Summer 1949

General Catalogue 1949, Summer

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SUMMER SCHOOL

ANNOUNCEMENT FOR 1949

June 6 — August 19

FIRST SESSION
June 6 — July 15

SECOND SESSION
July 18 — August 19

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When You Come to Register
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Placer Jr. College

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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 many different groups of people. There are always some 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 course, 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, 1949, there will be many regular students. Returning service men and women feel the necessity of speeding up 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 6 to August 19, 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 begin and continue to completion in the second session.

Teachers will be returning in greater numbers this year. There is the pressure for degrees and further training stimulated by generally adopted salary schedules which give substantial monetary recognition to additional course work. Others find it necessary to complete certification requirements.

SECOND SESSION

Regularly scheduled second session classes will begin Monday, July 18, and continue for five weeks, to August 19. The same rules as apply in the first session limit the amount of credit a student may take. Any regular college course which is not definitely scheduled for the second session in the catalog or the schedule bulletin 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 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 session in which the work is done. Credits allowed and fees charged for this type of study will depend on the time spent and the work accomplished.

REGISTRATION

Registration for the Summer Quarter will take place Monday, June 6, in the Main Reading Room of the Library, beginning at 8 a.m. and continuing to 3 p.m. 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.

There will be no special registration period for the second session. New students or students making changes or additions can complete the registration process any time during the first week of the second session.

The student load during the Summer Quarter is determined by the Deans of the various Schools. Seven and one-half hours per session are considered a normal load.

Scheduled classes, whether first or second session, may not be given if fewer than eight students register.

All graduate students must register with the Dean of the Graduate School, Dr. B. L. Richards. Dean Richards will be in the Main Reading Room of the library on Monday, June 6; thereafter, at his office in the Plant Industry building.

Summer School Fees for 1949

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Registration for Summer Quarter</td>
<td>$15.00</td>
</tr>
<tr>
<td>Tuition for Summer Quarter</td>
<td>20.00</td>
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<tr>
<td>Registration for either session</td>
<td>10.00</td>
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<tr>
<td>Tuition for either session</td>
<td>10.00</td>
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<tr>
<td>Materials and Laboratory Fee Summer Quarter</td>
<td>3.00</td>
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<tr>
<td>Either session</td>
<td>1.50</td>
</tr>
<tr>
<td>Registration for three credits or less</td>
<td>10.00</td>
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<tr>
<td>Registration for five credits or less</td>
<td>15.00</td>
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<tr>
<td>Coaching School fee</td>
<td>10.00</td>
</tr>
<tr>
<td>(Students who pay the regular $35 or $20 may attend the Coaching School without additional charge.)</td>
<td></td>
</tr>
<tr>
<td>Auditor's fee (per course)</td>
<td>3.00</td>
</tr>
<tr>
<td>(Does not apply to regularly registered students who may secure visitor's permits from Registrar's Office.)</td>
<td></td>
</tr>
<tr>
<td>Camping Trip Packing and Equipment Rental</td>
<td>16.00</td>
</tr>
<tr>
<td>Transportation</td>
<td>7.00</td>
</tr>
<tr>
<td>Aeronautics—37, 137, 138, 139—$10.00 per clock hour for dual instruction and $8.00 per clock hour for solo instruction.</td>
<td></td>
</tr>
</tbody>
</table>
Forestry Camp fees
Registration and Tuition ........................................ 35.00
Laboratory fee .................................................. 25.00
(Board provided on cost basis)
Library fee for Children’s Literature ............................ 1.50
Music Clinic (non-credit) ......................................... 5.00
Physical Education 73 (golf) fee ................................. 3.00

Special Fee:
Student Body Activity Fee ....................... $3.00

PRIVATE INSTRUCTORS IN SPEECH

Chester J. Myers $17.50 per credit hour either session
Rex E. Robinson 17.50 per credit hour either session
E. LeRoi Jones 17.50 per credit hour either session
Gwendella Thornley 17.50 per credit hour either session

Each session consists of 10 lessons per credit hour

THE GRADUATE SCHOOL
B. L. Richards, Dean

Objectives and Organization
The Graduate School is organized to serve the educational needs of men and women who have completed their undergraduate work and who desire to qualify themselves for professional services or who may wish to identify themselves with a program of higher education leading to a teaching or research career on the college or university level. In all advanced work, effort is made to bring the student into direct contact with the basic
Forestry Camp fees

- Registration and Tuition: $35.00
- Laboratory fee: $25.00 (Board provided on cost basis)

Library fee for Children’s Literature: $1.50

Music Clinic (non-credit): $5.00

Physical Education 73 (golf) fee: $3.00

INSTRUCTORS IN MUSIC FOR SUMMER SESSIONS

<table>
<thead>
<tr>
<th>Name</th>
<th>Fee For 1 Credit Hr.</th>
<th>Fee For 1 Credit Hr.</th>
<th>8 Week Credit Hr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. W. Christiansen</td>
<td>$21.00</td>
<td>$17.50</td>
<td>$50.00</td>
</tr>
<tr>
<td>Walter Welti</td>
<td>21.00</td>
<td>17.50</td>
<td>50.00</td>
</tr>
<tr>
<td>Roy Harris</td>
<td>18.00</td>
<td>15.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Johana Harris</td>
<td>18.00</td>
<td>15.00</td>
<td>50.00</td>
</tr>
<tr>
<td>George Pahtz</td>
<td>18.00</td>
<td>15.00</td>
<td>50.00</td>
</tr>
<tr>
<td>James Barrett</td>
<td>12.00</td>
<td>10.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Mrs. N. W. Christiansen</td>
<td>18.00</td>
<td>15.00</td>
<td>50.00</td>
</tr>
<tr>
<td>S. E. Clark</td>
<td>18.00</td>
<td>15.00</td>
<td>50.00</td>
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<td>Mrs. Maxine Greenwood</td>
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PRIVATE INSTRUCTORS IN SPEECH

- Chester J. Myers: $17.50 per credit hour either session
- Rex E. Robinson: 17.50 per credit hour either session
- E. LeRoi Jones: 17.50 per credit hour either session
- Gwendella Thornley: 17.50 per credit hour either session

Each session consists of 10 lessons per credit hour

THE GRADUATE SCHOOL

B. L. Richards, Dean

Objectives and Organization

The Graduate School is organized to serve the educational needs of men and women who have completed their undergraduate work and who desire to qualify themselves for professional services or who may wish to identify themselves with a program of higher education leading to a teaching or research career on the college or university level. In all advanced work, effort is made to bring the student into direct contact with the basic...
research and teaching activities in his chosen field to the end that he may obtain a comprehensive view of a specialized field of knowledge together with the training essential for effective teaching or independent investigation. In graduate work the aim is to achieve a high standard of scholarship rather than to fulfill routine course requirements.

Departments that offer graduate work in related fields or in natural educational areas cooperate (1) to determine the needs for graduate work within the educational areas; (2) to provide fundamental and basic course work or training within the areas; (3) to foster the spirit of scholarship and research and to determine standards of achievement characteristic of the areas involved; and (4) to promote standards and give institutional character to graduate work beyond that which is made possible by independent departmental direction.

Graduate work is directed by a Graduate Council, which consists of the Dean of the Graduate School and seven members of the faculty appointed by the President. The scope of the Graduate School covers all graduate study in the college.

Admission to the Graduate School

A graduate with a Bachelor's degree from Utah State Agricultural College or from any other accredited college or university may be admitted to the Graduate School (see No. 3 on page 16). Seniors in the College, who have an average of "B" or better in all their courses in their Junior and Senior year and who at the beginning of any quarter lack not more than five quarter credits to complete all requirements for the Bachelor's degree, may be allowed to register for a limited amount of graduate work. All courses so selected for graduate credit must be approved in advance by the Head of the Department and by the Dean of the Graduate School. In no case, will graduate credit be allowed if the student's total credit for which he is registered during the quarter exceed 16 credits.

Students are admitted to graduate studies in social work who have taken a Bachelor's degree with: (1) a major in social work; or (2) a major in sociology, economics, political science or psychology and have a total of not less than 36 credits in these four departments; or (3) a major in child development, physical education, public health or education and who also have 25 credits in one of the four social sciences above listed with a fair balance among them. Students over 35 are admitted only by special arrangement.

Admission to the Graduate School does not imply admission to candidacy for an advanced degree. Such admission is granted by the Dean of the Graduate School only on recommendation of the Head of the Department and of a special examining and advisory committee as explained below. All students registering in the Graduate School must have their registration card signed by the Dean of the Graduate School.

Students who wish to register in the Graduate School should submit their application at least one month before the opening of the quarter in which they wish to matriculate. In all cases, students who are not graduates from the Utah State Agricultural College must provide a certificate of graduation and a transcript.
of credit taken in other institutions. If his transcript of credit does not accompany the application, a date should be specified at which transcript will be provided. Blanks for making application can be had from the Registrar's office or from the office of the Graduate School.

MASTER'S DEGREE

All approved graduate courses in the College lead to the Master of Science Degree. Majors for the Master of Science Degree are offered in all the basic biological, physical, and social sciences, and in the various educational, industrial, and professional areas as follows: Animal Industry, Crop and Soil Science, Education and Psychology, Engineering and Technology, Forest, Range, and Wildlife Management, Home Economics, Irrigation and Drainage, and Microbiology. The specific departments or groups of departments (over 35 in all) in which the Master of Science Degree is given, together with the course service provided by the departments, may be determined by consulting the departmental statements provided in the catalog under the various undergraduate schools of the College.

Requirements and Procedures for Obtaining a Master of Science Degree

1. Acceptance for Registration as a Candidate for a Master's Degree. A student who has been registered in the Graduate School for one quarter and who has satisfied the Department in which he proposes to do his graduate work may be admitted to candidacy for a Master of Science degree upon the written recommendations of the Head of his Department and of a special examining and advisory committee appointed by the Dean of the Graduate School. All students working to become candidates for a Master of Science Degree will apply directly to the Graduate Dean. Application blanks are available at the office of the Graduate School.

2. Major Professor and Advisory Committee. The applicant will be assigned by the Dean of the Graduate School to a major professor who in all cases will be a member of the teaching staff of the Department in which the student has chosen to do his major work and who will be chosen in consultation with the student and the Head of the Department involved. The Major Professor will advise the student in the planning and the prosecution of his course of study and in his research work and will function as chairman of the student's Advisory and Examining Committee. The Major professor will be aided by an Examining and Advisory Committee consisting of himself as chairman and at least three other members chosen from the faculty of the Major Department or closely related Departments. A fifth member, completing the committee personnel, may be chosen from the faculty of the English Department. The committee is responsible for all examinations dealing with the candidate's work.

In instances where the thesis chosen by the applicant is based on research supported by the Experiment Station or by Federal or
other outside agencies, the applicant with the advice of the Major Professor and the Head of the Department may be assigned to a special Thesis Director. This thesis director may not be a member of the teaching staff or of the Major Department in which the student is majoring. The Thesis Director will become a member of the student's committee, directly responsible for the student's research and thesis, and will function in this connection with the Major Professor in directing the student's educational program. The Dean of the Graduate School and the Head of the Department in which the student is specializing are ex-official members of all committees and advisory groups.

3. Qualifying Examination and General Requirements. By examination of the records of the student's scholastic work and by special examination both oral and written, the advisory and examining committee shall satisfy itself as to the adequacy of the student's preparation and advisability of his pursuing Graduate work.

No student, however, will be admitted to candidacy until he has completed at least one quarter's work in residence with an average of "B" or better, and who has not received an average of "B" grade in his Junior and Senior years of undergraduate studies. Exceptions may be made where it is shown by the head of the Department that the student has special aptitudes which are not measured by his scholastic record.

4. Program of Study. If the Advisory Committee is convinced that the preparation and ability of the student are such as to give reasonable assurance of success in advanced studies, then, with him, the committee under the direction of the Major Professor shall plan a program of study which will meet all requirements for the Master of Science degree. This program must include in general:

(a) At least three quarters of residence. Four summer sessions with residence research culminating in a thesis may be accepted as fulfilling residence requirements. Under no condition will extension credit or credit transferred from other institutions be permitted to shorten the period of residence.

(b) At least 45 credits in courses numbered 100 or over in addition to any lower or upper division courses which may be necessary to strengthen the undergraduate preparation in his major or minor subjects.

(c) At least ten credits conclusive of work connected with the thesis in courses numbered 200 or above.

(d) A thesis with 9 to 15 credits. All courses allowed toward graduation shall be in the major department or closely related fields and must be completed with a grade of "B" or above. Under no condition will more than 16 credits be allowed in any one quarter, with 12 hours as a maximum for students on a one-half time basis.

Any modification of these requirements requiring action of the Dean of the Graduate School will be considered only if they are submitted by the chairman of the applicant's Advisory Committee and as part of the student's entire proposed program of study.

The candidate will submit his proposed programs of course study and research and make application to the Dean of Graduate School on blanks provided at the office of the Graduate School. This application must be accompanied by a critical statement of
the student's thesis and by a general plan of his research procedure.

5. Time Limitation for Application. Application for admittance to candidacy must be made before the student has completed more than one-third of the credits allowed toward his Master's Degree. The application should be submitted by the end of the first six weeks of the quarter preceding that in which he completes his work and is to be graduated. In no case will application be honored later than the last week of this same quarter.

Notice of admission to candidacy, together with a letter of instruction, concerning the thesis form, and final examination, will be sent to the candidate by the Dean. A form on which to make application for graduation will also be enclosed with the letter. This form calls for the payment of a fee of $10.00 for official checking and binding two copies of the thesis.

Thesis

Each candidate for a Master of Science Degree must present a thesis on a topic within the field of his major subject which must represent from 9 to 15 hours of the credit presented for his degree. In all cases the thesis must represent a contribution to the field of knowledge based on the student's own research or a treatment and presentation of known subject matter from a new point of view. After tentative approval by the Department, the thesis must be typewritten in standard form and submitted to the student's Examining Committee at least two weeks before the date of his final examination. A typewritten and carbon copy of the final draft properly signed by the Major Professor, the Head of the Department, a representative for the Library, and the Dean of the Graduate School must be submitted to the Librarian of the College to be deposited in the Library of the College one week prior to date of graduation. If the student is to be graduated at the June commencement, the thesis must be submitted in its final form by May 20 preceding commencement.

Examination

Each candidate for a Master of Science Degree will be required to pass a comprehensive final examination on the subjects of his Graduate study and on his thesis. This examination may be oral or written as his committee may decide and is open to all faculty members and officials of the Graduate School. Arrangements for the time and place of the examination will be made by the Dean of the Graduate School upon the recommendation of the Major Professor or Head of the Department. A member of the Advisory Committee, other than the Major Professor or a representative of the Graduate Council, will be appointed to act as chairman of the examination and will submit to the Graduate Council the results of the examination. For candidates who are to receive their degree at the June commencement the date of the final examination must not be later than April 3. When the examination is passed and the thesis submitted and deposited with the Librarian, the Dean of the Graduate School will present the name of the candidate to the College faculty for approval. He will also instruct the candidate regarding attendance at commencement and on the necessary matters relating to his graduation.
Time Limit for Completing Work for a Master's Degree

Work for a Master of Science Degree must be completed within six years from the date of matriculation as a regular student in the Graduate School if the work is done wholly or in part during the regular academic year. If the work is done entirely in summer sessions, a maximum of seven years is allowed. Older work may be revalidated by examination.

Extension Courses

Credit toward a Master of Science Degree will not be granted for correspondence study. The amount of extension credit to be allowed will be determined in consideration of the student's entire course program. In no case will more than 9 quarter hours be recognized as counting toward a degree. All extension courses for which graduate credit is sought must be regularly registered for through the Graduate School and must have the sanction of the Head of the Department in which the student is doing his Graduate work.

All students who satisfy the requirements for graduation by the close of the Summer Quarter are listed with the class of the following year and will receive their public graduation at the following Commencement. The graduation of such students, however, will be certified by proper authorities of the College as soon as their work is completed.

MUSIC FESTIVAL

June 13—August 5

Superior and ambitious music students will welcome the opportunity for advanced study offered by the Music Festival program which begins Monday, June 13 and continues to Friday, August 5. Directed by Dr. Roy Harris, head of the department of Music Composition at the College and composer in residence, the Festival will bring certain of the greatest artists in the world to the campus for the full period of eight weeks.

Visiting faculty members who will both teach and perform include Joseph Gingold, Concertmaster of the Cleveland Symphony; James Barrett, Assistant Concertmaster of the Detroit Symphony Orchestra; Milton Preves, principal violist of the Chicago Symphony Orchestra; and Leonard Rose, head of the Violoncello section of the New York Philharmonic Orchestra. Also included with these artists in the faculty will be Johana Harris, distinguished concert pianist and head of the piano department at the College. In addition to administrative duties, Dr. Harris will direct a string sinfonia composed of students and faculty.

During the eight-week period ten concerts will be given by the visiting artists and a number of broadcasts including at least one throughout the western hemisphere are scheduled. Students who register will receive both private and class instruction from the visiting faculty. Special entertainment features including a four-day tour of Yellowstone Park for all participants have been planned. All accommodations, both housing and meals, are available for students who require these services.
Performances

Logan Tabernacle 8:30 p.m.

Series A
SOLO CONCERTS

Piano ........................................ Johana Harris .......................... June 15
Violin and Piano .......................... Joseph Gingold and
........................................ Johana Harris .......................... June 22
Violin and Piano .......................... Milton Preves and
........................................ Johana Harris .......................... June 29
Viola and Piano ........................... James Barrett and
........................................ Johana Harris .......................... July 6
Violoncello and Piano ................. Leonard Rose and
........................................ Johana Harris .......................... July 13

Series B
CHAMBER MUSIC CONCERTS

Piano Trio ................................. Johana Harris, Joseph
........................................ Gingold, Leonard Rose .............. July 20
String Quartet ............................ Gingold, Barrett,
........................................ Preves, Rose ............................ July 26
String Sinfonia ........................... Roy Harris, Conductor ............ July 28
Piano Quintet ............................. Harris, Gingold, Barrett,
........................................ Preves, Rose ............................ August 2
String Sinfonia ........................... Roy Harris, Conductor ............ August 4

Student Concerts—Little Theatre in Main Building—8 p.m.
July 18, 19, 21, 22, and 23

DISTRIBUTIVE EDUCATION

An extensive course of training for teachers and prospective teachers of Distributive Education will be offered during the first three weeks, June 6 to June 24. This work is offered in cooperation with the State Department of Education. (See Dept. of Business Adm. for course offerings).

ENGINEERING SUMMER SURVEYING CAMP

The summer surveying camp, C. E. 87, at Utah State Agricultural College, is conducted each year during the first summer session. The offerings include: Highway curves and earthwork, geodetic procedure in layout and field establishment of triangulation nets methods of precise chaining and leveling, triangulation and closing of the quadrangle. Special problems in topographic mapping, and location of canals and highways, follow the general phases to complete the course. The camp is conducted from the Utah State Agricultural College Campus, which makes it possible for students to live at home or on the campus, and affords the facili-
ties of the Engineering School for lectures, drafting rooms, instrument storage and office space. The field laboratory consists of a large area to the east of the campus on the Provo bench of old Lake Bonneville, and the steep and rugged west slope of the Wasatch Range. The area extends east to include mountain peaks which afford excellent triangulation station locations, and north and south a distance of some two and one-half miles each side of beautiful Logan canyon. In this outdoor laboratory is included terrain which is ideal for all types of surveying work, including hydrographic work on Logan river and reservoir. Two hydro-electric plants are within the area; one high head type and one low head type with a combination hollow buttress dam and storage reservoir adjacent to it. Sheer canyon walls, steep slopes, rolling hills, and flat bench lands; all within a three mile radius of the Utah State Agricultural College Campus make this an ideal outdoor laboratory, which together with a marvelous summer climate, goes far to make this an outstanding surveying camp.

NURSERY SCHOOL

The College Nursery School will operate for the benefit of College students who bring their children and desire a means of caring for them during school hours. Enrollment, limited to 15 children, will be made up of 2, 3, and 4-year old children. Those students enrolled in Child Development classes will use the Nursery School as a laboratory for observing and working with preschool children.

School Session: Monday through Friday—8:00 to 11:50 a.m.
First Session only
Tuition: $5 for 6 weeks
Admission: by application only
Application must be made in writing on or before registration day. Children will be accepted in order of application.

CLASS SCHEDULE

Some 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, etc. The 11 a.m. hour is kept open as a lecture period during the first session and no classes are scheduled at that hour. Afternoon classes begin at 1 p.m. and continue on the hour until 5 p.m. During the second session meeting hours of classes may be arranged by agreement of students and teachers.

MUSIC CLINIC

The Summer School sponsored a music clinic in band and orchestra for several years immediately preceding the war. This program has been revived and this year will include chorus as well as band and orchestra. The clinic will be conducted Monday, June 6, to Friday, June 17, inclusive. It is expected to appeal to all music directors of the area and to high school
and junior high school students who wish to sing or play under
the direction of three of the most eminent men of the country.

Dr. Ralph E. Rush of the School of Music, University of
Southern California will direct the band. Dr. Norval Church
of Columbia University will direct the orchestra. Dr. William
E. Knuth of San Francisco State College will direct the chorus.

Housing and board will be provided at cost for students who
come from a distance: the male students will be housed in one resi-
dence hall and the female students at another. Students can par-
ticipate in one or more of the programs. In addition, numerous
activities are planned for the students, permitting them to enjoy
a vacation and at the same time improve their musical per-
formances. Students (high school and junior high) must express
intention to register and make a deposit covering part of the
board and room cost. Such students must also be recommended
by their music directors.

**DRIVERS' TRAINING INSTITUTE**

The Drivers' Training Institute will be conducted for one
week, May 30 to June 3. The course is designed to train the
men and women who will teach drivers' programs in the high
schools of Utah and surrounding states. The course is approved
by the American Automobile Association and all of the safety
organizations of the country. Registrants for the course must
make application prior to May 25. This program has been
developed because of the increased emphasis on drivers' train-
ing programs in the secondary schools. The State Department
of Education is cooperating with the College in the Institute.

**FAMILY LIFE INSTITUTE**

The annual Family Life Institute is scheduled for Monday,
Tuesday, and Wednesday morning, June 20, 21, and 22. Dr.
Herbert Modlin, psychiatrist at Winter Veterans' Hospital, Topeka,
Kansas, will be the leader. No charge is made for the Institute,
and both students and people of surrounding communities are
invited to participate.

**SMITH-HUGHES TEACHERS**

The annual conference for Smith-Hughes teachers will be held
on the campus during the week of June 13. An intensive program
of course work, lectures, and demonstrations is planned.

**SCOUT WATER SAFETY PROGRAM**

This nationally known program conducted by the Boy Scouts
of America will be held on the campus during the week of June
5-11. Leaders from National Headquarters, Boy Scouts of America
will direct the work assisted by the College staff of the department
of physical education.
GIRLS’ STATE

This annual conference is under the direction of the state organization of the American Legion Auxiliary. It will be held on the campus during the week of June 27. Faculty members will give lectures and conduct course work.

SCHOOL LUNCH PROGRAM

An intensive training for the supervisors of school lunch programs will be held June 20, to June 29. The course is operated in cooperation with the State Department of Education and the teaching is done by the College staff. Certificates are offered to those who complete the course successfully.

METHODS IN GREGG SHORTHAND

A short intensive course presenting the New Gregg Standard Manual, materials, and teaching procedures, will be offered during the first three weeks of the summer school (June 6, to June 24.) Professor Richard A. Hoffmann, one of the outstanding teachers of shorthand on the Pacific Coast, will be the instructor.

HIKING AND CAMPING TRIP

The annual summer school hiking and camping trip will take place during the two weeks immediately following the first session of summer school—July 18 to 30. Course work in camp preparation, packing, and other details will be held during the first few days of the week of July 18, following which the expedition will be led into the Wind River Mountains of Wyoming for a ten-day period.

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 1949, Lynn Waldorf of the University of California and Ed Hickey of St. Louis University, assure another quality school. It may be the best in a long series because both men are enthusiastic, vigorous men who have 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, and because of the quality of the instructors. 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 6-10 inclusive.

FORESTRY SUMMER CAMP

The School of Forest, Range, and Wildlife Management owns or controls 3,000 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 prerequisite to the technical courses of the junior and senior years.

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 Monday, June 6 and continues for a period of 11 weeks (August 19).

**LIVING ACCOMMODATIONS**

The College Residence Hall on the campus will be available for a few 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 and interested students should write or consult him.

**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, students may meet any of the requirements for Utah certification with the exception of practice teaching; and, since the College is fully accredited, 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 Dr. John C. Carlisle, 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 Industry  
G—Gymnasium  
N—Library  
F—Forestry  
W—Widtsoe Hall or Chemistry  
H—Home Economics and Commons  
MS—Military Science  
FH—Field House  
B—Technology Building

AGRICULTURAL ECONOMICS AND MARKETING

W. P. Thomas, D. A. Broadbent, Professors.

Visiting Faculty

R. C. Ashby, University of Illinois.

116. Marketing Livestock. Marketing factors as they relate to the marketing of livestock and livestock products. 3 credits. Daily 8 and one hour arr. First session. M178. Ashby


214. Research in Agricultural Economics. Credit and time arr. First and second sessions. Staf

215. Special Problems in Agricultural Economics. Credit and time arr. First and second sessions. Staf


AGRONOMY

R. J. Evans, Professor Emeritus; D. W. Thorne, D. W. Pittman, Professors; Lemoine Wilson, Assistant Professor.


201. Subject arranged. 2 hrs. credit. Staf

212. Soils Seminar. 1 credit, time arranged. Staf
224. Subject arranged. 2 hrs. credit.  


**ANIMAL HUSBANDRY**

L. L. Madsen, Professor; J. A. Bennett, M. A. Madsen, Assistant Professors.

150. Animal Nutrition. Attention is given various fundamental phases of animal nutrition, including protein, carbohydrate, 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. Four credits. Second session M.T.W.Th. 8 and 10.  

L. L. Madsen

160. Livestock Production Problems. Attention is given various problems in livestock production, particularly in Utah. Students are expected to apply knowledge acquired in previous courses in the solution of problems they will face in the field after graduation. Prerequisites: An. Hus. 110 and 125. Three credits. First session. Daily 7.

**AIR CONDITIONING AND REFRIGERATION**

J. C. Sharp, Assistant Professor; Angus Q. Woodruff, Instructor.


Sharp

121. Industrial Air Conditioning. Advanced training in the principles, construction, operation and repair of industrial air conditioning equipment. Prerequisites: AC&R 22 and 22a. 3 credit hours. First session. 4 lectures and 2 labs per week.  

Sharp

**ART**

Calvin Fletcher, Professor Emeritus, H. Reuben Reynolds, Professor; Essie Larsen, Assistant Professor.


Reynolds

3. Art Understanding and Appreciation. Aims to increase enjoyment of living through the sense of sight. First session. Daily 10. 2½ credits. Room M330C.  

Reynolds

104. Creative Expression. Studio experience in developing Spontaneous expression and freedom of graphic interpretation. Excellent for the layman who thinks that he cannot express himself artistically, but, who has a desire to do so. For art majors and teachers who find it difficult to interpret their inner ideas. Second session. Daily 7-9 a.m. 2½ credits. Room M330E.  

Larsen

106. Sculpture, Modeling, Casting and Carving in various media. First session, each credit desired represents thirty hours of work. Criticism daily at 10.  

Staff
8. 108. Drawing, painting and illustration. First session. Daily 1. Each credit desired represents thirty hours of work. Room M330D.


BACTERIOLOGY

W. Whitney Smith, Professor; K. R. Stevens, Associate Professor; Lewis W. Jones, Assistant Professor.

1. Elementary Bacteriology. 4 credits. 10 and 1 M.T.W.Th. 8 lectures per week. First session.


BOTANY

B. L. Richards, Professor; W. S. Boyle, Arthur H. Holmgren, Assistant Professors.

SERVICE COURSES

25. Survey of the Plant Kingdom. 5 credits. First session. Lecture, M. T. W. Th. 1. Laboratory, M. T. W. Th. 2-5.


BUSINESS ADMINISTRATION

P. E. Peterson, Professor Emeritus; V. D. Gardner, Professor; L. Mark Neuburger, Associate Professor; Guy Murray, Instructor.

Visiting Faculty

Robert A. Nelson, State Director of Vocational Business and Distributive Education, Utah State Department of Education.

12. Social Security Accounting. 3 credits. MWF 7.

25. Introductory Business Administration. 3 credits. MWF 8.

100. Accounting for Non-Commercial Students. 3 credits. MWF 8.
120. Auditing Theory and Practice. 3 credits. MWF 9.  
141. Real Estate. 5 credits. Daily 8.  
175. Office Management. Emphasis on principles of office management, duties and responsibilities of the office manager; types of organization; methods of control; office arrangement and equipment; job analysis; selection, employment, and training of employees. Prerequisites: Introductory Accounting and General Economics. 2½ credits. First session. (June 27 to July 15). Daily 9 and 12.  

**Distributive Education**

194. Principles and Objectives of Distributive Education. To acquaint students with the general philosophy and purposes of vocational distributive education, and to enable them to understand and appreciate its place in the modern educational program. The principles, objectives and standards that have been established in this field of education will be thoroughly considered. Students will study and compare the principles and objectives of distributive education with those of other educational programs. 3 credits. First session. (First 3 weeks, June 6 to 24). Daily 9-11.  

195. Part-Time Distributive Education. A study of the content, methods and devices to be used in part-time education programs. Emphasis will be placed on problems of coordination, selection of students, arrangement of a class schedule, supervision on the job and other phases of the cooperative part-time distributive education program in the high school. Requirements and standards of part-time vocational education will be treated. 3 credits. First session. (First three weeks, June 6 to 24). Daily 1-3.  

**CHEMISTRY**

R. L. Hill,Sterwin Maeser,D. A. Greenwood, Professors; Melvin C. Cannon, Associate Professor; T. M. Burton, Aubrey Lawrence, Assistant Professors.  

3. Chemical Principles and Qualitative Analysis. An introduction to chemical theory and the principles of chemistry including introductory qualitative analysis in the spring quarter. Prerequisites: high school chemistry or physics, algebra and geometry. This course is designed for science majors, pre-medical and pre-dental students and home economics majors in foods and nutrition. Three lectures and two labs. 5 credits. Lecture M.W.F. 8, Lab. M.W. 2-5. Both Terms.  

10, 11. General Chemistry. An introduction to the fundamental principles of inorganic and organic chemistry. A one-year terminal course open to any matriculated student. 5 credits each quarter. Three lectures and two labs. Lecture daily 10. Lab. daily 2-5. Both sessions.  

12s. Organic Chemistry. An elementary course. Four lectures, two labs per week. Both sessions. 6 credits.  

17, 18, or 117, 118. Quantitative Analysis. Theory and practice of gravimetric and volumetric analysis. Prerequisite: Chemistry 5. The course is so designed that it presents a terminal course for majors in agriculture, home economics and pre-medical and pre-
dental students. First term. Lectures M.T.W.Th. 8 and 1. Lab. Daily 2-5. 8 credits.  

90 or 190. **Elementary Biochemistry.** 3 lectures and 2 labs. Both sessions. 5 credits. Lectures M.W.F. 9; Lab. M.W. 2-5.  

150 or 250. **Advanced Inorganic Chemistry.** A study based on the periodic table and atomic structure. A course designed for Chemistry seniors and graduates and others with similar training. Three credits. M.W.F. 10. Both terms.  

192 or 292, 193 or 293, 194 or 294. **Biochemistry.** For senior and graduate students only. Time and credit arranged.  

198 or 298. **Research.** Senior or graduate students majoring in chemistry may register for research in any branch of the subject. Time and credit arranged.  

**CHILD DEVELOPMENT AND PARENT EDUCATION**  

HELEN L. PORTER, Assistant Professor; ORAL PUGMIRE, MARIAN AIKIN, Instructors.  

**Nursery School Enrollment.** The College Nursery School will operate for the benefit of college students who bring their children and desire a means of caring for them during school hours. Enrollment, limited to 15 children, will be made up of 2, 3, and 4-year old children. Those students enrolled in Child Development classes will use the Nursery School as a laboratory for observing and working with preschool children.  

School session: Monday through Friday—8:00 to 11:50 a.m. First session only  
Tuition: $5 for 6 weeks  
Admission: by application only  
Application must be made in writing on or before registration day. Children will be accepted in order of application.  

60s **Child Development and Guidance.** Growth, development and guidance of the young child and a study of play materials which meet the developmental needs of the child from one to six years of age. A 9 or 10 o'clock hour must be free each day to allow for scheduling a daily laboratory hour in the college nursery school. Class schedules should be checked by instructor before registration is completed. Four credits. 1 hour lab. arranged daily. Lectures at 8 daily.  

175as. **Nursery School Methods.** Must parallel practice teaching. Special consideration will be given to understanding the needs of individual children in the nursery school and evaluating the principles used in guiding them. Time and credit arranged.  

175bs. **Practice Teaching in the Nursery School.** Open to qualified Senior students. Check prerequisites with instructor before enrolling. Time and credit arranged.  

**CLOTHING, TEXTILES AND RELATED ARTS**  

BERTHA F. JOHNSON, Professor; FLORENCE GILMORE, Assistant Professor; MIGNON PERRY, JEAN DANCE, Instructors.  

6s. **Construction Problems.** Open to all college women. First three weeks only. 2½ credits. Daily 2-5, T. 9-12.  

Perry
33s. **Home Furnishings.** Open to anyone. Laboratory course including instruction on the following techniques; making of draperies, upholstering, and slip covering. First three weeks only. 2½ credits. Daily 2-4, T. 9-12.

140s. **Decorative Textiles.** Study of historic and modern hand woven textiles. Laboratory work consists of weaving. Prerequisites: Art to satisfy instructor. First three weeks of the first session only. 2½ credits. Sec. 1 Lecture 8 M W Th F, Lab. 9-12 daily. Sec. 2 Lecture 1 M T W Th Lab. 2-5 Daily.

165s. **Tailoring.** Application of techniques used in tailoring women’s suits and coats. Prerequisites, clothing and textiles 9, 24, 25, 115 for Home Economics Education and Clothing, Textiles and Related Arts majors. For others sufficient clothing construction to satisfy the instructor. First three weeks only. 2½ credits. Daily 2-5, T. 9-12.

190. **Special Problems.** Time and credit arranged.

290. **Special Problems for Graduate Students.** Time and credit arranged.

210. **Research for Master’s Thesis.** Credit arranged.

**DAIRY HUSBANDRY**

**George B. Caine, Professor.**


150. **Special Problems in Dairy Production.** Arranged for a limited number of students.

216. **Research in Dairy Production.** Arranged for a limited number of students.

**DAIRY MANUFACTURING**

**A. J. Morris, Professor.**

7. **Plant Practice.** Credit arranged.

103. **Cheesemaking.** 5 credits. First session.

105, 106 or 107. **Management and Operation.** 2 credits. First session.

154 or 254. **Special Problems.** Credit arranged.

217. **Research.** Credit Arranged.

**ECONOMICS**

**W. L. Wanlass, Professor; E. B. Murray, Associate Professor; L. J. Arrington, Assistant Professor; Charles T. Stewart, Instructor.**

51. **Principles of Economics.** A survey of the principles that underlie the operations of the American economic system. 2½ credits. First and second sessions. Daily 8. First session.

140. **International Economic Relations.** Special attention is given basic economic relationship between industrial nations of
the world, international commerce, tariffs, and trade restrictions, international debt and finance, and various means of promoting progress on a basis of sound economics. Prerequisites: Econ. 51, 52. (2;F.) First session. 2 ½ credits. Daily 9.

125. Labor Economics. The emphasis is on the theory and practice of collective bargaining. Special attention is given recent legislation that has promoted the growth of organized labor. Current issues in industrial relations are critically analyzed. Second session. Daily 8. 2 ½ credits.

165. Money, Credit, and Prices. The structure and operations of money and financial institutions. Special attention is given bimetallism, the gold standard, the money market, and the relation of money and credit to prices. Prerequisites: Econ. 51, 52. 2 ½ credits. Second session. Daily 9.

EDUCATION

E. A. Jacobsen, L. R. Humpherys, John C. Carlisle, Professors; C. E. McClellan, Professor Emeritus; L. G. Noble, Assistant Professor; Edith Shaw, Ben Van Shaar, Pearl S. Budge, Robert G. Hammond, Instructors.

Visiting Faculty

Esther Schroeder, Western Michigan College.


108. Social Studies in Public Schools. A consideration of the social responsibilities and opportunities of children and youth under current social conditions. Both content and method in the social studies field will be considered. 2 credits. Daily 10. First session.


116. Articulation of the Educational Program. A survey of existing needs for close articulation of the various educational units and agencies. Discussion of the factors conditioning the nature and extent of the articulation and of the unifying principles upon which a well-articulated program of education rests. 2 ½ credits. Daily 10. First session.

125. Methods of Teaching Agriculture. For teachers of vocational agriculture. Fundamental principles and practices of teaching, selection, and organization of subject matter and super-
vision of agricultural activities on the farm. 5 credits. Both sessions. Daily 7-8.  


138. Improvement of Teaching. Designed to meet the needs of teachers, supervisors and administrators. Emphasis will be upon recent developments in the improvement of teaching-learning situations and activities from the junior high school to the junior college. First six weeks. 2½ credits. Daily 10.  

161. Audio-Visual Aids in Education. Emphasizes the importance of audio-visual aids in the school program. Building a workable program in which are utilized the newest materials and techniques. 2½ credits. Second session. Daily 1.  


165. Rural Education. An overview of the major problems of rural life as they relate to education. The adaptation of general educational objectives to rural conditions, especially as they pertain to Utah. The organization of rural schools, the course of study, and methods in education suited particularly to the rural school problem on both elementary and secondary levels. Two credits. Daily 10. First session.  

180. Methods in Gregg Shorthand. For description see Secretarial Science.  

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. 2½ credits. Daily 2.  


194. Principles and Objectives of Distributive Education. For description see Business Administration.  

195. Part-time Distributive Education. For description see Business Administration.  

201. Backgrounds of Modern Education. An integration of the history and philosophy of education as a basis for understanding modern education. The evolution of educational thought, the sources of great philosophies of education in relation to their times. 2½ credits. Daily 1.  

205. Reading and Conference. Provides for individually directed study in the fields of one’s special interest and preparation. Credit arranged. Time arranged.

219. The Principal and His School. Practical problems confronting the principal in administration and supervision, 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 are all given consideration. 2½ credits. Daily 10. First session. Staff

227. Advanced Methods Teaching Agriculture. A consideration of problems of teaching agriculture. Planned for teacher trainers, supervising teachers, state supervisors, and assistant supervisors. Workshop procedures will be used. 3 credits. July 25—August 5. Time arranged. Humpherys


237. Problems in Secondary Education. For graduate students who are or who wish to become administrators, supervisors, etc., the emphasis being on problems peculiar to the secondary field together with ways and means of solving these problems. Individual problems will receive emphasis in the course. 3 credits. Daily 8-10. Miller

250, 251, 252. Research Studies. Individual direction in the preparation of research papers to meet requirements for "Plan B" for the M.S. Degree. 2-3 credits. Time arranged. Staff

*276. Introduction to Research. An inquiry into the nature and sources of research problems with a study of the methods of working out such problems in the field of education. Some attention is given to thesis writing as a problem related to research. 2½ credits. Daily 3. McClellan

271. Research and Thesis Writing. Provides for individual work in thesis writing with the necessary guidance and criticism. Credit arranged. Time arranged. Staff

*Courses will meet 1 extra period per week.

ENGLISH

N. A. Pedersen, Alma N. Sorensen, Professors Emeritus; Wallace J. Vickers, King Hendricks, Carlton Culmsee, Professors; Ira N. Hayward, Hubert W. Smith, Wendell Keck, Associate Professors; Stanley P. Andersen, Instructor.


10. Sophomore Composition. Required of all students not offering its equivalent. May not be taken in the freshman year. Emphasizes correctness and effectiveness in sentence, paragraph and theme; gives practice in organization and outlining of material, and in expository writings; demands clear, forceful expression, and requires a full third of a student's time. 5 credits. Daily 1. Both sessions. Andersen

19. Freshman English. For Forestry, Engineering and Technology students only. Composition, with stress on intelligent
thinking and clear expression. Practice in writing letters and reports. 3 credits. M. W. F. 8. Both sessions.


57. Whitman and Sandburg. A study of the attempts of two poet-philosophers to catch the American spirit—one writing with the surge of the frontier, the other writing in its wake. 2½ credits. Daily 10. First session.


111. Technical Writing. Emphasis upon bibliography, research methods, and final form of the technical report. 4 Credits. M. T. W. Th. 8. Both sessions.


191. The Victorian Period. A comprehensive review of the literary influences and personalities of the period, with emphasis on the chief prose masters of the age. 2½ credits. Daily 10. First session.

JOURNALISM

Carlton Culmsee, Professor.

112. The Writing of Feature Articles. Lectures and practice in preparing feature articles for newspapers and magazines. Analysis of periodicals to determine markets. 2½ credits. First session, daily 8.


FOODS AND NUTRITION

E. O. Greaves, U. Vermillion, Professors; P. Rowland, Assistant Professor.


146s. Conservation and Technology of Food. A lecture and laboratory course in approved scientific, practical methods of food processing, preservation and storage and its influence upon the nutritive value of the foods. 2½ credits. T. W. Th. F. 9. T. 2-5. First session.
FOREST, RANGE, AND WILDLIFE MANAGEMENT


FORESTRY

90. 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 and horses in Forest, Range, and Wildlife work. Problems in construction, planning recreational areas, and water development. 3 credits. Summer Camp.

96. Surveying. Practical field problems in surveying methods commonly employed in forest, range, and wildlife management. Type mapping. 3 credits. Summer Camp.

97. Forest Practice. Study of timber types and successional stages. Timber cruising, log scaling, inventories and growth of immature stand, stem analysis, taper measurements, sample plots, milling and utilization studies. 3 credits. Summer Camp.

RANGE

98. Range Practice. Field work in range management involving familiarization with vegetation, training in making reconnaissance, methods of studying vegetation and determining utilization. In addition, time will be devoted to range improvement and management planning. 3 credits. Summer Camp.

WILDLIFE

99. Wildlife Practice. A survey of lakes and streams for improvement purposes and for restocking; the use of census methods for big game, game birds, and rodents; rodent identification and study of activities; cover mapping; preparation of animal skins; and study of deer and elk ranges. 3 credits. Summer Camp.

FORGE PRACTICE

J. DONALD WADSWORTH, Instructor.

113. A. E. Farm Machinery Repair. Applied problems in farm machinery repair and maintenance. Prerequisite: Forging 81a, and Welding 96, or equivalent. Three credits. First session. Time arranged.

81b. F. P. Forge Practice. Fundamental operations of forging, such as shaping, bending, punching, hardening, tempering, and forge welding. Prepares students for forging jobs in repair shops, construction camps, and industrial maintenance shops. Excellent training for metal workers entering present-day industries. Three credits. First session. Time arranged.

GEOLOGY

J. STEWART WILLIAMS, Professor.

1. Introductory Physical Geology. A general survey of the whole field of physical geology for arts students and others who
desire only a broad introduction to the subject. Five Credits. Daily 7-9. M 283. Instructor to be announced.

HISTORY

Joel E. Ricks, J. Duncan Brite, Professors.


HOME ECONOMICS EDUCATION

Helen Cawley, Assistant Professor.

210s. Research for Masters Thesis. Credit Arranged. Cawley

199s. Special Problems in Home Economics Education. Developed around individual needs of students. Emphasis on use of community resources, development of home experience, and Future Homemakers of America Club program. 1-2 credits. Time arranged.

HORTICULTURE

S. W. Edgecombe, Professor; Robert Gerber, Assistant Professor.

1. General Horticulture. 3 credits M.T.W.Th. 7, M.W. 2-5. First session.

11. Garden Flowers. 3 credits. T.Th. 8 and 1, T.Th. 2-5. First session.

101. Advanced Pomology. 3 credits. Time arranged. First session.

110. Orchard Practice. 1 credit. Time arranged. Second session.

112. Orchard Practice. 1 credit. Time arranged. First session.

204a. Research. 1-10 credits. First session.

204b. Research. 1-10 credits. Second session.

INDUSTRIAL EDUCATION

Ernest C. Jeppsen, Professor; William E. Mortimer, Associate Professor; E. L. France, Assistant Professor; C. D. McBride, Assistant Professor; Bert V. Allen, Instructor; Lucy Heaton, Instructor, E. E. Ericson, Visiting Professor.

42. Plastics. To acquaint students with the new and important 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. 2 credits. Daily 9 to 11. First session.

51. General Photography. Principles and practice in the fundamentals of general photography. Training will be given in the selection and use of cameras, lenses, meters, films, filters, lights, developers, and accessories. 3 credits. Daily 1 to 3. First session.

151. Photographic Problems. Special problems in advanced photography designed to meet the needs of individual students in solving advanced photographic problems. 3 credits. Daily 3 to 5. First session.

107. Principles and Objectives of Industrial Education. To acquaint students with the general philosophy and purposes of Industrial Education and to enable them to understand and appreciate its place in the modern educational program. Students will study and compare the general principles and objectives of Industrial Arts Education and Trade and Industrial Education with those of other educational programs. 3 credits. Daily 1 plus 1 hour arranged. First session.

109. Course of Study Building in Industrial Education. To teach students to prepare and use a course of study consisting of the outline, analysis, progress charts, lesson plans, instruction sheets, references, tests, and instructional schedule. Each student will complete this work for one unit of instruction. 5 credits. Daily 7 to 9. First session.

113. Driver Education and Traffic Safety. This course is designed to acquaint prospective teachers and others with available instructional materials in the field of driver education and the latest methods of presenting such materials in the classroom and on the road. Supervised practice will be arranged for each student. 3 credits.

120. Personnel 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. 3 credits. Daily 9 to 11 plus 2 hours arranged. Second three weeks.

123. Curriculum Problems in Industrial Arts. To teach prospective junior high school industrial arts instructors the application of the skills and knowledge they have acquired in their basic shop courses. Each prospective instructor 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. Prerequisites: basic shop courses in wood, drawing, metal, electricity, crafts, and course of study building. 2 credits. Daily 2-5. Second 3 weeks.

124. History of Industrial Education. Historical development of manual and industrial education from early leaders to present. Emphasis is given to the influence that various leaders and movements, both in Europe and America, have had upon present day objectives of industrial arts and vocational industrial education. 3 credits. Daily 9-11; First 3 weeks.
141. **Art Metalwork.** This course consists of laboratory work in embossing, sinking, engraving, etching and metal spinning operations. The work is done in copper, brass, and aluminum on projects designed for utility and artistic merit. Prerequisites: Art 2. Machine Work 51-b. 2 credits. Daily 7-9. First session. **Staff**

254. **Measurements in Industrial Education.** Construction and use of the various types of tests and rating scales used in industrial education. Emphasis is placed upon measurable factors in industrial education and the types of tests best suited to this field. The elements of statistical methods necessary for an intelligent use of the tests are covered. Prerequisites: Psy. 102. 3 credits. Daily 9-11; Second 3 weeks. **Ericson**

271. **Research and Thesis Writing.** Provides for individual work in thesis writing in Industrial Education. The thesis is written in accordance with standard thesis requirements and under the direction of the major professor. Time and credit arranged. **Mortimer**

**LANDSCAPE ARCHITECTURE**

**Laval S. Morris, Professor; Kenji Shiozawa, Assistant.**

135. **Travel Course.** A major field to examine a variety of projects in land planning and design; town plans (with emphasis on residential areas) parks, parkways, cemeteries, airports, homes, civic centers and others. This course, starting early in June, will be conducted to the West Coast with stop-overs on the way. It will last two or three weeks and will require a written report shortly after the termination of the trip. Photographs are required to supplement notes and observations. **Staff**

**LIBRARY SCIENCE**

**King Hendricks, Director of Libraries; Pearl J. Carter, Assistant Librarian, Anne Smith, Instructor.**

1. **The Use of the Library.** A general course designed to help students to become efficient in using books and libraries. Emphasis will be placed upon use of card catalog, periodical indexes, and reference books. 2½ credits. First session. Daily. **Carter**

100. **Reference Materials and Bibliography.** A continuation of work done in The Use of the Library, which course is a prerequisite to this one. Principal reference tools in each field are studied. 2½ credits. First session. Daily. **Smith**


120. **First Quarter Cataloging and Classification.** Classification of books according to the Dewey decimal system and cataloging instruction adapted primarily to the use of school and public libraries. 2½ credits. First session. Daily. **Smith**

150. **School Library Administration.** The theory of school library work with emphasis on demonstration and practical application. 2½ credits. First session. Daily. **Smith**

MACHINE TOOL TECHNOLOGY

FREDERICK PREATOR, Associate Professor; G. MERRILL SHAW, Assistant Professor; W. KARL SOMERS, Instructor.

51. Machine Tool Practice. Training in the use of hand tools, and in bench work and tool sharpening, together with elementary training on drill press and engine lathe. Tools and machine parts are made that give practice in the operations essential to machine shop work. Included are assignments of reading on machine work subjects, and application of mathematics to machine work. 5 credits. Continues through both sessions. Daily 1-4. A102.

56. Machine Practice for Engineers. This course is designed to acquaint engineering students with basic machine shop operations, which include the use of hand tools, bench work, tool sharpening, and elementary engine lathe and drill press operation. 2 credits. Either session. Time arranged.

Mechanical Drawing

91, 92, 93. Mechanical Drawing. The use of instruments applied to template drawings, graphic solutions, and lettering; standard elements and symbols which make up working drawings used in industry. The theory of shape and its representation in orthographic projections, section, auxiliary views, revolutions, and size descriptions. Isometric drawings and the translation of orthographic views into pictorial drawings. 2 credits each course. Either session. Time arranged.

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

MATHEMATICS

V. H. TINGEY, Professor; N. C. HUNSAKER, Associate Professor, MARY NELSON, Assistant Professor; J. K. EVERTON, Instructor.

34. Introduction to College Algebra. 3 credits. Daily 8. First session.


44. Plane Trigonometry. 3 credits. Daily 10. First session.


100. Calculus. 3 credits. Daily 8. First session.


Upon request of fifteen or more students any course listed in the regular catalog will be given.
MODERN LANGUAGES AND LATIN

George A. Meyer, Professor; George C. Jensen, Professor Emeritus; Thelma Fogelberg, Marian L. Nielsen, Associate Professors; Aldyth Thain, Assistant Professor; Jesse G. Nelson, Gordon Porter, Instructors.

FRENCH
3. Elementary French. Third Quarter. 5 credits. Staff
101. Intermediate French. 5 credits. Staff

GERMAN
3. Elementary German. Third Quarter. 5 credits. Staff
101. Intermediate German. 5 credits. Staff

SPANISH
3. Elementary Spanish. Third Quarter. 5 credits. Staff
101. Intermediate Spanish. 5 credits. Staff

MUSIC

N. Woodruff Christiansen, Walter Welty, Roy Harris, Professors: Johana Harris, Associate Professor; George Pahtz, Instructor.

Visiting Faculty

Norval L. Church, Professor of Music Education, Columbia University; William E. Knuth, San Francisco State College; Ralph E. Rush, University of Southern California; Hollis Grange, Band Director, Davis High School; Joseph Gingold, Concertmaster, Cleveland Symphony Orchestra; James Barrett, Assistant Concertmaster, Detroit Symphony Orchestra; Milton Preves, Principal Violist, Chicago Symphony Orchestra; Leonard Rose, Principal Cellist, New York Philharmonic Orchestra.

Private Instruction Courses

Vocal Walter Welty, Patience Thatcher, Maxine Greenwood
Composition Roy Harris
Violin Joseph Gingold, Milton Preves, N. Woodruff Christiansen, Mischa Pognanski
Viola James Barrett
Cello Leonard Rose, George Pahtz
Piano Johana Harris, Lucy L. Christiansen, S. E. Clark (piano and organ), Thelma Lundquist, Jean C. Thatcher, Jeanne T. Welty.

Assistant Instructors

Piano Eleanor Smith
Brass Instruments Eldon Torbensen
Flute Norma Sigler
From June 6-18 the following will be available for private instruction:

Percussion  Norval L. Church
Bassoon    William E. Knuth
Clarinet   Ralph E. Rush

17s-117s. **String Ensembles.** Offering an opportunity for trios, quartets, and other small units. One credit. Time arranged.


77A. **Concert Band.** All members of the band will register for this course. High school graduates who meet college entrance requirements may receive one hour of college credit upon payment of registration fee. Daily 9-11, 3-4. First two weeks. M 30.

77B. **Orchestra.** All members of the orchestra will register for this course. Credit given as for 77A. Daily 11-12, 1-3. First two weeks. M 30.

78. **Marching Band.** Open to students. First two weeks. Daily 5.

87s. **Musical Literature for String Instruments.** A study will be by the use of recordings of standard concerti, trios, and quartets. Also biographical sketches of composers and performers. 2½ credits. First session. Daily 9. Children's Library.

114s-214s. **Conducting and Score Reading.** A study of typical musical literature with application of conducting techniques. Special assignments. One credit. First two weeks. Daily 9. M 252 A.

122s. **Band and Orchestra Clinic.** An analysis of problems incident to performance. First band study of actual cases with suggestions for improvement. The course will include care and repair of instruments and equipment. ½ credit. First two weeks. 11 a.m. M 30.


178s. **The Marching Band and the Twirling Drum Major.** A study of the fundamentals of marching and twirling. This course is designed to help the director or drum major who is a beginner or has had a limited amount of experience. ½ credit. First two weeks. Daily 11.
182s. Advanced Marching and Twirling. This class is for directors and student drum majors who know the fundamentals of marching and twirling. Will deal with stunt formations for football and basketball games and with original maneuvers for marching festivals. Attention will be given to twirling problems of the individuals. ½ credit. First two weeks. Daily 4.

183s. Student Marching Band. A demonstration of rehearsal methods with the marching band. ½ credit. First two weeks. Daily 5.

VOCAL MUSIC

24s. High School Chorus. Open to all high school students. Those who meet college entrance requirements will receive one hour of college credit. First two weeks. Daily 10 and 3. M 207.

24s or 124s. Summer School Chorus. A recreation class in singing. Open to all Summer School students. The chorus will prepare a program. First session. M. W. F. 12. 1½ credits. M 207.


132s Choral Materials Workshop. A seminar conducted on a Workshop basis for choral conductors, supervisors, and classroom teachers desiring help in reviewing standard choral resources, new publications, program planning, the integrated program, and methods of choral training. Opportunity will be given to work on individual problems, and class members will conduct a selected choir for laboratory evaluation of music materials. Persons enrolled in this seminar will be expected to keep time free to attend the regular rehearsals of high school choir. 1½ credits. First two weeks. Daily 1. M 53.

PHYSICAL EDUCATION AND RECREATION

H. B. Hunsaker, W. B. Preston, Professors; Elizabeth Anne Dutton, Associate Professor; J. K. Vanderhoff, Israel Heaton, Assistant Professors; Dale Nelson, Lois Downs, Instructors.

Visiting Faculty

Recreational Clinic Specialists from National Recreational Association and other leaders in the field of recreation.

Aquatics School Specialists in the American Red Cross and Boy Scout Aquatics Program.

Physical Education Dr. H. H. House, Head of Department, Physical Education, Washington State College.

Aquatics School Designed for leaders in Physical Education, Recreation, and others interested in swimming, boating and life saving. June 1 to June 15.

Recreational Clinic A three-week course in technique and leadership in six fields of recreation including crafts, social recreation, recreative sports, camping, social dance and square dance. The course is designed to make it possible for a student to take any one or all of the various activities. June 13—July 1.
SERVICE COURSES

25. Tennis (Ele.) Men and Women. 1 credit. First session.
   Sec. 1. Daily 2.        Vanderhoff
   Sec. 2. Daily 8.        Downs
   Sec. 3. Daily 1.        Vanderhoff


48. Modern Dance. 1 credit. Daily 2. First session.        Staff

54. Swimming (Ele.) 1 credit. First session.

54. Archery (Ele.) Men and Women. 1 credit. First session.
   Sec. 1. Daily 9.                Heaton

66. Badminton (Ele.) Men and Women. 1 credit. First session.
   Sec. 1. Daily 10.               Downs

73. Golf (Ele.) Men and Women. 1 credit. Lab. Fee. First session.
   Sec. 1. Daily 8.                Vanderhoff
   Sec. 2 Daily 9.                 Vanderhoff

54. Swimming (Ele.) 1 credit. Daily 10. Second session.        Vanderhoff

73. Golf (Ele.) Lab fee, Men and Women. 1 credit. Daily 8. Second session.

89. Intramural Sports. Teams will be organized. Softball, badminton, tennis, and horseshoe tournaments will be conducted. Students registering for this course will be placed on teams for tournament participation. 1 credit. Daily 12. First session.        Heaton

PROFESSIONAL COURSES

85. Organization of Intramurals. A course for men and women physical education teachers desiring to study organization and supervision of junior and senior high school intramural programs. 2½ credits.        Hunsaker

111. Creative Rhythms for the Elementary School. Methods and materials in guiding the creative rhythmic experiences of the elementary school pupil. 2½ credits. First session.        Dutton

112. Physical Education Curriculum for Elementary Schools. Methods and practice in evaluating, developing and presenting a well-rounded curriculum of physical education for the elementary school, with emphasis on the rhythmic phase. 2½ credits. Daily 2. First session.        Downs


131. Techniques of Dual Sports and Gymnastics. For men students majoring in Physical Education. Students will be taught the technique of boxing, wrestling, tumbling and gymnastics. Each
student will be expected to prepare a teaching syllabus for class

157. Field Work Recreation. (Prerequisite approval of depart-
ment head) This course is designed to give practical experience
in conducting recreational programs at playgrounds and camps
under the supervision of the college recreation staff and the direc-
tor of the program to which the individual is assigned. Students
will be expected to plan and conduct programs in a variety of
activities applying principles, methods, and techniques gained in
his prerequisite work. 4 credits. Daily 10. First and second session.

Swimming, boating, life saving. 3 credits. Daily 8 a.m. to 5 p.m.
May 30, to June 5.

176. Leadership, Camping and Hiking. (Men and Women)
Designed for physical education and recreation leaders. Period:
July 19 to 30. July 19 to July 22: Precamp training class in camp-
craft, camp cookery, first aid and safety, equipment to check, and
menu planning. July 23; Bus trip to "high country." Hiking, camp-
ing, fishing. July 30; Return by bus. Lab. fee. 3 credits. Second
session.

192. Tests and Measurements in Physical Education. Practical
studies of tests now in use, and the technique of test construction,
administration and interpretation. 2½ credits. Daily 8. First
session.

Deals with current problems in physical education. Especially
designed for upper division majors and teachers of physical edu-
cation. 2½ credits. Daily 1. First session.

250. Reading and Conference. A course providing for indivi-
dual directed study. Men and women. 2½ credits. Time and credit
arranged. Second session.

271. Research. Thesis writing. Provides for individual work
in thesis writing with the necessary guidance and criticism. Time
and credit arranged. First or second session.

PHYSICS

WILLARD GARDNER, Professor; ROLLAND PERRY, PHILIP J. HART, Associate
Professors; JAY O. JENSEN, Assistant Professor.

3. Introductory Physics. A non-mathematical lecture demon-
stration course designed for students not majoring in the Sciences,
Engineering, Agriculture, or Forestry. (Credit in this course will
not be allowed students who have previous college credit in Phy-

3B. Introductory Physics. Similar to Physics 3 but covering
the field of Modern Physics and emphasizing recent developments.
Prerequisite, Physics 1 or Physics 3. Five credits. Second session.

6. General Physics. Covers mechanics, constitution of mat-
ter, heat, and meteorology. Primarily for students in Forestry


Any other upper division course will be taught upon sufficient demand.  

**PHYSIOLOGY**  

DATUS M. HAMMOND, Professor; CLYDE BIDDULPH, Associate Professor.  

4. **General Physiology.** For the student who desires a survey of physiology and who is not planning advanced intensive study in the field. It deals with the functioning of the human body with emphasis upon broad general biological principles. First session. 5 credits.  

160. **Special Problems, Physiology.** Special investigations in physiology are carried out in this laboratory course. Open to students who have taken Physiology 121, 122 or who have been granted special permission. Either session. Time and credit t.b.a.  


**POLITICAL SCIENCE**  

F. D. DAINES, Professor Emeritus; M. R. MERRILL, Professor, WENDELL B. ANDERSON, Assistant Professor.  


70 or 170. **Comparative Government.** Second session. 2½ credits. Daily.  


**POULTRY HUSBANDRY**  

BYRON ALDER, Professor; C. I. DRAPER, Associate Professor.  

101. **Poultry Production.** Daily 9, extra hour arranged. First session. 2 credits. L305.
125. Special Problems. Time and credit arranged. Both sessions. L304.

Draper

**PSYCHOLOGY**

Arden Frandsen, Professor; D. R. Stone, Heber C. Sharp, Assistant Professors.

Visiting Professor

Stanford E. Erickson, Professor of Psychology Vanderbilt University.

53. Elementary General Psychology. General principles of human behavior and experience including: nature of personality; factors determining development; how we learn, observe, and think; motives of human conduct; dealing with people; and the maintenance of personal efficiency and mental health. Intended for Lower Division students in all schools of the College. 5 credits. Both sessions.

Sharp

102. Educational Psychology. A professional course for prospective high school teachers intended to increase understanding of personality and to develop greater insight into the conditions for effective learning. Applications to development in adolescence of both normal and deviate personalities, to provisions for individual differences, and to learning junior and senior high school subjects are emphasized. Prerequisites: General Psychology. Both sessions.

Stone

114. Independent Readings in Psychology. For students who cannot participate in the discussions in Psychology 115. Provides an opportunity for independent readings and conferences on topics elected by the student. Both sessions.

Staff

116. Beginning Research in Psychology. To acquire some experience in research methods, students are supervised by a staff member in conducting minor experimental studies in psychology. Prerequisite: elementary statistics. Both sessions.

Staff

123-223. Psychology of Exceptional Children. The development and behavior characteristics of exceptional children and of the education, home management, social control, and psychological treatment especially suited to their needs. The group included are the mentally deficient, the gifted, children with special achievement disabilities, speech defectives, the crippled and physically handicapped, and children with serious personality and conduct problems. First session.

Sharp

133-233. Personality. A systematic survey of dynamic principles of personality development and emotional adjustment with special emphasis on mechanisms operating and influencing behavior. Prerequisite: General Psychology. First session.

Erickson

145. Mental Hygiene. The common personal and social adjustment problems of normal people. It shows how people, in striving to attain a balanced satisfaction of motives in their major life activities, learn different modes of adjustment; effective patterns of behavior, a variety of maladjustive mechanisms, and non-adjustive reactions. It should aid in cultivating personal efficiency and mental health and increase understanding of the human problems dealt with by parents, teachers, social workers, and personnel workers. Prerequisite: General Psychology. Second session.

Sharp
55-155. Psychology of Business and Industry. The methods and explanatory principles of psychology are applied to understanding several general problems of business and industry, including vocational choice and the selection of employees; advertising and selling; marketing and consumer research; conditions for efficient work, and the psychological aspects of training for work in business and industry. (See also Bus. Admin. 54) Prerequisite: General Psychology or instructor's approval. Second session.

161. Social Psychology. The acquisition of personality or "self." The effect of society on the individual, and the individual's reciprocal effect on society is considered in terms of such topics as propaganda, institutional behavior, "social" neuroses, morale, leadership, membership etc. Sociological concepts here serve as valuable context for the basic psychological elements in the analysis of the individual's personality development as he encounters the world. Prerequisite: General Psychology. First session.

182. Clinical: Individual Testing. Directed Practice in the Administration of Individual Tests. The emphasis is on acquiring skill in diagnosing intelligence by the individual Binet procedure; but the writing of clinical reports and recommendations and the uses of other individual tests of aptitudes, personality, and adjustment are also studied. Prerequisite: Clinical Psychology 181 or equivalent. Second session.

183 or 283. Clinical Psychology. Theory and practice of Counseling and Psychotherapy. In educational and vocational guidance, in improving school achievement and worker efficiency, and in treating problems of personal and social maladjustments, the uses of the following procedures are studied: non-directive counseling; directed problem-solving interviewing; giving advice, assurance, persuasion, and information; and of controlled family, school, club or camp, community and institutional environments. Prerequisite: General Psychology. First session.

217. Research for Master's Thesis in Psychology. Credit and time arranged with the approval of a member of the Department Staff. Both sessions.

PUBLIC HEALTH

W. Whitney Smith, Professor.

50. Elementary Public Health. 3 credits. 8 and 10 M.T.W.Th. 8 lectures per week. Second session.

155. School Health. 3 credits. Daily 8 with one hour arranged. First session.

RADIO AND ELECTRONICS

Larry S. Cole, Clayton Clark, Associate Professors; William L. Jones, Instructor.

Any course listed in the regular catalog will be given in the summer sessions upon petition of a sufficient number of students who may need and desire such a course.
SECRETARIAL SCIENCE
V. D. Gardner, Professor; L. Mark Neuberger, Associate Professor; Clara P. West, Assistant Professor.

Visiting Faculty
Richard A. Hoffman, Placer Junior College (California)

69. Transcription Practice. Methods and practice in developing skill and speed in the transcription of letters from shorthand notes. Students must be able to take dictation at not less than 60 words a minute and type at least 40 words a minute. 1 credit. Second three weeks of first session (June 27-July 15). 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 a new vocabulary. Special attention will be given to the attainment of speed in taking dictation. 2½ credits. First session. Daily 10. M305.

86. First Quarter Typewriting. For students who have had no previous training in typewriting. This course is designed to develop a thorough knowledge of the keyboard and to give practice in the use of the mechanical features of the typewriter. Special attention will be given to the development of typewriting for personal use. 1 credit. First session. Daily 12. M304.

175. Office Management. Emphasis on principles of office management, duties and responsibilities of the office manager; types of organization, methods of control; office arrangement and equipment; job analysis, selection, employment, and training of employees. Prerequisites; introductory accounting and general economics. 2½ credits. First session, second three weeks (June 27-July 15). Daily 9 and 12. M301.

180. Methods in Gregg Shorthand. A three weeks intensive course presenting the New Gregg Standard Manual, materials, and teaching procedures. Teachers will be given an opportunity to familiarize themselves with revised Gregg Shorthand theory. This course may be taken for either Business Education or Education credit and meets state certification requirements. 3 credits. First three weeks (June 6 - June 24). Daily 8 and 10. M302.

189. Practicum in Business Education. Provides an opportunity for the planning and development of practical or creative projects in Business Education. Experienced teachers and students, who are registered for teacher training work, are encouraged to build projects around actual school situations. 2 credits. First session. Time arranged.

SOCIOLGY
Joseph A. Geddes, Professor; Joseph N. Symons, Lawrence S. Bee, Associate Professors; Evelyn Hodges Lewis, Assistant Professor, Carmen Fredrickson, Instructor.

141. Community Organization and Leadership. The growth of the natural community and forces which under leadership are gradually transforming collective effort in rural areas. 2½ credits. Daily 8. First session. Room M206. Geddes


161. Modern Social Problems. A selection of a series of social problems is made. The problems are studied with the two-fold object of ascertaining the present situation and arriving at common sense solutions. 2½ credits. Daily 8. Second session. Room M206. Symons

199. Readings and Conference. 2 credits. Time arranged. Both sessions.

201. Research in Sociology. For advanced students only. A project is organized and field work is carried on under supervision. Original studies are made. Time and credits arranged. Both sessions. Staff

SOCIAL WORK


SPEECH AND DRAMA

Chester J. Myers, Professor; Harold I. Hansen, Assistant Professor; Gwendella Thornley, Leland Watson, and Merlin J. Mecham, Instructors.

1s. Public Speaking. Elementary training in Public Speaking. Includes training in daily speaking situations, voice improvement. 5 credits. Daily 8 and 10. Both sessions. M204. Thornley Hansen

5s. Extempore Speech. Designed to meet the specific needs of professional people in the practice of their profession. Basic principles of effective speaking, with emphasis on composition and delivery of the forms of address of greatest interest to those for whom the course is provided. 2½ credits. Daily 10. Both sessions. M204. Thornley Hansen

11s. Speech for the Foreign Student. The class is designed to help foreign students with conversational and technical vocabulary development. 2½ credits. Daily 8. Both sessions. M282. Mecham

p12-p112. 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. Staff

18s-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, adaptation 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. 2½ credits. Daily 8. M205. Myers


62. or 162. Practical Theatre Production. A course designed for teachers, MIA directors, recreation leaders, and Speech majors and minors. A course covering the problems of play selection for high school and community, casting, acting, directing, scenery, lighting, costume, make-up, and all phases of theatre production. Student's will participate in the production of two UTAH STATE THEATRE summer presentations. Lecture and laboratory approach will be utilized. Students may register for 2 to 9 credit hours. Class will meet daily at 1, and the remaining hours by arrangement with the instructors. 2 to 9 credits. Daily 1, and by arrangement with instructors. STUDIO THEATRE, M205. Hansen Watson

108s. Interpretation: Scene and Play Reading. Instruction for readers of plays. The classics as well as modern plays are to be used. 2½ credits. Daily 10. M205. Myers

173. Speech Clinic. Application and discussion of methods applied to speech correction in the clinic. Training and practice through the supervised handling of selected cases. Students who have had one quarter of experience are allowed to participate in extension clinics. Prerequisite or corequisite, Speech 167. Consult the instructor for permission to register. Time and credit arranged. Both sessions. Mecham

183. Problems in Speech and Theatre. 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. Credit and time arranged. First session. Staff

WELDING
Anton B. Kemp, Instructor.

91. Acetylene Welding. 3 credits. Time arranged. First session. Kemp

94. Electric Welding. 3 credits. Time arranged. First session. Kemp

WOODWORK AND BUILDING CONSTRUCTION
D. A. Swenson, Professor Emeritus; Joseph Coulam, Associate Professor; Charles N. Merkley, Assistant Professor; Ross A. Nyman, Instructor.

61, 62, 63. Joinery and Millwork. 2, 3, or 5 credits. Both sessions. Time arranged. Shop. Nyman
67. Woodwork for Engineers. 2 credits. Both sessions. Time arranged. Shop.


105. Farm Woodwork and Building. 3 or 5 credits. First session. Daily 9-12, 2-5. Shop.

ZOLOGY

DATUS M. HAMMOND, Professor; J. S. STANFORD, Assistant Professor.

1. Principles of Biology. Basic principles of life as illustrated in plants and animals, with emphasis on concepts of fundamental importance, including organization of living things, energy relationships, growth, relation to environment, kinds of living things, reproduction, development, inheritance, and evolution. For lower division students, except those who elect Botany 24, 25, or Zoology 2 or 3 and 4. First session. 5 credits.

2. General Zoology. A brief survey of the more important groups of animals, including the organization, behavior, reproduction, classification and relationships of each group. The basic principles of greatest importance in Zoology receive consideration. This course is especially designed to meet the needs of students in Agriculture and Forestry for a basic course in Zoology. Both sessions. 5 credits.

111. Heredity. The facts and principles of inheritance, with emphasis on application to human beings. This includes a consideration of how characteristics are passed from parent to offspring, how the most important human characteristics are inherited, and how the human race as a whole is being influenced in its inherited qualities by various agencies and conditions. It is desirable but not essential that an introductory course in biology, physiology, zoology, or botany precede this course. Second session. 4 credits.

121. Ornithology, Zoology. Bird study planned to acquaint the students with native birds, and the class AVES (birds) in general. Identification, relationships, structure, habits, and distribution are studied in classroom, laboratory, and field. Time t.b.a. First session. 4 credits.

123. Natural History of Animals, Zoology. The identification, habits, food, distribution and other features of the more common Utah animals are studied. Also, methods of collection and preparation of specimens for study, displays, and storage, are emphasized. Major consideration is given to insects, birds, and mammals. A considerable amount of laboratory time is spent in making observations in the field and some longer field trips are taken. Prerequisite: Zoology 1 or Zoology 3 and 4. First session. 4 credits. Time t.b.a.
199. **Minor Problems, Zoology.** Deals with research problems similar to Zoology 201, but intended primarily for undergraduate majors in Zoology. Credit arranged. Time t.b.a. Both sessions.

201. **Special Problems, Zoology.** The student who wishes to engage in some line of original research and is qualified to do so may elect and study some topic of Zoology. Open to undergraduates only by special arrangement with the department. Credit arranged. Time t. b. a. Both sessions.