equivalent. Five credits. Both Sessions. M.W.F. 9, M.W. 1-4. M227. Hammond