Section rehearsals (and less formal group activity in band, orchestra, and chorus) characterize Music Camp, June 21 - July 1.

The Art Workshop, June 7 - 20, emphasizes creative experience in working with elementary school projects.

The traditional Aggie Raquet Hike, scheduled for the first two weeks of the second session, provides practical instruction in camping followed by a ten mile trip into relatively primeval areas of Yellowstone Park.

Many short courses, workshops, institutes and conferences are planned for this summer.
Utah State Agricultural College

Bulletin

SUMMER SCHOOL
ANNOUNCEMENT FOR 1954

June 7 — August 20

FIRST SESSION
June 7 — July 16

SECOND SESSION
July 19 — August 20

Please Bring This Bulletin With You
When You Come to Register
A Message from the President of the College

It is a pleasure to invite the public to another Summer School at Utah State Agricultural College. The wide offering of courses, the numerous lectures, conferences, and special events, and the impressive list of visiting professors, together with our own distinguished faculty, all combine to promise an unusually stimulating summer.

As usual, special attention is being given to the needs of teachers, school administrators, supervisors and other school workers. Nevertheless, courses will be found in all departments for regular students, either graduate or undergraduate. In fact, freshmen just out of high school may to advantage begin their college work in June.

Opportunities for graduate work are especially good in the summer time. Library and other research facilities are all available, and major professors in the various departments have scheduled ample time for individual conferences and student guidance.

Records indicate that the first summer school was held at the College in 1903. Thus for more than fifty years the Institution has been operating on a year-round basis. The slogan this year is “Come Back to Utah State.” Whether you can come for the entire quarter, one of the two sessions, or a briefer period, don’t fail to spend some time on the Logan campus this summer. You will find significant things going on here.

[Signature]
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Asa Beecher ............................................................. Veterans Coordinator
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Dean, Summer School

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Assistant Professor of Poultry Husbandry

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and Extension Forester

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Instructor in Instrumental Music

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Assistant Professor of Veterinary Science

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Professor of Wildlife Management

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Assistant Professor of Sociology
Acting Dean of Students
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Associate Professor of Range Management

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Professor of English

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Professor of Bacteriology and Public Health

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Burbank, California

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Bureau of Health Education

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Dartmouth College

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Professor of Education
Head, Dept. of Vocational Education
Iowa State College

LAURENCE WILLHIDE, Ph.D.
RESIDENT FACULTY

Summer School Fees for 1954

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<th>Service</th>
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<td>Registration for Summer Quarter</td>
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<td>P.E. 176—Campus Trip Packing and Equipment Rental</td>
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<td>Physical Education 73 (golf) fee</td>
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<td>Forestry 96, 97; Range 98; Wildlife 99: $5.00 lab fee in each course</td>
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<td>Graduation Fee</td>
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<td>Music Clinic (non-credit)</td>
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<td>Social Work Certificate</td>
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<td>Master’s Degree Fee for binding and proofing Thesis</td>
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<td>Special Examination—per credit hour</td>
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<td>Cap and Gown Rental:</td>
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<td>Qualifying Examination in Graduation School:</td>
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<tr>
<td>Building Fee (First Session)</td>
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<tr>
<td>(Second Session)</td>
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<td>(Remitted to students who have paid the building fee for three preceding quarters.)</td>
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</table>

Private Instructors in Music

Rate per Lesson

<table>
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<tr>
<th>Instructor</th>
<th>Rate per Lesson</th>
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<tbody>
<tr>
<td>N. W. Christiansen</td>
<td>$3.50</td>
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<tr>
<td>Mrs. N. W. Christiansen</td>
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<tr>
<td>S. E. Clark</td>
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<tr>
<td>Max Dalby</td>
<td>$3.00</td>
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<tr>
<td>Mrs. Maxine Greenwood</td>
<td>$2.50</td>
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<td>Thelma Lundquist</td>
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<td>Mrs. Wallace Odd</td>
<td>$2.00</td>
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<tr>
<td>George Pahtz</td>
<td>$2.50</td>
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<tr>
<td>Micha Poznanski</td>
<td>$3.00</td>
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<tr>
<td>Patience Thatcher</td>
<td>$3.00</td>
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<tr>
<td>Eldon Torbensen</td>
<td>$3.00</td>
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<tr>
<td>Mrs. Walter Welti</td>
<td>$3.00</td>
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<tr>
<td>Walter Welti</td>
<td>$3.50</td>
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<td>Irving Wassermann</td>
<td>$3.00</td>
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All fees paid, with the exception of the registration fee, will be refunded to any student in resident who withdraws from school before the end of the quarter or either session, in proportion that the number of instructional weeks subsequent to withdrawal bears to the number of instructional weeks in the period covered by the fees paid.
Utah State Agricultural College

Utah State Agricultural College was established in 1888 under the provisions of the Land-Grant College Act. It serves the people of Utah and the intermountain west through three main divisions: (1) the instructional services of the college, (2) the Agricultural Experiment Station, and (3) the Cooperation Extension Service. The instructional services are organized in seven schools: Agriculture; Arts and Sciences; Commerce; Education; Engineering and Technology; Forest, Range, and Wildlife Management; and Home Economics. The Graduate School and the Summer School are also organized to render special services. Through all these schools, it is the policy of the college to make available to students opportunities for a broad program of collegiate education, including vocational, technical, scientific and so-called liberal education. The object is to foster all that makes right living, good citizenship, vocational efficiency, and general culture. Fundamentally, the college has always considered the main function of education in its broadest sense to be the preservation and improvement of the democratic way of life.

All departments offer curricula leading to the B.S. degree; many offer the M.S.; and some the Ph.D. Detailed requirements for these degrees are listed in the general catalog.

The college is located one mile east of the center of Logan on the brow of a hill overlooking Cache Valley. One mile still further to the east is the entrance to scenic Logan Canyon through which Highway 89 leads onto Bear Lake and points east, or north through Wyoming to the South entrance of Yellowstone Park.

With its population of sixteen thousand, Logan serves as a delightful center of student life. The climate in the summer time seldom becomes oppressively warm, while the evening canyon breeze makes summer nights especially comfortable. Student enrollment at the college during the regular academic year has in recent years exceeded five thousand. Enrollment in the Summer School ranges from one thousand to fifteen hundred.

Summer School Faculty Committees


CREDITS AND ADMISSIONS—Sharp, Cannon, Boyle, Hayward, Jones, Registrar.

FAMILY LIFE INSTITUTE—Skidmore, Bruce Gardner, Burke, Carter, Frandsen, Cawley, Wilcox.

GRADUATE COUNCIL—Williams, Pollard, Gardner, Murray, Frandsen, Stoddart, Wilcox, Hendricks.

GRADUATION—Mortimer, Carter, Kelker, Bennett, Stone, Bell.

HEALTH EDUCATION—H. B. Hunsaker, Dale Nelson, Stevens, Preston, Bahler.

TEACHER PLACEMENT—Oakes, Richardson, Cawley, Mortimer, Burke.

PERSONNEL AND GUIDANCE—Welling, Bell, Stone, Burns, Lewis, Bruce Gardner.

REGISTRATION—Jacobsen, Academic Deans, Registrar, Hayward, H. B. Hunsaker.

SUMMER SCHOOL RECREATION—H. B. Hunsaker, Heaton, Christiansen, Mortimer, C. Blaser, Welling.
The 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 scholarship program; there are the elementary and secondary teachers meeting certification requirements or proceeding toward advanced degrees as they continue in their regular teaching positions, and finally there are many special groups who spend a week or two weeks or longer in short courses specifically adapted to their professions or avocations.

The Utah State Agricultural College Summer School is organized to meet these diverse needs. For many years it has been a significant part of the institution. Since 1924 the program has been expanded to include visiting professors from different parts of the nation who supplement the regular faculty in various departments in giving advanced courses, conducting institutes, or giving one or more special lectures. Lyceum numbers in music and drama are also a significant part of the summer program.

A full quarter of study is available this summer, divided into two sessions, the first of six weeks from June 7 to July 16, and the second from July 19 to August 20. Some courses in the first session are arranged to terminate in three weeks, thus making it possible for individuals to complete an intensive program for college credit if they cannot be on the campus for a longer period.

In general the 1954 summer offering has been planned to meet the needs of the groups indicated above. First, many regular students of undergraduate standing will wish to use the summer quarter to complete requirements earlier than otherwise possible. Similarly, many high school graduates may want to enroll in college this summer in order to get their advanced schooling started without delay. Most departments are offering freshman courses to meet these needs, as well as more advanced courses meeting graduation requirements. Second, teachers planning to renew certificates or meet certification requirements for Utah and surrounding states will find that specific courses have been listed to meet their needs. Course needs for other special groups have also been kept in mind, and suitable offerings made available. A third group which the Summer School seeks to serve directly is the large number of graduate students who find it advantageous to pursue their school work in the summer time. A detailed description of the policies of the graduate school is included later in this bulletin.

The list of short courses, workshops, and institutes is especially impressive this year. Each is described in some detail in a later section of this catalog.

REGISTRATION

The student load during the Summer Quarter is determined by the deans of the various schools. A maximum of nine credits may be taken the first session, and eight the second. Students are reminded that this number cannot be exceeded without the special approval of the dean of the school concerned. Nor will completion of correspondence study or extension class work paralleling Summer School be permitted if the combined total of credits exceeds the above figures unless special approval has been granted.

Students who desire to register for credit in research problems or field studies should 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 for the Summer Quarter will take place Monday, June 7 in the Main Reading Room of the Library, beginning at 8 a.m. and continuing to 3 p.m. Classes will begin Tuesday morning, June 8. 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 (M276). The first step in registration is to call at the Registrar's Office to obtain registration forms and instructions. Students will find it to their advantage to send in the registration request form on the last page of this bulletin before registration day. Although this is not necessary it will insure that all previous records as well as registration forms will be ready for them on June 7.

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. Regularly scheduled session classes will begin Monday, July 19, and continue five weeks, to August 20. 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 10 one-hour lecture periods or 10 three-hour laboratory periods. Registration forms for any session period will not be accepted after the period has ended.

Scheduled classes, whether first or second session, may not be given if fewer than eight students register. If it is possible to do so, any course listed in the general catalog will be given if eight or more students request it. Requests should be directed to the head of the department concerned.

All graduate students must register with the Dean of the Graduate School, Dr. J. Stewart Williams, who will be in the Main Reading Room of the library on Monday, June 7; thereafter, at his office in the Main building.

CLASS SCHEDULE

It is anticipated that all classes will meet at the time and place listed in this catalog. If changes are necessary, a corrected schedule will be available on registration day, June 7. 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 not listed in the schedule bulletin may be arranged by agreement with students and teachers.
SPECIAL CONFERENCES, INSTITUTES, SHORT COURSES, AND WORKSHOPS

Coaching School—June 1-5

The twenty-eighth annual Coaching School at Utah State Agricultural College will feature “Jim” Tatum, head football coach at the University of Maryland and “Tippy” Dye, head basketball coach at the University of Washington. Tatum was named football coach of the year in 1953, and Dye is generally considered to be one of the best basketball coaches in the West. Both men are keenly interested in the high school foundations of their respective sports. Lectures on baseball, track, and athletic training will also be offered.

Discussion groups, demonstrations, and regular class work will be held for five consecutive days, June 1 through June 5. Individuals may enroll for either football or for basketball or both.

If possible, reservations for enrollment in the Coaching School should be sent in before the opening date, June 1. Registration in the School carries one credit for each course for the week. Free playing privileges at the Logan Golf and Country Club are extended to those who are enrolled.

Industrial Education—June 1-June 11

Intensive courses in Industrial Education will be given during the two weeks' period, June 1 through June 11. Visiting professors will be Mr. Clifford G. Dobson, who will give the course **Instructional Aids**, I.E. 102; and Mr. M. Ray Karne, who will give a course in **Measurements in Industrial Education**, I.E. 254.

It is suggested that individuals interested in enrolling for these courses communicate with Professor Williams Mortimer, head of the department. The courses will be taught with the cooperation of the Utah State Department.

Vocational Education Conference. Under the sponsorship of the Vocational Education Division of the Utah State Department of Public Instruction, a conference for Vocational Education teachers will be held on the campus during the first week of Summer School. Teachers of Industrial Arts, Industrial Education, Vocational Agriculture, and Home Economics will participate. Detailed schedules will be announced later.

Girls’ State—June 6-13

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 6. Faculty members will cooperate by giving lectures and conducting course work.

School Administrators Conference in Cooperation with the Utah State Cooperative Project in Educational Administration—June 7-11.

“The Role of the Administrator in the Improvement of the Instructional Program” will be the topic developed at this conference. Emphasis will be on the status of the on-going district projects and how other school districts may initiate and develop activities directed toward the evaluation and improvement of the instructional program.
Part of the conference will be devoted to the culmination of certain phases of the various coordinated state activities sponsored cooperatively by the three higher institutions of Utah and the Department of Public instruction. The Utah project has been developed as a part of a national Cooperative Project in Educational Administration sponsored by the W. K. Kellogg Foundation. Participants in the conference will include consultant representatives from Stanford University, the directing institution for the Pacific-Southwest Region of the C.P.E.A., and from George Peabody College for Teachers, the directing institution for the Southern States Region of the C.P.E.A.

Art Education Workshop—June 7-26

An art education workshop for teachers is again being held on the campus through the first three weeks of the summer session, June 7 to June 26. Two members of the State Curriculum Committee in Art are listed as special instructors for this course, and other members of the committee will cooperate. The workshop is planned for the regular classroom teacher. It is anticipated that theory and background material will be discussed but the major emphasis will be upon learning how to do what is called for in providing good art experiences for the child. Five credits may be earned by participating in the workshop and it is anticipated that this will take the full time of the teachers for the first three weeks. Students who enrolled in the workshop last year may do so again for more advanced work. New students, of course, may also enroll.

Utah State Theatre Workshop—June 7 to July 16

Utah State’s Theatre Workshop is now in its sixth year. Plays that have been produced in the past summers are: “Antigone,” Anouilh; “The Importance of Being Earnest,” Wilde; “Thunder Rock,” Ardrey; “The Wingless Victory,” Maxwell Anderson, and “The Lady’s Not for Burning,” Christopher Fry.

The actors and production crews are members of the class in Practical Theatre, Speech and Drama 66 and 166, and other interested students. Summer School students and townspeople are invited to participate. The plays are presented before college and local audiences in a well-equipped plant. An attempt is made to produce drama as near the professional level as possible.

School Custodians Conference—June 14-16

A workshop for school custodians and other school maintenance personnel will be held for the three days, June 14-16. The conference will be directed by Harold M. Wadsworth, Superintendent of Buildings and Grounds at the College, with the cooperation of the Utah State Department of Public Instruction. It is expected that various matters of school maintenance will be given careful consideration.

School Lunch Program—June 14-16

The ninth annual school lunch workers conference will be conducted for the supervisors and managers of such lunch programs during the three days, June 14-16. Daily programs will be announced.

School Bus Drivers Conference—June 17-18

An intensive conference for school bus drivers will be held during the two days, June 17-18. Owen Slaugh, head of the department of
Automotive Technology, assisted by representatives from the State Department of Public Instruction and the State Highway Patrol will be in charge of the conference. Problems of maintenance and efficient operation of school buses will be considered.

Health Conference—June 21-25

The annual Health Conference is scheduled for Monday through Friday, June 21 to June 25. Dr. Fred V. Hien, Division of School Health, American Medical Association, will be the chief consultant. He will be supported by leaders from the Utah State Department of Public Instruction, the Utah Department of Health, and many of the national health organizations represented in the state.

The Conference will deal particularly with problems of health within these cooperating fields and areas. Enrollees are especially solicited from public school leaders in nutrition, physical education and recreation, mental hygiene, and school health; and from state leaders in the various health departments, agencies, and associations organized and operating with the state.

See Public Health Course 158 for credit allowance.

Music Camp—June 21-July 2

The Music Camp is one of the oldest in the West. Band, orchestra, and chorus are included. It is designed for music directors as well as high school students who have had training in their respective music organizations. Directors and students are given an opportunity to perform and study under the direction of eminent music educators.

Clarence Sawhill of the University of California at Los Angeles, nationally known music educator, will direct the band. Dr. Roy E. Freeburg, equally well known in the field of vocal music, from San Francisco State College, will direct the work in chorus. In charge of orchestra will be Nicholas Furjanick, supervisor of instrumental music at the Long Beach City Schools.

A special feature of the Music Camp this year will be a dance festival under the direction of Miss Pauline Fuller, of the Physical Education Department at the College. The work in dance is open to high school girls who will be scheduled for instruction and related activities two hours daily.

Students will be housed under supervision in the Rural Arts Building. Housing and board will be provided at cost. Students may participate in one or more of the programs. Numerous activities are planned for the students, permitting them to enjoy a vacation and at the same time improve their musical performance. Registration fee covering admission to the entire course, plus housing, is $14.00. Students who do not require housing pay $7.50 registration fee. Since registration in the Camp is limited, interested students and teachers should send notification early concerning their intentions to enroll.

Dance Festival—June 21—July 2

In connection with the Music Camp a special course in dance for high school girls will be offered during the two-week period June 21 to July 2. The schedule is so arranged that girls taking part in the Music Camp may also enroll for the classes in dancing which will meet two hours daily. Other girls wishing to participate are invited to join. Advance registration should be made with Miss Pauline Fuller, Department of Physical Education.
Elementary Supervisors Conference—June 21-July 2

A conference and workshop for elementary supervisors will be held during the two weeks' period, June 21 through July 2, under the direction of Miss Blanche Nelson, supervisor from Cache County School District, and Professor Caseel D. Burke, head of the Department of Elementary Education at the College. A detailed program of the conference will be announced later. It is anticipated that various specialists in the curriculum areas of the elementary school who are serving as visiting professors in the 1954 Summer School will serve as guest consultants to the various sessions of the conference.

Family Life Institute—June 28, 29 and 30

The annual Family Life Institute has become a traditional part of the Summer School program at Utah State Agricultural College over the years. Mrs. Dorothy T. Dyer, President of the National Council on Family Relations, will be the leader.

Home Economics Conference on Nutrition—July 1-2

Dr. Pearl P. Swanson, Assistant Director of the Experiment Station and Professor of Nutrition at Iowa State College, will be the visiting lecturer on nutrition on July 1 and 2. An 11 o'clock lecture on the application of nutrition to everyday living will be given each day. In the evenings, informal discussions on nutrition problems will be held. All summer school students and the public are invited to attend the lectures and discussions.

Workshop in Physical Education in the Elementary School—July 5-17

A two-week workshop in Elementary School Physical Education is scheduled for the period July 5-17. The members of the group will meet two hours daily and will study the best material and methods for conducting activities which will be usable in elementary schools.

Miss Elsa Snieder, Specialist for Health Instruction in P.E., Office of Education at Washington, D.C., will be the instructor of the workshop. Miss Snieder has been in Utah and has conducted several regional workshops in different parts of the country.

Two hours of college credit will be given for the completion of the workshop. (P.E. 2825)

Alcohol Education Conference—July 7-8

In cooperation with the Utah State Board for Alcohol Education, a conference will be held on the campus July 7 and 8. Daily lectures will be given at the 11 o'clock hour and workshop sessions will be held in the morning and afternoon.

Management Institute Training Conference—July 15-16

The third Management Institute Training Conference will be held on the Campus Thursday and Friday, July 15 and 16. Panel discussions and workshop sessions with leading Utah industrial executives participating will characterize the conference. Dean Arthur Upgren of the School of Business Administration, Dartmouth College, who is the guest lecturer at the College for the week, will serve as consultant.
Future Homemakers of America Meeting—July 19-23

The Pacific regional meeting of the Future Homemakers of America will be held on the campus during the period July 19-23. This conference is one of four national meetings. Three hundred delegates from the eleven western states and Hawaii will be in attendance. The focus will be on leadership training with emphasis on responsibilities unique to F. H. A.


LECTURE SERIES

A strong tradition of summer schools at Utah State has been to reserve the eleven o'clock hour each morning in the first session for the lecture series. This year a particularly distinguished list of speakers has been engaged including: Dr. Henry H. Hill, President, George Peabody College for Teachers, Nashville, Tennessee; Dr. David Fellman, Professor of Political Science, University of Wisconsin; Dr. Fred V. Hien, Division of School Health, American Medical Association; Dr. Pearl Swanson, Professor of Nutrition, Assistant Director, Experiment Station, Iowa State College; Mrs. Dorothy T. Dyer, President, National Council on Family Relations; and Dr. Arthur Upgren, Dean of the College of Business Administration, Dartmouth University. More information about these individuals will be found in the final section of this catalog.

Students who wish to earn credit from the lecture program enroll in Political Science 170.

SUMMER SCHOOL AT BRANCH AGRICULTURAL COLLEGE

The Branch Agricultural College at Cedar City, Utah, also operates a Summer School for one session, scheduled this year from June 7 through July 16. Individuals interested in information concerning this session should address their inquiries to Director Daryl Chase, Branch Agricultural College, Cedar City, Utah.
GRADUATE SCHOOL
J. STEWART WILLIAMS, DEAN

Organization

Graduate study is supervised by the Dean of the Graduate School, assisted by the Graduate Council. This council consists of one representative from each of the seven schools of the college, and the Libraries. Members of the council are appointed by the President in December of each year to serve a one-year term commencing the first of July following.

The Graduate Council for 1954-55 is as follows:
- School of Agriculture—Professor Leonard W. Pollard
- School of Arts and Sciences—Professor Eldon J. Gardner
- School of Commerce—Professor Evan B. Murray
- School of Education—Professor Arden Frandsen
- School of Engineering—Professor M. Greaves
- School of Forest, Range and Wildlife Management—Professor Laurence A. Stoddart
- School of Home Economics—Professor Ethelwyn B. Wilcox
- Libraries—Professor King Hendricks

Admission to 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. Seniors in this college who have an average of "B" or better in all their courses in the junior and senior years, 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 in the Graduate School.

An application for admission accompanied by transcripts of all previously earned credits and letters of recommendation should be presented as far in advance of the day of registration as possible.

The applicant must be approved by the department in which he proposes to work.

Students who cannot qualify for the degree program in a particular field may be admitted to the Graduate School as non-candidate students. Admission to the Graduate School does not imply admission to candidacy for a higher degree.

Master's Degree

General: The Master of Science degree is offered in most of the basic biological, physical, and social sciences and in various educational, industrial, and professional divisions of the college. The specific departments in which the Master of Science degree is given, together with the courses provided by the departments, may be determined by consulting the departmental statements provided in this catalogue under the various undergraduate schools of the College.

Qualifying Examinations: A qualifying examination is required by the Graduate School and may be taken prior to registration. If not taken, this examination and any qualifying examination required by the student's department must be taken as soon as possible after registration. The results of these examinations become a part of the student's file in the graduate office. If a student is found to be deficient in the work basic to the field in which he proposes to study, he may be required to take
undergraduate courses, which do not count in the minimum requirements for the Master's degree, to satisfy the deficiency.

**Supervisory Committee:** When it has been determined that a student is acceptable as a possible candidate for a higher degree, the major professor will suggest a committee to assist in guiding the student's program and in conducting necessary additional qualifying examinations and the final examination. When the student's program has been determined and approved by his committee, he will be advanced to candidacy for a degree. Advancement to candidacy must be accomplished before the end of the winter quarter if the student is to graduate at the following commencement. When the student's research is best supervised by a federal collaborator, or other person who is not a member of the regular teaching staff, such collaborator or other person may be designated as thesis director. This thesis director is a member of the student's committee.

**Student Program:** The student program for the Master of Science degree must include:

1. At least 15 credits taken on the Logan campus;
2. At least 45 credits in courses numbered 100 or above which are approved for graduate credit;
3. At least 10 credits, exclusive of thesis, in courses numbered 200 or above;
4. A thesis with 9 to 15 credits, or thesis alternate as described below.

**Thesis:** Each candidate for a Master of Science degree, usually 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. The thesis must be 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 final approval by the department, the thesis must be typewritten in standard form; and a copy must be submitted to each member of the student's Advisory and Examining Committee at least two weeks before the date of his final examination. After approval by the committee and the department, and after the student has successfully passed the final examination, four copies of the final draft of the thesis must be deposited in the graduate office. Two of these copies will be deposited in the library, another sent to the department, and the fourth returned to the student.

**Thesis Alternate:** The supervisory committee may permit the substitution of three advanced reports, valued at 6 to 10 credits, for the regular thesis. These are known as "Plan B" reports. The Master's program is otherwise the same under "Plan B."

For students working under "Plan B" in general agriculture, the Dean of the School of Agriculture will select a major professor to be the chairman of the supervisory committee. The student's program must include a minimum of 6 credits each in the fields of Plant Science, Animal Science, and Agricultural Economics.

**Final Examination:** Each candidate for a Master of Science degree is 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 or both 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 are made by the Dean of the Graduate School. A member of the Advisory and Examining Committee, other than the major professor, or a representative of the Graduate Council is appointed to act as chairman of the examination and submits 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 should be not later than May 10.
Time Limit: 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 Course Credit: The amount of extension or off-campus credit to be allowed will be determined in consideration of the student's entire course program. In no case will more than nine quarter hours of extension credit be allowed as counting toward a degree and the total of off-campus credit may not exceed 15 hours, exclusive of thesis.

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. Credit toward a Master of Science degree is not granted for correspondence study.

Transfer Credit: A maximum of 9 quarter credits of graduate work satisfactorily completed at another approved Graduate School may be allowed toward a Master of Science degree. The extent to which such credit may reduce either the course or the residence requirements will be determined by the student's committee.

Credit Load: Maximum load for full-time graduate students is 16 credits. Maximum for assistants engaged in teaching or research is 12 credits.

Degrees of Civil Engineer and Irrigation Engineer

The School of Engineering and Technology offers a two-year graduate program in Civil Engineering and Irrigation Engineering leading to the degrees of Civil Engineer and Irrigation Engineer. The plan of study for these degrees is similar in many respects to plans at other western institutions for degrees of Civil Engineer, Mechanical Engineer, etc.

Special Requirements: The student program for these degrees includes:

1. A minimum of 6 quarters of study, of which at least 3 quarters must be in residence at Utah State Agricultural College.
2. Completion of 30 credits of approved courses.
3. Completion of a minimum of 30 credits of graduate courses (200 series), exclusive of thesis.
4. Completion of an adequate thesis based on a research program for which a maximum of 30 credits may be allowed by the committee.

For candidates who present the Master of Science degree in an appropriate field of engineering, and who have completed a thesis project for this degree, the requirements will be modified as follows:

1. A minimum of 3 quarters in residence
2. Completion of a suitable program of study of not less than 45 credits, of which
   (a) at least 30 credits must be graduate courses (200 series), and
   (b) a maximum of 20 credits for thesis.

The suggested curriculum for these degrees is detailed in the section on engineering.

Degree of Doctor of Philosophy

General: The degree of Doctor of Philosophy (Ph.D.) is awarded by the Utah State Agricultural College in recognition of high attainment and productive scholarship in a special field of learning.
Admission to the Graduate School to work toward the degree of Doctor of Philosophy is obtained in the same manner as for the Master’s degree. Qualifying examinations are similarly required, and the student’s program is likewise directed by a supervisory committee.

**Student Program**:
The student program for the Doctor of Philosophy degree must include:

1. Three years of full-time graduate study above the Bachelor’s degree. If the student has a Master’s degree, then two years will be required. The student’s supervisory committee may recommend that part of this program be taken at other schools, but the last year must be spent in residence at Utah State Agricultural College;

2. A minimum of 135 credits of approved graduate study beyond the Bachelor’s degree, 90 credits beyond the Master’s degree;

3. A major field to which approximately two-thirds of the program is devoted, and a minor field to which approximately one-third of the time is devoted;

   The minor may be divided between two suitably related areas. A Master’s degree in a suitably related area may satisfy the minor requirement.

4. A research problem on which a thesis will be presented. Credits for this thesis may not exceed 45, and work on the thesis should ordinarily occupy most of the third year, but may be carried on with course work throughout the program.

**Language Requirement**:
A reading knowledge of at least one foreign language is required of all candidates. The particular language required will be that which meets best the applicant’s needs. Requirement of a second language will be optional with the department in which the student is taking his major. The degree of proficiency of the applicant to use the required language in his chosen field and his knowledge of the grammar and structure of the language will be determined by a committee appointed by the Dean of the Graduate School from members of the Language department.

The language examination should be taken before the beginning of the third year of study.

**Comprehensive Examination and Candidacy**:
Written and oral examinations are conducted by the supervisory committee and the departments concerned, usually in the last quarter of the second year of the student’s work, to determine his fitness for admission to candidacy for the degree of Doctor of Philosophy.

**Thesis**:
A completed dissertation approved by the department must be presented to the supervisory committee not later than May 1 of the year in which the student will graduate. The dissertation must show ability to do critical and independent research. It must present a contribution to knowledge in scholarly fashion.

**Final Examination**:
The final examination in defense of the candidate’s thesis will be conducted by the supervisory committee not later than two weeks before the date of commencement.

**Teaching and Research Assistantships**

A number of teaching and research assistantships in various departments of the college are available each year to graduate students. Teaching assistantships carry a stipend of $850 for one-third teaching service on a nine-month basis. Remuneration for research assistantships may vary from $850 to $1,500 dependent upon the time of service involved. Generally assistantships are arranged so as to allow the student to complete work for his Master’s degree in two years. At present, assistantships are available in the following departments: Animal

Graduate Programs in Education

The following graduate degrees are offered in the field of Education:

Master of Science. The Master of Science degree is awarded to those students completing a full year of graduate work in specified courses and writing a research thesis for which 9 to 15 credits is allowed. The thesis requirement may be fulfilled by the writing of two field studies.

Master of Education. The Master of Education degree is granted in each of the following areas:
- Master of Education in School Administration and Supervision
- Master of Education in Secondary Education
- Master of Education in Elementary Education
- Master of Education in Vocational Education

The course of study leading to the Master of Education degree in each of the above areas has for its purpose the preparation of thoroughly prepared teachers, supervisors, and administrators. It aims at providing a broad foundation in the field of education and in the particular area of specialization, and differs from the Master of Science degree by providing more flexible requirements designed to meet the specific needs of the individual student. This professional degree emphasizes proficiency in the interpretation and application of research.

Doctor of Education. The professional degree of Doctor of Education is designed especially to prepare for leadership and expert service in the field of education. Requirements for this degree include the development of a high degree of competence in an area of specialization in education plus a thorough development of skills and knowledge of the broad field of education and in a supplementary field other than professional education.

Detailed requirements for the above degrees may be obtained at the office of either the Dean of the Graduate School or the Dean of the School of Education.

Graduation

Requirements for graduation in the various schools and departments of the College are listed in the general catalog. In most cases students can complete many of these requirements by attendance during summer quarters. In every department, one or more advisers are assigned to guide the student's work leading toward graduation. Students planning to attend during the summer are invited to write to the departments in which they are interested for evaluation of credits and other such guidance services.
Graduation exercises are held only once during the year—at the end of the spring quarter. Students who complete all requirements during the summer may receive official statements of completion by applying to the chairman of the Graduation Committee. Their degrees will be conferred at Commencement the following spring.

Speech Clinic

The Speech Clinic provides special classes meeting the needs for speech correction in this area. Special attention is given in the summer meetings to groups of children. The Clinic is also available to college students who have speech problems. The types of problems handled include stuttering, disorders of articulation, cleft palate, paralytic speech, foreign accent and dialectic speech, and voice problems.

The testing of hearing is an important part of the clinic services and available to all college students.

Poultry Flock Testing Training School

The twenty-first Annual Training School for the training and qualifying of poultry flock-testing and pullorum disease-testing agents will be held at the College during the month of August. Dates will be announced early in the summer. Those interested should write to the Department of Poultry Husbandry for detailed information.

Living Accommodations

The housing situation is better at Utah State than it has been for many years. Nearly any type of accommodation desired can be obtained through the College Housing Office or private home owners. Many Logan City residents list their apartments, rooms, or board and room accommodations with the College Housing Office, Room 133, Main Building. Such listings may be had by anyone who wishes to call for them. The Housing Office has the following accommodations available for Summer School students:

**Lund Hall**, offers campus dormitory accommodations for women.

**Kerr Hall**, located in downtown Logan, offers housing for men students. Both of these halls have served summer school students satisfactorily for several summers.

"Pre-fab" and quonset apartments are available for couples or families on a monthly basis.

Lund Hall because of its size will also be available for some teachers or married couples who wish to remain on the campus. Some limitation in reservations for this hall is made so those desiring to live there should make reservations as early as possible.

On page 69 in this catalog there is a form for use in making application for housing. The College Housing Office operates on a year-round basis. Inquiries are welcomed at any time.

Nursery School

The facilities of the College Nursery School will be available to pre-school children of Summer Session students. Enrollment is limited to children between the ages of 2½ and 5 years. Students in certain classes will use the Nursery School as a laboratory for observing and working with pre-school children. School sessions: Monday through Friday 8-11 A.M., first session only. Application for enrollment should
be made in writing on or before registration day. Children will be accepted in order of application. Inquiries should be directed to Dr. Bruce Gardner, Head, Department of Child Development and Parent Education. Tuition: $5.00 for six weeks.

**Teachers’ Certificates**

By attending the Summer Quarter of Utah State Agricultural College, students may meet any of the requirements for Utah certification with the exception of student teaching. Experience indicates that summer school offerings at the College usually include essential courses required for certification in other states as well.

**Teachers’ Placement Bureau**

The College Teacher Placement Bureau 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. The Bureau is located in the Main Building, Room 276.

**Veterans’ Administration**

The College maintains a veterans’ bureau on the campus where all GI students may receive guidance service and where provisions for the clearance of veterans for registration and so forth is made. In this connection, it should be pointed out that veterans under P.L. 346 who completed the Spring quarter may attend Summer School under the GI Bill, or they may take the usual summer vacation, and in either case their entitlement will be active for the Fall quarter. They are reminded, however, that all training under this bill ends July 25, 1956.

Veterans under P.L. 346 who attended Summer School last year and who have been teaching school during the regular school term may continue to attend Summer School under the GI Bill. In fact, they must attend at least one session of five weeks duration in order to keep their entitlement active. Either the first or second session at USAC will thus qualify. It will be necessary for such veterans to submit a statement from some responsible official of their school stating that they are employed as teachers and giving the beginning and ending dates of the school term.

Veterans who plan to take graduate work under P.L. 346 must make application for graduate work while they are still in training in undergraduate work. Applications made after graduation will not be granted. Veterans who come under Public Law 550 (Korean Bill) will not be subject to the above requirements. Veterans under this bill must begin their training within two years after their discharge from the service and after that time they must not discontinue their training for more than twelve consecutive months. All training under this bill must be completed within seven years from the date of discharge.

While summer school attendance is not required in this program, veterans will usually find it advantageous to plan their work on a four-quarter basis, including the summer term.

Further information may be obtained by addressing:

Utah State Agricultural College
Office of Veterans’ Affairs
Logan, Utah
AGRICULTURAL ECONOMICS AND MARKETING

G. T. BLANCH, V. L. ISRAELSEN, Professors; E. M. MORRISON, R. H. ANDERSON, Associate Professors; WELLS M. ALLRED, Assistant Professor; L. H. DAVIS, Instructor; W. P. THOMAS, Professor Emeritus.

100. Managing Personal Finance. Principles and problems of personal financing and financial security. 3 credits. Daily at 10 and one hour arranged. First session.

102. Principles of Farm Management. Principles underlying organization, management, and financial success of farms. 3 credits. Daily at 8 and one hour arranged. First session.


215. Special Problems in Agricultural Economics. Credit and time arranged. Both sessions.

AGRICULTURAL EDUCATION

STANLEY S. RICHARDSON, Professor

291. Special Problems for Ag Teachers. For teachers of vocational agriculture who desire to develop a more practical program for future, young, and adult farmers. Held during Agricultural Teachers Summer Conference. Daily 8 to 11 and 1 to 4 for one week. 2 credits. First session.

Note: If there is a need, the following courses will be offered during the four weeks after the completion of course No. 291:

124. Methods of Teaching Farm Mechanics. Scope of mechanics in agriculture, lesson planning, course of study preparation, shop equipment and management, skill requirements, and supervised practice. Daily 10 to 12 except Friday. 3 credits. First session.

225. Special Problems in Agricultural Education. A consideration of needs of individual students and special types of service. Daily 8 to 9 for four weeks. 1-2 credits. First session.

AGRONOMY

D. W. PITMAN, D. C. TINGEY, H. B. PETERSON, Professors; W. H. BENNETT, S. A. TAYLOR, Associate Professors; D. R. McALLISTER, Assistant Professor.

150. Special Problems in Agronomy. Conferences or library or laboratory investigations. Subject, time and credit arranged. Both sessions.

218. Special Problems in Agronomy. Special problems in crop production, crop breeding, soil fertility or other phases of agronomy work are investigated. Students review literature on the problem and conduct experiments in the laboratory or on field plots. Credit and time arranged.


Any course listed in the regular catalog will be given in the summer sessions upon petition of ten or more students who may need and desire such a course.
ANIMAL HUSBANDRY
J. A. BENNETT, L. E. HARRIS, Professors
M. A. MADSEN, H. STEFFEN, Associate Professors

230. Research in Animal Breeding. Time and credit arranged. Bennett
240. Research in Animal Nutrition. Time and credit arranged. Harris
250. Research in Animal Production. Time and credit arranged. Madsen, Steffen

ART
H. REUBEN REYNOLDS, Professor; JESSE LARSON, Associate Professor; EVERETT THORPE, WARREN B. WILSON, Assistant Professors.

Visiting Faculty
HERBERT BARTLETT, DELBERT NAPPER

1. Art Structure and Design. Creative approach to line, mass, form, pattern, texture, color, and their combined relationship to design construction. 3 credits. Daily 9-11. First session. Thorpe
3. Creative Expression. Studio experience in developing spontaneous expression and freedom of graphic interpretation. Excellent for the layman who thinks he cannot express himself artistically, but who desires to do so. 3 credits. Daily 9-11. First session. Larson
4. Mural Painting. Techniques for designing and developing of mural painting. 3 credits. First session. Thorpe
108. Drawing and Painting. Each credit desired represents thirty hours of work. 3 credits. Daily 9-11. First session. Larson
111. Fabric Design and Application. Projects in creating designs of character and beauty and applying them to suitable textiles in techniques of block print, stencil, hooked rug, tie and dye, freehand painting, batik. 3 credits. Daily 7-9. First session. Larson
112. Ceramics. Art of making pottery, tiles, figurines, etc. 3 credits. Daily 9-11. Second session. Wilson
152. Art Methods for Elementary Grades. Methods of teaching drawing, painting, design and handwork in the elementary schools. 3 credits. Daily 1. Second session. Staff
153-154. Art Education Workshop. This course is designed to give teachers a chance to explore the field of art experiences, to work with many types of art media, to explore the background material and to develop a philosophy of art suited to the learning needs of the growing child. Attention will be given to the correlation of the art program to the other subjects of the elementary curriculum and some time will be devoted to the place of research and methods for its use in art activities. This course is designed to give help to the regular classroom teacher. 3-5 credits. Daily 8-11, 1-4. First session. June 7 to June 26. Bartlett, Napper, Reynolds
171-271. Special Studio. Individual work on specific problems. Time and credit arranged. Both sessions. Staff
272. Art Research and Special Problems. Time and credit arranged. Staff
BACTERIOLOGY AND PUBLIC HEALTH

KENNETH R. STEVENS, Professor
LEWIS W. JONES, Associate Professor
GARTH A. JAMES, Instructor

Bacteriology

10. **Elementary Bacteriology.** Basic concepts and practical applications. 5 credits. 7 to 9 Daily. First session. Stevens
Second session, 5 credits, 7 to 9 Daily with 6 class hours arranged. Jones

294. **Advanced Bacteriological Problems.** Special assignments, reports, and discussions. Preparation of a comprehensive and critical review. Time and credit arranged. Both sessions. Staff

299. **Thesis Research.** Time and credit arranged. Both sessions. Staff

Public Health

155. **School Health.** Meets state certification requirements in health education. 3 credits. 9 Daily. First session. James
Second session. 9 Daily with 5 class hours arranged. James

158. **Workshop in Health Conference.** Attendance required at all sessions of the Health Conference, and participation in a functional work project. June 21 to 25. 1 Daily. 1 1/2 credits. Stevens

254. **Advanced Public Health Problems.** Special assignments, reports, and discussions. Preparation of a comprehensive and critical review. Time and credit arranged. Both sessions. Staff

BOTANY

W. S. BOYLE, ARTHUR H. HOLMGREN, Associate Professors.

20. **Common Plants of Utah.** A study of plants characteristic of the valleys and canyons of Utah. Wherever possible plants will be studied in their native habitat. Especially designed to aid teachers in the grades and secondary schools. 5 credits. M T W Th. 1. Lab M T W Th. 2-5. First session. Holmgren

25. **Elementary Botany.** A survey of the plant kingdom. Emphasis on comparative morphology and reproductive processes of representatives of the major groups of plants. 5 credits. Daily 1-5. Second session. Boyle

BUSINESS ADMINISTRATION

NORMAN S. CANNON, Assistant Professor
STANFORD L. JOHNSON, Instructor

29. **Managing Personal Finances.** Designed to aid in meeting the growing complexity of personal finance: how to avoid financial entanglements, installment buying, borrowing money, owning or renting a home, investing and speculating in securities, every day legal problems, dealing with illness, death, personal taxes. Second session. Daily 9. 3 credits. Johnson

63. **Salesmanship.** The development and application of modern sales technique. Analysis of the retail store salesman's functions under the present competitive selling conditions. Emphasis will be given such typical selling problems as prospecting, meeting objections, overcoming
price resistance, and developing repeat business. Second session. Daily 8. 3 credits.


150. **Managerial Accounting.** Emphasizes the use of accounting as a tool of control for management. Major aspects include budget and managerial control, elements of an accounting system, and problems of cost interpretation. First session. Daily 7. 3 credits.

**CHEMISTRY**

SHERWIN MAESER, DELBERT A. GREENWOOD, Professors; MELVIN C. CANNON, Professor.

10-11. **General Chemistry.** Fundamental principles of inorganic chemistry. Both terms. 5 credits each term. Open to any matriculated students. Lecture daily at 10. Lab. daily 2-5.

125-126. **Applied Organic Chemistry.** Biological applications are emphasized. Designed especially for students in agriculture, home economics, and nutrition. Both terms. 5 credits each term. Lecture daily 8. Lab daily 2-5. Prerequisite Chemistry 10 and 11, or equivalent.

298. **Research.** Senior or Graduate Students in Chemistry may register for research in any branch of the subject. Time and credit arranged.

**CHILD DEVELOPMENT**

BRUCE GARDNER, Associate Professor

DOROTHY LEWIS, RUTH MALIN, Assistant Professors

LORRAINE STOREY, Nursery School Assistant

67s. **Child in the Family.** To help students develop a philosophy of family living as a desirable background for the child; understanding of reproduction, prenatal care, and care of the mother and baby during infancy; fundamentals of growth and development and an introduction to child guidance. Either the 9 or 10 o'clock hour should be free some days during the week to arrange for scheduled observations of children in the nursery school. 3 credits. Daily 8. First session.

140s. **Special Problems.** Independent study for qualified students in Child Development, upon consultation with the instructor. Time and credit arranged. First session.

174s. **Nursery School Methods.** Must parallel practice. Special consideration will be given to understanding the needs of individual children in the nursery school, and evaluating principles used in their guidance. 3 credits. Daily 12. First session.

175s. **Practice Teaching in the Nursery School.** An opportunity to apply principles of child guidance in the nursery school. Open to qualified students upon consultation with the instructor. 3 credits. Daily 8-11. First session.

190s. **Seminar in Parent-Child Relations.** Approaches to understanding the behavior of the individual child, with emphasis on behavior problems of the normal child. Especially recommended for young parents and for teachers of young children. 1 credit. MW 1. First session.
CIVIL ENGINEERING

J. E. CHRISTIANSEN, E. M. STOCK, Professors;
A. ALVIN BISHOP, Associate Professor;
WILLIS A. TINGEY, REYNOLDS K. WATKINS, Assistant Professors.

Summer Surveying Camp

C. E. 87. Summer Surveying Camp. This camp is conducted each year during the three weeks preceding the opening of the fall term. The offerings include: Highway curves and earth work, 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 facilities 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 ideal for all types of surveying work, including hydrographic work on Logan River and reservoir. Two hydro-electric plants are within areas; 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. The excellent climate helps make this an outstanding surveying camp.

The student is responsible for his own transportation to the field and return each day, his living expenses, and the registration fee. Prerequisite: C. E. 85. Immunization for Rocky Mountain Spotted Fever recommended. 4 credits. September 6 to 24. Daily 8 to 5.

Tingey and Staff

CLOTHING, TEXTILES AND RELATED ARTS

FLORENCE GILMORE, Associate Professor
RUTH CLAYTON, Instructor
OLETA MOORE, Instructor

6. Construction Problems. Open to anyone who wishes to develop skill in construction techniques. Daily 7-10. 3 credits. First session. Moore

41. Weaving. Designing and weaving of personal and household articles. Aim of the class is to develop an understanding of basic fabric construction and skill in the various techniques of hand weaving. Three weeks only; June 14-July 2. Daily 1-4. 2 credits.


169. Newer Developments in Textiles. Designed for teachers and advanced students of Clothing and Textiles. Class includes a study
of fibers, finishes, and materials being placed on the market and economic conditions affecting their production as well as factors influencing choice and care of present-day materials. Pre-requisite: Textiles 24 or equivalent. Three weeks only, June 14-July 2. Daily 10. 2 credits. First session.

185. Family Clothing Problems. Family clothing problems with emphasis on economic, sociological and psychological aspects. Practical problems may include clothing budgets, selection and construction of clothing for children of all ages and care and renovation of clothing. Daily 1-4. 3 credits. First session.

190 or 290. Special Problems. Independent study under direction of professor of a problem in the area of clothing or textiles. Time and credit arranged. First session.


DAIRY INDUSTRY

GEORGE B. CAINE, A. J. MORRIS, Professors; PAUL B. LARSEN, LLOYD HUNSAKER, Associate Professors


150. Special Problems in Dairy Production. Arranged for a limited number of students. Time and credit arranged. Both sessions. Staff

254. Special Problems in Dairy Manufacturing. Time and credit arranged. Both sessions. Staff

216. Research in Dairy Production. Arranged for a limited number of students. Time and credit arranged. Both sessions. Staff

217. Research in Dairy Manufacturing. Time and credit arranged. Both sessions. Staff

ECONOMICS

EVAN B. MURRAY, Professor; L. J. ARRINGTON, Associate Professor; LEO M. LOLL, Assistant Professor

52. Economic Problems. Problems of labor, finance, economic instability; international economics, social waste, government control, and world economic systems. 5 credits.

127. Social Security. Survey of the main divisions of social security legislation; workmen's compensation, legal minimum wage, regulation of hours, unemployment compensation, old age insurance, family wage systems, and health insurance. Prerequisites: one course in Economics and one in Political Science. 3 credits.

139. Economics of Security Markets. Analysis of organization and operation of stock and bond markets; security speculation; brokerage houses; exchange relations with other institutions; security price behavior; exchange regulation. 3 credits.

150. Comparative Economic Systems. The more important present forms of economic organization: their history, theory, and practices. Emphasis on Capitalism, British Socialism, German Fascism and Soviet Communism. 3 credits.

197. Economic History of Utah. Development of agriculture, mining, manufacturing, merchandising, transportation, communication, and fin-
ance in Utah from 1847 to the present. Special attention will be given to the economic policies and practices of the Mormon Church and their contribution toward the development of Western economic institutions. Lectures and papers based on original research will be featured. For upperclassmen and graduate students. 3 credits. Daily 10. First session. Arrington

EDUCATION

E. A. JACOBSEN, JOHN C. CARLISLE, STANLEY S. RICHARDSON, L. G. NOBLE, Professors; CASEEL BURKE, KEITH R. OAKES, BEN VAN SHAAR, Assistant Professors.

Visiting Faculty

GLENN E. BARNETT, CHARLES W. BURSCH, THEODORE CLYMER, IDA STEWART HILL, J. C. MOFFITT, LEWIS V. NEWKIRK, RALPH G. NICHOLS, GEORGE T. RENNER, VICTOR E. SCHMIDT, BLANCH NELSON, ELSA SNIEDER, JAMES E. WERT

104. Elementary School Curriculum. Familiarizes prospective elementary teachers with the nature and content of the elementary curriculum and factors that influence its development. Includes an introduction to Utah Elementary Teaching guide and Supplements, and considers some of the objectives, methods of instruction, teaching aids and materials, and sources of information related to the subjects of the curriculum. 3 credits. First session. Daily 8. Burke

108. Social Studies in the Public School. Social responsibilities and opportunities of youth in the modern world. Emphasizes the part to be played by the school and the teacher in helping children meet problems of living. Deals with content and methods on both elementary and secondary levels. 3 credits. First Session. Daily 7. Burke

109. Methods and Materials for Teaching Elementary Science. A course designed to give practical help to elementary school teachers who wish to teach science more effectively. Various areas of science are examined from the viewpoint of elementary school children, and related teaching techniques and materials are considered. Emphasis is placed on the construction of homemade equipment, the provision of science experiences outside the classroom, and the development of scientific attitudes. 3 credits. First Session. Daily 8. Schmidt

109b. Teaching of Arithmetic. The course will deal with the modern viewpoints and techniques of teaching arithmetic and will provide opportunity for creating instructional materials and devices. 3 credits. First Session. Daily 10. Clymer

111. Principles of Secondary Education. The background and present status of the secondary school in the United States. Problems of objectives, curriculum, methods, and pupil personnel are considered. 3 credits. First Session. Daily 8. Noble

113. Principles of Guidance. Major emphasis given to organization of guidance as a service, including individual and occupational differences, tests, measurements, and counseling. 3 credits. First session. Daily 2. Van Shaar

114. Organization and Administration. Fundamental principles of organization and administration of schools in the American public school system with emphasis on Utah conditions. 3 credits. First session. Daily 1. Van Shaar

124a. Teaching the Communication Skills. The course will deal with the broad field of English instruction in the secondary schools
including listening, reading, speaking and writing. Particular attention
will be given to the integrative approach to teaching these various
fields. 3 credits. Second session. Daily 8.

124. **Methods of Teaching Farm Mechanics.** Scope of mechanics
agriculture, lesson planning, course of study preparation, shop equip­
ment and management, skill requirements, and supervised practice.
3 credits. First session. Daily 10 to 12 except Friday. MA-220

Nichols

131. **Creative Music Handicrafts.** See Mus. 131.

133. **Workshop in Public School Music.** See Music 133.

138. **Improvement of Teaching in Secondary Schools.** Designed to
meet the needs of teachers, supervisors, and administrators. Emphasis
will be upon recent development in the improvement of teaching learn­
situations and activities from the junior high school to the junior
college. 3 credits. First session. Daily 9.

Richardson

Staff

139. **Modern Practices in the Teaching of Reading.** In addition to
a concern for an adequate developmental reading program, major
emphasis will be placed on helping the child who is having reading
difficulties. For both the elementary and secondary teacher. 3 credits.

Clymer

142. **Educational Anthropology.** A consideration of anthropo­
logical studies and their implications for education. A comparison of
developmental needs of individuals in different cultures and the kind
of educational programs that have been set up to meet these needs.

Renner

143. **Public Speaking for Educators.** The course is designed to
offer practical help for school educators in the public speaking aspects
of their school-community relationships. 3 credits. Second session. Daily 9.

Nichols

151. **Methods and Materials for Teaching Junior High School Science.**
A course designed to give practical help to teachers of biology and
general science in the junior high school. Emphasis is placed upon the
construction of homemade equipment, the provision of-science experi­
ences outside the classroom and the development of scientific attitudes.

Schmidt

161. **Audio-Visual Aids in Education.** Emphasizes the importance
of audi-visual aids in the school program. Building a working program
in which are utilized the newest materials and techniques. 3 credits.
First session. Daily 7.

Sampson

162. **Techniques and Development of Audio-Visual Aids.** Theory
and practice in the construction and use of visual-aids as an aid to
teaching. 3 credits. First session. Daily 8.

Sampson

180. **Industrial Arts for Elementary School.** Suitable instructional
content will be presented for each grade level and methods of teaching
and organizing instructional materials will be carefully considered.
Instruction is given on the use of tools and materials in the shop where
projects suitable for the elementary school will be constructed from
wood, metal, and plastic. 3 credits. First Session. Daily 1-3. MA-222.

Newkirk

182. **History of Education.** Major educational movements from early
Greek to the present with emphasis on purposes, organization, instruc­
tional procedures, curriculum, etc. and their bearing on today's education.

Carlisle

188. **Group Development.** A course for persons who work with
groups in either a leadership or membership capacity. The course will
be conducted by the discussion method. A substantial part of the class
activity will be that of observing and analyzing the class group in action designed to help members become aware of the effect the group has on its members. Readings will be practical rather than theoretical in nature. Members will have an opportunity to practice skills of effective leadership and membership and will be introduced to the technique of role-playing and process observation. 3 credits. First session. Daily 2.

Hill

189. Group Dynamics and Action Research. A course for advanced students in education and the social sciences designed to introduce students to the scientific investigation of small groups. Subject matter will be drawn from psychology, sociology and education. Students will have an opportunity critically to study and evaluate the most recent research on various instructional methods. The course should be helpful to student's anticipating research for theses at either the master or doctorate level as well as practicing teachers at any level who are interested in assessing the effectiveness of their instructional techniques. 3 credits. First session. Daily 10.

Hill


Oakes

208. Elementary School Supervision. Principles and practices of supervision including the nature and use of the various supervisory techniques, and the supervision of the several types of teachers. Designed for supervisors, elementary school principals, superintendents, and others preparing for these positions. 3 credits. First session. Daily 8.

Barnett

Ed. 208a. Problems in Elementary School Supervision. For those supervisors and principals who attend the supervisors' conference and desire to obtain College credit, by completing special projects or assignments. 3 credits. First session.

Nelson, Burke


Sharp

215. Secondary School Curriculum. An advanced course dealing with foundations of curriculum building in the junior and senior high school. Plans and procedures for organizing the faculty into curriculum study groups will be considered. Members of the class will have opportunity to develop courses of study for their own teaching fields. 3 credits. Second session.

Carlisle

218. Public Relations in Education. Objectives and techniques and media for an improved school public relations program are listed and evaluated. 3 credits. First session. Daily at 1-3. June 28 - July 16.

Jacobsen

221. State and Local Administration of Schools. The work of the school administrator and the principles upon which the profession of school administration is practiced. Federal, state, and local relations to education are discussed. 3 credits. First session. Daily 9.

Moffitt


Jacobsen

223. Legal Aspects of School Administration. Emphasis is given to responsibilities and functions of local and district school administrators with interpretation of legal status, form, and procedure as established by statutes, legal opinions, and court decisions. 3 credits. First session. Daily 10.

Oakes

225. Special Problems in Agricultural Education. A consideration of needs of individual students and special types of service. Daily 8 to 9 for four weeks. 1-2 credits. First session.

Richardson
236. **Secondary School Administration.** Selected topics in secondary school administration will be considered including problems of teacher-pupil personnel, the principal as supervisor, managing the activity program, and so forth. Designed for experienced school principals and those preparing for the administrators certificate in secondary education. 3 credits. First session. Daily 10.

237. **Problems in Secondary Education.** An intensive study of selected current problems in secondary education. Such matters as Education for All American Youth, Life Adjustment Education, the Core Curriculum and other similar topics will be considered. 3 credits. First session. Daily 8.

245. **Problems in Elementary Education.** Will consider major issues confronting the schools with special attention to their implications for the students' own professional needs. 3 credits. First session. Daily 10.

260. **School Building Problems.** The course is designed for school administrators and prospective school administrators, particularly superintendents of schools. A consideration of school planning as the foundation for the development of school building programs. Essentials in school building needs to serve today's schools will be considered. Detailed plans for elementary school buildings will be analyzed. Daily 1-3. June 8 - June 25. 3 credits

267. **Introduction to Research.** An inquiry into the nature and sources of research problems with a study of underlying principles and methods of working out such problems in education. Arrangements will be made for personal conferences with students working on graduate theses. 3 credits. First Session. Daily 9.


282s. **Physical Education in the Elementary School.** See P. E. 282s

291. **Special Problems for Ag. Teachers.** For teachers of vocational agriculture who desire to develop a more practical program for future, young, and adult farmers. Held during Agricultural Teachers Summer Conference. Daily 8 to 11 and 1 to 4 for one week. 2 credits. First Session. Browsing Room of Student Union Building

NOTE: Education courses for the Second Session will be scheduled upon the request of 10 or more students for each course. For particulars, see the Dean of the School of Education.

**ELECTRICAL ENGINEERING**

LARRY S. COLE, Professor; CLAYTON CLARK, BRUCE O. WATKINS, Associate Professors; WILLIAM L. JONES, Assistant Professor.

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.

**ENGINEERING DRAWING**

AUSTIN G. LOVELESS, Associate Professor.

61, 62. **Engineering Drawing.** The use of drafting instruments, graphic solutions, applied geometry, lettering, principles of shape and size description, sectioning, and standard elements and symbols which
make up working drawings used in industry. Problems are included in sketching, and pictorial illustrations are made from orthographic views. 3 credits. Either or both sessions. Time arranged.

195. Industrial Production Illustration. Translation of working drawings into pictorial drawings, with emphasis on Oblique, Isometric, Tri-metric and perspective, and other applications to blackboard illustrations for Industrial Arts teachers. Techniques in rendering finished drawings. 3 credits. First session. Time arranged.

ENGLISH

WALLACE J. VICKERS, HUBERT W. SMITH, KING HENDRICKS, Professors; IRA N. HAYWARD, Associate Professor; THORNTON Y. BOOTH, Assistant Professor; J. LYNN MORTENSEN, Instructor.


110. Advanced Composition. For students who have taken English 10 or 11; may be taken in place of English 19 by students who have had English 17 and 18 and who have transferred from Forestry or Engineering; may be taken by transfer students who have six credits in composition. Emphasizes selection and clear organization of information. 4 credits. M.T.W.Th. 8. Both sessions. L-301. Hayward, Mortensen


124. Teaching of English. A practical course for those who are either teaching or planning to teach English in public schools. The purpose is to study materials and methods in the three fundamental areas of English instruction: grammar, composition, and literature. 3 credits. Daily 10. First session. L301. Hayward

124a. Teaching the Communication Skills. (See Ed. 124a) Nichols

132. Enduring Poetry. A study of poems enjoyed by old and young, to which we return throughout life for replenishment of spirit. Emphasis upon how to read them and memorizing of selections. 3 credits. Time arranged. First session.


ENTOMOLOGY

DATUS M. HAMMOND, Professor; DONALD W. DAVIS, Associate Professor.

102. **Systematic Entomology.** Each student must collect, properly mount and label a representative collection of insects containing at least 400 specimens, 125 species, and 15 orders, the collection to be arranged in phylogenetic sequence. Correctly place specimens in order. Two full day field trips will be taken. Prerequisite: Ent. 13 or 108. Time arranged. 3 credits. Either or both sessions.

103. **Systematic Entomology.** The collection arranged for Ent. 102 must be enlarged to at least 700 specimens, 225 species, 100 families and 18 orders. Classification will include a correct placing of specimens in families. Two full day field trips will be taken. To be taken only with the permission of the instructor. Prerequisite: Ent. 101. 3 credits. Time arranged. Either or both sessions.

210. **Special Problems.** Students may select or be assigned problems dealing with certain phases of Entomology. The amount of credit depends on nature of problem and time spent. Open to undergraduate students only by special permission. Prerequisite: Ent. 13, 103, and 108. Time and credit arranged. Either or both sessions.

250. **Research and Thesis.** For research connected with problem undertaken for partial fulfillment of requirements for Master of Science degree. Time and credit arranged. Either or both sessions.

FOODS AND NUTRITION

UNA VERMILLION, Professor; ETHELWYN WILCOX, Professor; EDNA PAGE, Associate Professor; MARGARET MERKLEY, Instructor.

25. **Meal Preparation for the Family.** Planning, preparing and serving meals for the family. Consideration is given to nutritional adequacy of meals at different income levels and for special occasions. Prerequisite: Foods 24. M.T.W.Th. 1-4. 3 credits. First session.

102. **Teaching Food Preparation in a Short Laboratory Period.** For teachers of homemaking who desire to develop a more practical program for teaching food preparation in the short laboratory period. Participants will cooperate in the development of methods and materials for teaching food preparation in a short laboratory period. 3 weeks, June 14-July 2. First session. Daily 8 with 2½ hours arranged. 2 credits.

146. **Food Technology.** Manufacture and preservation of food products and influence of these processes on physical, chemical and nutritive values of foods. Prerequisite: Bacteriology 10, Foods 24. First session. M.T.W.Th. 9. 2 credits.

160. **Special Problems.** Open to qualified students majoring in Foods and Nutrition upon consultation with instructor. Time and credit arranged. First session.

185. **Nutrition Refresher Course.** A review of recent developments in the field of nutrition. Open to men and women with previous training in nutrition. Taught from June 14 - July 2, 3 weeks. M.T.W.Th. 1 credit.

FOREST, RANGE AND WILDLIFE MANAGEMENT


Forest Management

145. Forest Problems. Individual study and/or research upon a selected forestry problem, approved by the instructor. 1-3 credits. Staff

210. Forest Problems. Individual advanced study and research upon a selected forestry problem approved by the student's major professor. 2-10 credits. Staff

Range Management

195. Range Problems. Individual study and research upon a selected range problem. 1-3 credits. Staff

200. Range Thesis. Original research and study on a problem in range management. This course is open only to graduate students. 1-15 credits. Staff

Wildlife Management

170. Wildlife Problems. Individual study and research upon a selected wildlife problem approved by the instructor. Prerequisite: Wildlife 172. 1-5 credits. Staff

270. Advanced Wildlife Problems. Research problem chosen, the project outlined and planned, and data collected by the student qualified for investigations in Wildlife Management. 5-15 credits. Staff

Forestry Summer Camp

Director, Associate Professor RAYMOND R. MOORE

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. Eight weeks of field instruction is given at the Tony Grove Summer Camp and is required for graduation of 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 four instruction courses offered at summer camp with a total of nine credits, and students in the School of Forest, Range and Wildlife Management are required to take all four courses. This summer camp opens Monday, June 7.

96. Surveying. Practical field problems in surveying methods commonly employed in forest, range and wildlife management. Lab. fee $5.00. Summer Camp. 3 credits. Staff

97. Forest Practice. Field studies in inventories, successional stages and growth of stands of trees. Study of forest soils and related land uses. Lab. fee $5.00. Summer Camp. 2 credits. Staff

98. Range Practice. Field practice in the problems of range land analysis and correlation of land uses. Lab. fee $5.00. Summer Camp. 2 credits. Staff
99. **Wildlife Practice.** Integrated studies of wildlife populations in relation to other forms of life and to other land uses. Lab. fee $5.00. Summer Camp. 2 credits.

**GEOLOGY AND GEOGRAPHY**

**THEODORE HERMAN, Assistant Professor**

**Visiting Faculty**

**GEORGE T. RENNER**

41. **Physical Geography.** Elements of the physical environment and the principles that underlie their distribution. 5 credits. First session. Daily 8-10. **Herman**

151. **Geopolitics and World Affairs.** An examination of current world happenings in the light of the principles of political geography. Major emphasis is placed upon the geopolitical problems of Britain, France, Germany, Italy, and Russia; with some attention to American interests. Requirements for a lasting world peace are examined. 3 credits. Second session. Daily 10. **Renner**

**HISTORY**

**JOEL E. RICKS, Professor.**

**Visiting Faculty**

**WHITNEY R. CROSS, Ph.D., Assistant Professor of History. West Virginia University**

143. **The Jacksonian Era.** Stresses interrelationships between Jacksonian Democracy, religious and reform enthusiasm, industrial revolution and Westward migration, expressions of nationalism and degrees of sectional differentiation. 3 credits. First session. M-F 10. **Cross**

152. **The American Revolution.** The background, philosophy, nature, campaigns and consequences of the American Revolution. 3 credits. Second session. M-F 10:00. **Ricks**

155. **The Growth of American Thought to 1865.** Explores major forms of thought like Puritanism, the enlightenment, religious and humanitarian reform, transcendentalism, democracy, and nationalism, in relation to events and public policies in American society. It is concerned with the environmental influence on ideas and the impact of ideas on history. It includes some philosophy, science, literature, arts, theology, social, economic and political theory, but does not attempt technical, systematic surveys of these fields of knowledge. 3 credits. First session. M-F 8:00. **Cross**

176. **History of the Far East.** 3 credits. Second session. M-F 8:00. **Ricks**

**HOME ECONOMICS EDUCATION**

**HELEN L. CAWLEY, Associate Professor**

**MARGARET MERKLEY, Instructor**

Classes in Home Economics are set up on a six weeks and a three weeks basis. The classes set up on a three weeks’ basis start at the beginning of the second week of Summer School, June 14, and extend through July 2. Students enrolled for the six weeks term may arrange their schedules so they may carry one of the classes offered during the three week’s period. Four quarter hours credit may be carried during the three week’s period.
117s. **Current Developments in Home Economics Education.** A study of the newer developments in the field of homemaking at the secondary level will be taken up in this class. Class is planned to serve advanced undergraduate students or graduate students. Students may arrange with instructor to substitute this class for Home Economics Education 120. 2 credits daily at 1:00 during period with 2 1/2 hrs. per week arranged. (June 14-July 2).

Cawley

210. **Special Problems in Home Economics Education.** Independent study under direction of professor of a problem in home economics education developed around individual needs of students. 1-2 credits. Time arranged. First session.

Cawley

199s. **Research for Master's Thesis.** Time and credit arranged.

Cawley

Two courses will be offered during the period, June 14-July 2, which will be of special help to teachers of homemaking. One of these is listed under the Foods and Nutrition section of the Summer School Catalogue and is a course set up to assist teachers in planning and conducting the one hour food's laboratory. The other is listed under Household Administration and is a course set up to assist teachers in incorporating personal and home management into all their teaching as well as to teach special units in this area.

(See Foods and Nutrition and Household Administration sections of catalogue for descriptions of courses referred to above.)

**HORTICULTURE**

L. H. POLLARD, Professor; J. CLARK BALLARD, ROBERT A. NORTON, ROBERT K. GERBER, Assistant Professors

156. **Special Problems.** Time Arranged. Credit Arranged. Staff


**HOUSEHOLD ADMINISTRATION**

WANETA WITTLER, Assistant Professor

65. **Housing.** Present's housing needs and practices affecting housing construction and home ownership. Emphasis is placed on housing needs in relationship to small income families. 3 credits. First session. Daily 8.

Witller

130. **Home Management Problems in the Teaching Field.** Special attention will be given to management problems of high school students. Help with individual problems will be stressed throughout the course. First session. Three week period starting June 14 and ending July 2. Daily 2 with 2 1/2 hours arranged. 2 credits.

Witller

149. **Principles of Home Management.** Includes a philosophy of homemaking and use of human and material resources as it relates to family living. 3 credits. First session. Daily 10.

Witller

150. **Home Management House.** Residence students are directed in practical management of home experience. Required of all Home Economic majors. Elective for other students upon consultation with the advisor of Home Management House. Prerequisites: H. Ad. 149; F. & N. 24 and 25. 4 credits. First session. 7 T. Th.

Witller

160. **Special Problems in Household Administration.** Independent study under direction of professor of a problem in household administration in which upper division or graduate student has special interest or need. Consult department head before enrolling. Time and credit arranged. First session.

Witller
13. Driver Training. Designed for those who desire to learn to drive an automobile correctly and safely. Includes study of traffic rules and regulations essential to sound driving; physical qualifications and tests of drivers; general mechanics, operation, and servicing of the automobile; highway safety engineering; and actual supervised training in dual-control cars. 2 credits. First session, M W F 3. Lab. arranged. T-7

102. Instructional Aids. Instruction in the purpose, types, sources, preparation, and proper use of audio and visual aids, including samples, models, charts, graphs, slides, still film, movie film, sound film, and other aids suitable for classroom and auditorium use. 6 hours daily. 3 credits. Two weeks course from June 1 to June 11.

109. Course of Study Building in Industrial Education. Teaches 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 completes this work for one unit of instruction. 5 credits. First session. Daily 1-3.

110. Shop Organization and Management. Teaches students to organize and manage an Industrial Education shop of the unit, general, or multiple activity type. Each student prepares, for one type of shop, a complete plan of organization and management dealing with the necessary equipment, materials, supplies, methods of purchasing, financial control, and problems of shop arrangement. 3 credits. Second session. Daily 8.

111. The General Shop. Comprehensive study of the types of "General Shop," its advantages and applications; content and organization of subject matter; methods of teaching and shop plans. General shop projects, shop plans and new trends in content and equipment are given special consideration. 3 credits. First session. Daily 10:00.

113. Driver Education and Traffic Safety. To acquaint prospective teachers and others with available instructional materials in the field of driver education and the latest methods of presenting these materials in the classroom and on the road. Supervised practice is arranged for each student. First session. M W F 2-4. Lab. arranged. T-7. 3 credits.

117. Foremanship and Supervision. A comprehensive study of the place and functions of the foreman or supervisor in industry and business. Emphasizes foremanship as an important part of management. Provides the practical information a foreman or supervisor needs in his work. 3 credits. First session. Daily 10.

120. Personnel Relations. Training for leadership in industry as foremen, supervisors, and directors. Problems in organizing, supervising, training, and directing personnel. Directed conferences based on student experiences and directed studies in leadership problems and principles. 3 credits. First session. Daily 8.

141. Art Metalwork. Laboratory work in embossing, sinking, engraving, etching, and metal spinning operations. Work is done in
copper, brass, and aluminum on projects designed for utility and artistic merit. 2 credits. Second session. Daily 10-12.

142. Plastics. Acquaint students with the new and important group of plastic materials now produced and the fundamental operations used in working these materials. Students complete projects in hand and machine work. Special emphasis is given to the place of plastics in modern industrial arts programs. 3 credits. First session. Daily 3-5.

Hailes

145. Industrial Arts Applied Electricity. Provides the prospective teacher with an understanding of how the basic principles and applications of electricity in the home and in industry should be prepared for the industrial arts program of secondary schools. 3 credits. First session. Daily 8-10.

Mortimer

167. Special Problems in Industrial Education. For qualified students majoring in Industrial Education who wish to do specialized work not covered by other courses. Time and credit arranged. Section 1, First session. Section 2, Second session.

Hailes

180. Industrial Arts for Elementary Schools. Objectives and theory of Industrial Arts in the Elementary School. Suitable instructional content will be presented for each grade level and methods of teaching and organizing instructional materials will be carefully considered. Instruction is given on the use of tools and materials in the shop where projects suitable for the elementary school will be constructed from wood, metal, and plastic. 3 credits. First session. Daily 1-3.

Newkirk

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 intelligent use of the tests are covered. 6 hours daily. 3 credits. Two weeks course from June 1 to June 11.

Karnes

267. Reading and Conference. Provides for study in advanced and specialized problems in Industrial Education. Problems are selected with approval of the department head. Investigation is carried on under direction of the major professor. Time and credit arranged. Section 1, First session; Section 2, Second session.

Mortimer


Hailes

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. Section 1, First session; Section 2, Second session.

Mortimer

290. Advanced Studies Under Plan "B". Special library and seminar problems or studies designed to meet requirements for reports under plan "B". 2-3 credits. Either session. Time arranged.

Mortimer

JOURNALISM

CARLTON CULMSEE, Professor

112. Feature Article Writing. 3 credits. First session. Daily 8.

Culmsee

185. Special Problems in Journalism. 2 credits. Time arranged. First session.

Culmsee

186. Special Problems in Journalism. 2 credits. Time arranged. Second session.

Culmsee
LANDSCAPE ARCHITECTURE

LAVAL S. MORRIS, Professor; KENJI SHIOZAWA, Assistant Professor

135. Travel Course. A major field trip 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 San Francisco and vicinity with stopovers on the way. It will last two to three weeks and will require a written report shortly after the termination of the trip. Photographs are required to supplement notes and observations. All students majoring in Landscape Architecture and Planning are required to take two travel courses before graduation. Time and credit arranged. First session. Staff

LIBRARY SCIENCE

KING HENDRICKS, Director of Libraries; MILTON ABRAMS, JAMES TOLMAN, RUSSELL DAVIS, Assistant Professors.

100. Reference Materials and Bibliography. Principal reference tools in each field are studied. Reference materials for school, public, and college libraries are included. 3 credits. Daily 9. First session. Davis

113. Book Repair and Binding. Methods and materials of book repair and binding. Davis

120. 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. 3 credits. Daily 9. First session. Davis

150. School Library Administration. Theory of school library work with emphasis on demonstration and practical application. 3 credits. Daily 10. First session. Davis


MATHEMATICS

V. H. TINGEY, Professor

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


MODERN LANGUAGES AND LATIN

GEORGE A. MEYER, Professor; THELMA FOGELBERG, MARION L. NIELSEN, Associate Professors; ALDYTH THAIN, JESSE G. NELSON, GORDON PORTER, Assistant Professors.

French

1. Elementary French. 5 credits. Daily 9 and 1. First session. Staff

106. Selective Reading. Arr. Staff
German

1. Elementary German. 5 credits. Daily 9 and 1. First session.

106. Selective Reading. Arr.

Spanish

1. Elementary Spanish. 5 credits. Daily 9 and 1. First session.

106. Selective Reading. Arr.

MUSIC

N. WOODRUFF CHRISTIANSEN, WALTER WELTI, Professors; JOHN PHILIP DALBY, Assistant Professor; GEORGE PAHTZ, MISCHA POZNANSKI, Instructors.

Visiting Faculty

MAX DALBY, ROY R. FREEBURG, CLARENCE SAWHILL, NICHOLAS FURJANICK, J. LAURENCE WILLHIDE

Instrumental Music

18. Clinic Orchestra. All members of the orchestra 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 8-10. June 21-July 2. Furjanick

*43. Clinic Band. All members of the band will register for this course. Credit given as for Music 18. Daily 1-3. June 21-July 2. Sawhill


177. Counterpoint. Prerequisite: Diatonic harmony. A study of counterpoint based on techniques of the 16th century. For upper division and graduate students. 2½ credits. First session. Daily 3. M. Dalby

184. String Ensembles. Offering an opportunity for trios, quartets, and other small units. One-half credit. Time arranged. Pahtz

190. Music in General Culture. A non-technical course aiming to increase the enjoyment and understanding of music lovers. Open to all interested persons. 2½ credits. Daily 2. First session. Christiansen


205B. Same as 205A. June 21-July 2. One credit. Sawhill

210. Development of Instrumental Forms. A historical study of instrumental forms as they developed through various periods. 2½ credits. Daily 11. First session. Christiansen

221A. Woodwind Clinic. An intensive study of the woodwind family with recommended methods of teaching. One credit. 7 p.m. Daily. June 21-July 2. M. Dalby
SUMMER SESSION

221B. Brass Clinic. See 221A. One credit. Daily 4. Staff
221C. String Clinic. See 221A. One credit. Daily 2. Furjanick
221D. Repair of Musical Instruments. One-half credit. Arr. Bunce

300. Thesis. Applicant must receive approval of department head. 5 to 10 credits. Time arranged. Staff
*All band members except those in orchestra will attend section rehearsals at 8 a.m. String players will hold section rehearsals at 5 p.m. During the Music Clinic a reading band, limited to teachers and selected students, will rehearse daily under the direction of Mr. Sawhill.

Private Instruction

Credit will be given as follows:
- 7 lessons, 1 credit
- 11 lessons, 1½ credits
- 15 lessons, 2 credits
- 21 lessons, 3 credits

See first section of catalog for fees. Time to be arranged with teacher selected.

50, 150. Piano. Christiansen, Clark, Lundquist, Odd, Welti, Wasserman
56, 156. Wind Instruments. Dalby, Torbensen
60, 160. String Instruments. Christiansen, Poznanski, Pahtz, Clark

See first section of catalog for fees. Time to be arranged with teacher selected.

Vocal Music

24. Clinic Chorus. Open to all high school students. Those who meet college entrance requirements will receive one hour of college credit. June 20 to July 2. Freeburg
128. Opera Workshop. A one act opera will be selected and studied, with the prospect of presenting it in public performance. It is desired that applicants will write in early, stating voice, experience, and training. 3 credits. Time arranged. Welti
131. Creative Music Handicrafts. This course will deal with the development of the child's inherent capacity for creative expression in music, art and handicrafts and the construction of simple wind, stringed, and percussion instruments by children of elementary and junior high grades. 3 credits. Second session. Two hours daily. Time arranged. Jeppson
133. Workshop in Public School Music. Open to elementary and secondary teachers. A general discussion course, with emphasis on individual problems presented by the class. June 28-July 16. 3 credits. Daily 8 to 10. Willhide
135. Chorus. Open to all summer school students. A recreational course of song material will be undertaken. 1½ credits. MWF at 12. Welti
155. Private Instruction. Voice. Time and credit arranged. Welti
230. Problems in School Music Supervision. An intensive course for public school music supervisors or individuals preparing for this field of service. Materials and methods in music instruction in the public schools will be considered. 1 credit. Daily at 8. June 21-July 2. Freeburg
233. **Supervisory Procedures.** History and philosophy of music education. The music supervisor's responsibilities in planning, coordinating and integrating the music program. 1½ credit. Daily at 2. June 28-July 16. 

**PHYSICS**

ROLLAND PERRY, Professor; JAY O. JENSEN, Assistant Professor


20. **Mechanics and Molecular Physics.** 5 credits. Both sessions. Daily 8, Lab. M.W. 1 to 3 or 3 to 5.

Other Courses Upon Sufficient Demand.

**PHYSICAL EDUCATION AND RECREATION**

H. B. HUNSAKER, Professor; ISRAEL C. HEATON, Associate Professor; DALE O. NELSON, HELEN CLARK, LOIS DOWNS, Assistant Professors; PAULINE FULLER, Instructor.

**Visiting Faculty**

LLOYD M. JONES, ELSA SNIEDER

**Service Courses**

**First Session**

25. **Tennis** (Elem.) Men and Women. 1 credit. Courts.
   - Section 1, Daily at 10.
   - Section 2, Daily at 1.

48. **Elementary Modern Dance.** 1 credit.
   - Section 1, Daily at 10.

52. **Swimming** (Elem.) Men and Women. 1 credit. Pool.
   - Section 1, Daily at 2.

54. **Casting.** 1 credit. G-30. Section 1, Daily 1.

61. **Archery.** 1 credit. F. H. Section 1, Daily.

73. **Golf** (Elem.) Men and Women. 1 credit. Course.
   - Section 1, Daily at 8.

168. **Social and Square Dancing.** 1 credit. M.G. Daily 1.

**Second Session**

25. **Tennis** (Elem.) Men and Women. 1 credit. Courts.
   - Section 1, Daily at 8.

52. **Swimming** (Elem.) Men and Women. 1 credit. Pool.
   - Section 1, Daily at 9.

73. **Golf** (Elem.) Men and Women. 1 credit. Course.
   - Section 1, Daily at 10.

168. **Social and Square Dancing.** 1 credit. M.G.
   - Section 1, Daily at 1.

**Professional Courses**

**First Session**

55 & 154. **First Aid and Safety.** Standard American National Red Cross course in first aid with emphasis on practical use of the knowledge as applied to everyday life in various occupations. Detailed demon-
strations and practice. American Red Cross First Aid certificates may be obtained by students who pass a satisfactory examination. 3 credits. Daily at 9.

85. Organization and Administration of Intramurals. Organization and administration of intramural sports in secondary schools. Sports, tournaments, units of competition, scoring systems, and co-ordination of intramural sports with physical education and athletics are considered. 3 credits. Daily at 8.

120a. Football Coaching School. Daily A.M. June 1 to June 5. 1 credit. Nelson

120b. Basketball Coaching School. Daily P.M. June 1 to June 5. Tatum and Roning

153. Leadership in Dance. An advanced class in dance leadership to meet the needs of students who expect to teach social or square dancing in schools or churches. One quarter of social or square dancing should be taken as a prerequisite. Emphasis on methods of teaching group dancing and creation of original routines. A syllabus is required. 2 credits. Daily at 2.

157. Field Work in Recreation. (Prerequisite approval of department head). This course is designed to give practical experience in conducting recreational programs at playgrounds and campus under the supervision of the college recreation staff and the director 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. Credits arranged. Time arranged.

174. Life Saving and Water Safety. Prerequisite: Permission of the instructor. 2 credits. Daily at 3. Fuller

294. Research in P.E. and Recreation. This course is devoted to the nature, purpose, methods, and techniques of research in this field. Potential and completed problems are analyzed with a view to possible selection and method of procedure for individual's own topic. 2 credits. Daily at 1. June 7-25. Jones

283. Interpretation of Physical Education Objectives. A philosophical study of the place of physical education in the education program—its contributions to the developments and adjustments necessary in a democracy. 2 credits. Daily at 10. June 7-25. Jones

277s. Physical Education Activities for Elementary Schools. A course designed to give the theory of Physical Education for the Elementary grades. The various areas of elementary Physical Education program will be studied emphasizing Physical Education responsibility to the total education curriculum. 3 credits. Daily at 9. Snieder & Downs


282s. Workshop in Elementary Physical Education. A course designed for teachers desiring practical experience and knowledge of Physical Education activities for the elementary school grades with emphasis on current teaching techniques and methods. Class will acquaint students with games from each of the various areas of the elementary Physical Education curriculum. 2 credits. Daily at 1-3. 1 hour arranged. July 7-17. Snieder

250. Reading and Conference. A course providing for individual directed study in Physical Education. Time and credit arranged. Hunsaker
271. **Research and Thesis Writing.** Provides for individual work in thesis writing with the necessary guidance and criticism. Time and credit arranged.

**Hunsaker**

**Second Session**

157. **Field Work in Recreation.** (Prerequisite approval of department head.) This course is designed to give practical experience in conducting recreational programs at playgrounds and campus under the supervision of the college recreation staff and the director 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. Credits arranged. Time arranged.

**Heaton**

176. **Camping and Hiking.** Men and women. Designed for Physical Education and Recreation leaders. Precamp training class in campcraft, camp cookery, first aid, and safety equipment to check, and menu planning. Bus trip to "high country." Hiking, camping, fishing. Return by bus. (Lab. fee). 3 credits. Time arranged. First two weeks of second session.

195-295. **Problems in P.E.** A course designed for graduate students. The course will deal with techniques of research, recognition of research problems, and a study of current research literature. 3 credits. Time arranged.

**Hunsaker**

196-296. **Org. & Adm. of Recreation.** Problems of organization and administration of community recreation departments, including staff, facilities, program of activities, and office management. Special problems of recreation surveys, legislation, property acquisition, finances, construction, and maintenance, and securing community and school cooperation in a united recreation program. 3 credits. Daily 10-12.

**Heaton**

250. **Reading and Conference.** A course providing for individual directed study in Physical Education. Time and Credit arranged.

**Hunsaker**

**PHYSIOLOGY**

DATUS M. HAMMOND, Professor; THOMAS L. BAHLER, Assoc. 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. Second session. 5 credits. Daily 7-9.

**Bahler**

200. **Special Problems, Physiology.** Similar to 160 but for graduate students. Either or both sessions. Credit arranged.

**Staff**

260. **Research and Thesis.** Research connected with problem undertaken for partial fulfillment of requirement for Master of Science degree. Either or both sessions. Time and credit to be arranged.

**Staff**

**POLITICAL SCIENCE**

M. R. MERRILL, Professor; M. JUDD HARMON, Assistant Professor.

101. **American Foreign Policy.** The place of the United States in the family of nations as affected by our traditions, interests, and interpretations of international affairs. First session. 3 credits. Daily 9.

**Merrill**

126. **Soviet Government and Politics.** This is a course designed to acquaint the student with the structure and functioning of Soviet government and the Communist party system. Attention is also given to the
theoretical background of government and party practices in modern
times. Second session. 3 credits. Daily 9.


170. Current Problems. The summer school lecture program in­
cludes discussions of many vital problems of our time. Students who
wish to earn credit by attending these lectures may do so by enrolling
at the time of registration. Reports will be required and a minimum
of lectures will be specified. 1 credit. Daily 11. First session.

180. Current Political Problems. Upper division students may take
without prerequisite. First session. 3 credits. Daily 10. Merrill

181. Current Political Problems. Upper division students may take

POULTRY HUSBANDRY
C. I. DRAPER, Professor;
J. O. ANDERSON, J. DAVID CARSON, Assistant Professors.

1. General Poultry. Breeds, judging, incubation, brooding, feeding,
marketing, designed to meet the needs of the students wishing a general
knowledge of the poultry industry and the problems of production, and
a foundation upon which other courses are built. 3 credits. Daily at 10.
First session.

125. Special Problems. Time and credit arranged.

210. Research Problems in Poultry Nutrition. Time and credit ar­
ranged. First session.

214. Research Problems in Poultry Production. Time and credit ar­
ranged. First session.

PSYCHOLOGY
ARDEN FRANDSEN, Professor;
D. R. STONE, HEBER C. SHARP, Associate Professors.

102. Secondary Educational Psychology. A professional course for
prospective high school teachers intended to increase understanding of
personality and to develop greater insight into 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. Pre­
requisite: General Psychology. 5 credits. Both sessions. Daily 10.

105. Child Psychology. The roles of maturation, learning, and
environmental conditions in the motor, mental, social and emotional
development of children from birth to adolescence. Generalizations with
respect to individual differences, emotions, motivation, how children
learn, observe, and think, are applied to understanding and guiding
children's behavior in home, school and community. Prerequisite: Gen­
eral Psychology. 3 credits. First session. Daily 9.

112. Applications of statistics to Education and Psychology. An ele­
mentary study of the statistical procedures used in handling test scores in
the schools and of the concepts needed to read current educational and
psychological literature. First session. 3 credits. Daily 8.

123. Psychology of Exceptional Children. The development and
behavior characteristics of exceptional children and of the education,
home management, social control, and psychological treatment, suited
to their needs. The groups included are the mentally deficient, physically
handicapped, the gifted, and children having serious personality and conduct problems. Prerequisite: General Psychology. 3 credits. Second session. Daily 8.

145. Mental Hygiene. Common personal and social adjustment problems of normal persons. The course 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 or instructor’s approval. 3 credits. First session. Daily 8.

183. Theory and Techniques of Counseling. Principles and techniques of counseling students on problems of curriculum planning and vocational choice, on problems of improving methods of study, and on problems of emotional and social adjustment will be studied. Applications will be made also to administrative, supervisory, teaching, and other inter-personal relations situations. 3 credits. First session. Daily 7.

202. Psychology of Adolescence. A study of growth, of psychological and social characteristics, of educational and guidance needs, and of adjustment problems met by adolescents in their schools, homes, and communities. Prerequisite: Educational Psychology. 3 credits. Second session. Daily 1.

208 & 108. Advanced Educational Psychology of the Elementary School. A study, from the points of view of learning theory and experiments in elementary education and child psychology, of the aims, curriculum, methods of teaching, provisions of individual differences, and evaluation of outcomes in the elementary school. Intended especially for supervisors, principals, and teachers of the elementary school interested in graduate study. Thesis topics will be suggested. But provision will also be made for the undergraduate students who need the course Psychology 108 for certification. 3 credits. First session. Daily 10.

217. Research in Psychology. Credit and time arranged with the approval of a member of the Department of Psychology. 2-4 credits. Both sessions. Time arranged.

281. Psychometrics of Guidance. For school counselors, personnel workers, social workers, and clinical psychologists. Consideration is given to selection, evaluation, administration, interpretation, and practical uses of tests of intelligence, aptitudes, interests, personality and quality of personal and social adjustment. Prerequisites: General Psychology and Elementary Statistics. 5 credits. Second session. Daily 10-12.

SECRETARIAL SCIENCE

INA DOTY, Associate Professor; FLORIS OLSEN, Assistant Professor.


86. First-Quarter Typewriting. For students who have had no previous training in typewriting. Designed to develop a thorough knowledge of the keyboard. Special attention to the developing of typewriting for personal use. First session. 1 credit. Daily 8.

94. **Burroughs Calculator.** Practice in addition, multiplication, subtraction, and division on Burroughs calculators and the application of the machine to various business computations such as percentages, discounts, prorating, decimal equivalents, and constants. First session. 2 credits. Daily 10.


**SOCIOMETRY**

**THEREL R. BLACK, WILLIAM DE HART, C. JAY SKIDMORE,**
Assistant Professors.

70. **Introductory Sociology.** Offered for students in all schools and departments of the college. Emphasis is placed upon developing the student's understanding of the social world about him, and how his social experience contributes to his personality development. Given as Soc 70a in first session and as Soc 70b in second session. Students desiring 5 hours credit are to take both sessions. Those desiring fewer credits may take either first session or second session. Soc 10 or 70 is a prerequisite for all Upper Division Classes. First session. 3 credits, Daily 9. Second session. 2 credits. M.T.W.Th. 9.

141. **Community Organization and Leadership.** Analysis of forces and procedures at work in developing community organizations, with special emphasis on techniques of training to help make the community more effective. First session. 3 credits. Daily 10.

160. **Family Relations.** The social-emotional development of the child in the family. Marital adjustment; social-culture difference in family behavior; problems; ideological considerations. Second session. 3 credits. Daily 8. 1 hour arranged.

262. **Instructional Problems in Family Life Education.** Methods, materials, and content for teachers dealing with the social, emotional and cultural phases of Family Life Education. Second session. 3 credits. Daily 9. 1 hour arranged.

287. **Methods of Social Research.** Formulating problems, collecting, analyzing, and interpreting data in social research. Second session. 3 credits. Daily 10. 1 hour arranged.

**SPEECH AND DRAMA**

CHESTER J. MYERS, Professor; FLOYD T. MORGAN, Associate Professor; BURRELL F. HANSEN, GWENDELA THORNLey, Assistant Professors; GEORGE TANNER, MARY JANE WRIGHT, Instructors.

**Visiting Faculty**

RALPH G. NICHOLS

4s. **Principles of Reading.** Effective oral and silent reading of literary selections. A preparatory course for understanding and appreciation of the printed page. Practice material includes both standard literature and everyday reading matter. 3 credits. Daily 9. Second session.

5s. **Extempore Speech.** Designed to meet the specific needs of professional people in the practice of their professions. 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. 3 credits. Daily 10. Second session.
p12. Individual Problems. 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 everyone needing individual speech instruction, and to all speech majors. Special fee. Either session. Time and credit arranged.

Staff

75s. Remedial Speech. For persons who have noticeable difficulty with speech, in articulation, quality, pitch, intensity, or rhythm. Time and credit arranged. Consult instructor before registering. Wright

82s. Radio Speech. Analysis and development of the speech skills and speech forms as applied to radio. Development of acceptable standards of voice and articulation for radio presentation is emphasized. Effective organization and presentation of the various speech types utilized on the air-announcements, talks, program continuities, interview round-tables are included. 3 credits. Daily 9. First session.

B. Hansen

Speech 107s. Speech Hygiene. Primarily designed for public school teachers, but can be used by those desiring emphasis in speech correction. Attention is given to normal speech development and detection of speech abnormalities found in the classroom. Does not fulfill speech pathology requirements for Speech majors. 3 credits. First session. Daily 8.

Wright

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 training and to all those who are majoring in speech. Special fee. Time and credit arranged.

Staff

118s. 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. 3 credits. Daily 10. First session.

Staff

124s. Oral Interpretation. Various literary forms are studied for platform presentation. The mastering of significant selections from great masters. Reading from manuscript and from memory. 3 credits. First session. Daily 9.

Myers

143. Public Speaking for Educators. The course is designed to offer practical help for school educators in the public speaking aspects of their school-community relationships. 3 credits. Second session. Daily 9.

Myers

Nichols

166. Practical Theatre Production. Designed for teachers, M I A 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, costumes, make-up, and all phases of theatre production. Students will participate in the production of the 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 instructor. 2 to 9 credits. Daily 1, and by arrangement with the instructor. Studio Theatre. First session.

Morgan & Tanner


Wright
181. **Radio Production.** Study and studio practice in problems in directing and producing various kinds of broadcasts. Planning programs, casting and rehearsal procedures, co-ordination of technical aspects of production, and problems in special studio effects are considered. Registration limited to Juniors and Seniors. 3 credits. Daily 10.

B. Hansen

190. **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. Both sessions.


201. **Thesis.** Prerequisite: Graduate standing. Either session. Time and credit arranged.

**VETERINARY SCIENCE**

WAYNE BINNS, Professor; M. L. MINER, Associate Professor; LeGRANDE SHUPE, Assistant Professor.

50. **Artificial Insemination of Cattle.** Outlined for training students in artificial insemination of cattle and to train technicians for doing insemination in the Artificial Breeding Associations in the State. Fulfills the requirements for the qualifications necessary for the student to be eligible to take the State Board Examination. 3 credits. Daily 8 to 5. June 7-19. First session.

Binns and Shupe

120. **Animal Hygiene.** Daily 8-9; Lab. T. 2-5. 4 credits. First Session.

Staff

WELDING

R. W. ESKELSON, ANTON B. KEMP, Instructors.

91. **Acetylene Welding.** 3 credits. First session. M.T.W.Th. 2-5.

Eskelson

94. **Electric Welding.** 3 credits. First session. M.T.W.Th. 2-5.

Kemp

WOODWORK AND BUILDING CONSTRUCTION

CHARLES N. MERKLEY, Associate Professor; D. H. SWENSON, Assistant Professor; ROSS A. NYMAN, Instructor.

61, 62, 63. **Joinery and Millwork.** Basic training in hand tool and machinery operations for students in Building Construction or for those who desire a working knowledge in wood for their own needs. The courses include a thorough study in the proper use, care and sharpening of hand tools, machine processes, safety measures, care and repair of machines, and sharpening of machine cutters. Assigned reading and application of mathematics to woodwork problems are integral parts of the course. 2-5 credits. First session. Daily 7-10, 10-1.

Merkley, Nyman and Swenson

64. **Building Construction.** Steel square and roof framing. 2-5 credits. Daily 7-10. First session.

Merkley and Nyman
171, 172, 173. Cabinet Work. The design and construction of furniture and cabinets including a study of the woods suitable for furniture and cabinet building, wood turning, inlaying, wood carving, and types of wood finishing. Projects are built in fine furniture and cabinets which include inlaying, overlaying, and carving. Prerequisites: W.W. 61, 62, 63. 2-5 credits. First session. Daily 10-1. Merkley and Swenson

ZOOLOGY

DATUS M. HAMMOND, Professor; MERRILL H. GUNNELL, Assistant Professor; GENE H. LINFORD, Instructor.

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. 5 credits. Daily 7-9. First session.

Gunnell

111. Heredity. Facts and principles of inheritance, with emphasis on application to human beings. It is desirable but not essential that an introductory course in biology, physiology, or botany precede this course. 4 credits. Daily 9-11. First session.

Linford

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. Either or both sessions. Credit and time arranged.

Staff


Staff
About the Visiting Faculty

DR. GLENN E. BARNETT is Associate Professor of Education and Director of University School at University of California, Berkeley. Previous to coming to California, he had been Assistant Executive Secretary of the Educational Policies Commission in charge of Education for all American Children. He is curriculum consultant to several California school districts, and has taught in summer schools at the University of Texas, Montana, and George Washington University.

HERBERT BARTLETT is a graduate of the U.S.A.C. Art Department and has done advanced work at N. Y. University. He has served as Supervisor of Jordan District for many years, and has given many lectures and demonstrations to teacher groups on art topics of timely interest. He has served as a faculty member at summer sessions at B.Y.U. and U.S.A.C. and is a member of the Curriculum Committee on Art for the Utah State Department of Public Instruction. He returns this year for his fourth assignment with the Summer School Art Workshop.

DR. CHARLES W. BURSCH is Assistant Division Chief, School Planning, California State Department of Public Instruction. He has occupied this position since 1929. Dr. Bursch has participated in numerous school surveys, has taught summer school courses in all of the major universities in California and some elsewhere. He is considered a national authority in problems of planning for school building programs and the construction of school buildings.

DR. THEODORE W. CLYMER has his Ph.D. from the University of Minnesota where he worked as a staff assistant to Dr. Leo J. Brueckner and Dr. Guy L. Bond in diagnostic and remedial teaching. He is at present Assistant Professor of Education at the University of Minnesota where he is teaching courses in Elementary Education.
DR. WHITNEY R. CROSS did his graduate work at Harvard where he received the Ph.D. in history in 1945. He is at present Assistant Professor of History at West Virginia University. He has received several national awards for his research work in writings in the field of early American history, particularly that which deals with the specialized area of New England and the Northeast states for the period preceding 1850.

MAX DALBY is Instructor in Instrumental Music at Ogden High School. His A.B. is from B.Y.U. and M.A. from San Diego State College. For three years he was supervisor of music in private schools at San Diego, preceding which he was first chair clarinetist with the Utah State Symphony.

CLIFFORD DOBSON is Supervisor of Industrial Education in the Burbank Unified School District, Burbank, California. He is a member of the teacher training staff at UCLA where he has also taught courses in trade and industrial education. He is co-author of the course of study in the machine shop published by the California State Department of Education. He comes to the College for a two weeks' period, June 1 to June 11, to teach an intensive course in "Instructional Aids in Industrial Education."

WILLIAM H. H. "TIPPY" DYE is head basketball coach at the University of Washington. In three seasons at Washington he has guided the Huskies to three straight Northern Division titles. At Ohio State University he was a three-sport star and after graduation coached in high school, at Brown University and at Ohio State.

DOROTHY DYER, Consultant to the Family Life Institute, is Professor of Family Life Education at the University of Minnesota. Author of the book, "The Family Today," she is President-elect of the National Council on Family Relations.
DR. DAVID FELLMAN is Professor of Political Science at the University of Wisconsin where he has been a member of the faculty since 1947. His doctor's degree is from Yale University. He has contributed many articles to national publications in the field of political science and is a recognized authority on legal problems pertaining to civil rights. He will give a series of lectures at the 11 o'clock assembly hour during the week beginning June 14.

DR. ROY E. FREEBURG is Chairman of Music Education at San Francisco State College. He is a member of the Board of Directors for the California Western Music Educators Conference. He has published songs for elementary and junior high students, and he has been in great demand as a leader of music workshops in the Western States. He was visiting professor of public school music at Utah State Agricultural College in the summer of 1953.

NICHOLAS FURJANICK is Supervisor of Instrumental Music in the Long Beach Public Schools in California. He was born in Czechoslovakia where he studied music and became a concert violinist. At present, in addition to his work with the orchestra in the Long Beach Schools, he is concert master and associate conductor of the Long Beach Philharmonic Orchestra. He has been chosen to direct work with string instruments in various summer music camps and in 1949 directed the all-southern California high school orchestra.

DR. FRED V. HEIN, consultant in health and fitness, is with the American Medical Association, Bureau of Health Education. He is secretary of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association; is an Affiliate Fellow of the A.M.A. and Fellow of the American Public Health Association, the American School Health Association and the American Academy of Physical Education. He is a member of the governing board of the American School Health Association, Past Chairman of the School Health Section of the American Public Health Association, Vice-President for Health of the American Association for Health, Physical Education and Recreation.
**DR. HENRY H. HILL** is President of the George Peabody College for Teachers at Nashville, Tennessee. He is past chairman of the Educational Policy Commission. He has been influential in many fields of public and higher education in America. He received his doctor’s degree from Columbia University and has taught in numerous summer schools in the East as well as in Utah some years ago. He comes to the College to participate in the Kellogg Conference on School Administration and will give a series of lectures during the opening week of the Summer School beginning June 8.

**DR. IDA S. HILL** has her doctor’s degree from the University of California at Los Angeles. Utah people will remember her as Assistant Professor of Psychology and Assistant Dean of Students at the University of Utah from 1947-1951. From 1951 until 1953 she was research associate in the Center for the Study of Liberal Education for Adults sponsored by the Ford Foundation agency of Chicago, Illinois. She has been a member of the National Training Laboratory in Group Development at Bethel, Maine, and is at present a consultant in Group Development and Adult Education.

**MARIE THORNE JEPPSEN** teaches music and arts and crafts in Box Elder County School District. She has received state and national recognition for her work, particularly in helping school children to build their own musical instruments. She will teach a course in this field and one in arts and crafts during the second session.

**DR. LLOYD M. JONES** is Professor of Physical Education in the Pennsylvania State University. His doctor’s degree is from Columbia. At present he is serving as President of the Eastern District, American Association for Health, Physical Education and Recreation. He is a member of numerous associations in the field of education and physical education and has taught in several eastern universities.

**DR. M. RAY KARNES** is chairman of the Department of Industrial Education at the University of Illinois where he has come to be recognized as a national authority in this field. He comes to the College for a two weeks’ period beginning June 1 to teach an intensive course in "Measurements in Industrial Education."
DR. J. C. MOFFITT is Superintendent of Schools at Provo, Utah, and one of the state's best known educators. His doctor's degree was from the University of Chicago. He has studied briefly at Stanford and Northwestern Universities. He has served on national committees of the National Society for the Study of Education, the National Education Association and the American Association of School Administrators.

DELBERT NAPPER is a graduate of the U.S.A.C. Art Department and received his Master's Degree from U.S.A.C. in Education. Mr. Napper is a member of the Art Curriculum Committee and Supervisor of Art in Logan City Schools since 1945. He is recognized as a capable designer and an enthusiastic teacher with an excellent philosophy of the place of art in the education of the child.

BLANCHE NELSON is elementary supervisor of Cache County School District and President of the Utah State Supervisors organization. She will be in charge of the conference for supervisors being held on the campus June 21 to July 2.

DR. LEWIS V. NEWKIRK is Director of the Division of Industrial Education in the Chicago Public Schools and is considered a national authority in this field. He has taught summer school in numerous colleges and universities in America and is the author of some ten books dealing with Industrial Education and Industrial Arts.

DR. RALPH G. NICHOLS, Head of the Department of Rhetoric at the University of Minnesota, comes to the College for a second Summer School appointment. In recent years he has done considerable work and become recognized as an authority in the broad field of communications. He is especially interested in the art of listening, and will give courses on this subject during the three weeks he is at the College this summer.

DR. GEORGE T. RENNER is Professor of Geography in Teachers College, Columbia University. He is known throughout America for his leadership in this field. He comes to the College for the second session to teach courses in the Teaching of Geography and Educational Anthropology.
CLARENCE E. SAWHILL comes to the College for a second appointment to direct the bands in the Summer Music Camp, June 21 to July 2. He is Director of Bands at the University of California, Los Angeles. Previous to that period he served for several years in the same position at the University of Southern California. Currently, President of the College Band Directors National Association, he is recognized throughout America as a distinguished leader in this field. His experience includes ten years as a music educator in the public schools of the Mid-West before moving to California.

DR. VICTOR E. SCHMIDT is a graduate of Cornell University with the PhD in Geology. For several years he remained at this institution teaching classes for teachers in the Teaching of Science. Recently he has been associated with the New York State Teachers College at Brockport, and during the past year has been visiting Professor of Science Education at Long Beach State College of Education, California. For five years he was editor of the "Science Teachers Bulletin." He comes to the College for a second Summer School appointment after being on the staff for the first session in 1953.

ELSA SNIEDER, Specialist for Health Instruction in Physical Education, Office of Education at Washington, D.C., is recognized as one of the outstanding authorities in the field of health and physical education. She is especially strong in the field of elementary physical education. She has been in Utah and has conducted several regional workshops. Her leadership was recognized and many requests have come to the College asking that she be brought back to the State.

DR. PEARL SWANSON is Professor of Nutrition and Assistant Director of the Experiment Station in charge of Home Economics Research at Iowa State College. Before coming to Iowa State in 1930, Dr. Swanson was at Montana State. She received her undergraduate training at Carlton College in Minnesota, and her graduate work at the University of Minnesota and Yale University, where she received her Ph.D. degree in 1930. She has served on numerous national committees dealing with research.

JAMES M. (JIM) TATUM is head football coach at the University of Maryland where he has been for the past six years. Because of his impressive record there he was in 1953 chosen Coach of the Year for the entire United States. A graduate of the University of North Carolina, he has been on the coaching staff of Cornell University and head coach at North Carolina and at Oklahoma before going to Maryland. He will have charge of football in the Coaching School June 1 to June 5.
DR. ARTHUR UPGREN is Dean of the Amos Tuck School of Business Administration at Dartmouth College. His under-graduate work was completed at the Universities of Wisconsin and Minnesota. He is joint author of the book "Economics for you and Me," published by MacMillan Company in 1953. Recent positions are Professor of Economics, University of Minnesota; Chairman, Committee on the Federal Debt, Sponsored by the Twentieth Century Fund; Guest Lecturer, Aarhus University, Denmark, under Fulbright grant; Formerly Economic Consultant and Associate Editor, the Minneapolis Star and Tribune; Vice President and Economist, Federal Reserve Bank of Minneapolis; Chief, National Economics Division, Bureau of Foreign and Domestic Commerce, Department of Commerce; and Vice Chairman, Ninth District Committee for Economic Development.

DR. JAMES E. WERT is Professor of Education and Head of the Department of Vocational Education at Iowa State College. Dr. Wert received his Ph.D. from Ohio State in 1934 and has had considerable experience as teacher, administrator, and director of research. Before coming to Iowa State, he was professor of Education and Director of the Graduate Division at Arizona State Teachers College.

LAURENCE WILLHIDE is a graduate of Overland College of Music with a master's degree in music from the Cincinnati Conservatory and a Doctor of Philosophy degree in music education from the University of Southern California. He was teacher of music education at the Cincinnati Conservatory for several years. He is an accomplished concert pianist and was assistant supervisor of music in the Cincinnati public school system for several years.
RECREATION EVENTS AND LYCEUMS

The Summer School offers a rich and varied program of recreation. A special Recreation Committee, cooperating with various departments, sponsors many activities both on and off the campus including evening lyceum programs. Events will be announced in the weekly edition of Student Life. The Summer School activity card admits students to all lyceums, lectures, theatre workshop productions, summer school parties, and similar activities.

The following major activities are announced in advance so that students can plan accordingly:

June 16 — Old Juniper Hike and Party
July 1 — Music Camp Concert, Vocal and Orchestra
July 2 — Music Camp Concert, Band
July 2 — Dance Festival
July 2-6 — Yellowstone Park Trip — Approximate cost per person, $25.00
July 8 — Annual Smorgasbord for Students and Faculty
July 13-16 — Theatre Workshop Production
July 17-20 — Southern Parks Trip — Approximate cost per person, $25.00
July 23-31 — Aggie Ranger Hike to primitive area of Yellowstone Park. See Physical Education 176 for particulars.

Through the summer school recreation committee, students can obtain assistance in planning to use many other sources of recreation. Suggested recreational activities include picnics at one of the many camp areas in Logan Canyon, hikes to Mt. Logan and White Pine Lake, excursions to Minnetonka Cave, Bloomington Lake in the Wasatch Forest, and other interesting places. Picnic, camping and recreational equipment is available through the college for students at nominal rental fee. For further information address inquiries to Department of Physical Education or Dean of the Summer School.
APPLICATION FOR SUMMER SESSION HOUSING RESERVATION

Utah State Agricultural College

Instructions: Print or use typewriter. A deposit of $5.00 for dormitory or $10.00 for apartment accommodations must accompany this application if you wish a place reserved. In the event that you are unable to come, notify us by June 10 and a refund will be granted.

Applicant's full name_________________________________ Sex_____ Date________

Present Address _______________________________________

Applicant's year in college_________ Age_____ Marital Status_____

If married, state number in family group________________________

Dates of period for which applying: From______19—to________ 19____

Housing desired: 1st choice________ 2nd________ 3rd________

Check for $5 or $10 enclosed________ Money order enclosed________

I am planning to attend and will send deposit later. ________________

I plan to arrive on (date)_________________________

Mail to: College Housing Manager
Utah State Agricultural College
Logan, Utah
Registration procedures at the College are made more convenient for all concerned if the student submits an application in advance. Please send in the form below at your convenience.

**U.S.A.C. REQUEST FOR REGISTRATION MATERIALS**

To the Registrar:  
Date ______________________

I am tentatively planning to enroll in the 1954 Summer Quarter. Please prepare registration materials for me. I expect to attend the session beginning ______________________

Print name ______________________  
Last  First  Middle

Alpha No. _______  Student No. _______  (Male ☐)  (Female ☐)  
(Single ☐)  (Married ☐)  Citizen of U.S.A.  (Yes ☐)  (No ☐)

Date of Birth ______________________  
Month  Day  Year

Previously enrolled at U.S.A.C.  (Yes ☐),  (No ☐).  (Residence ☐),  
(Extension ☐),  Correspondence ☐). First quarter and year ______________________

Last Quarter and Year ______________________

Permanent Address ______________________

High School Last Attended ______________________  City and State ______________________

Other Colleges attended with location ______________________

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### Other Summer Schools in Rocky Mountain Area

- **Adams State College, Alamosa, Colorado**  
  June 7 to August 14
- **Brigham Young University, Provo, Utah**  
  June 14 to August 20
- **Colorado A & M College, Fort Collins**  
  June 28 to August 20
- **Colorado College, Colorado Springs**  
  June 21 to August 13
- **Colorado School of Mines, Golden**  
  July 13 to Sept. 9
- **Colorado State College of Education, Greeley**  
  June 14 to August 20
- **Idaho State College, Pocatello**  
  June 7 to July 30
- **Montana State College, Bozeman**  
  June 14 to August 20
- **Montana State University, Missoula**  
  June 14 to August 20
- **New Mexico A & M College**  
  June 12 to August 7
- **New Mexico Highlands University, Las Vegas**  
  June 14 to August 20
- **University of Colorado, Boulder**  
  June 14 to August 24
- **University of Denver, Denver, Colorado**  
  June 21 to August 20
- **University of New Mexico, Albuquerque**  
  June 17 to August 11
- **University of Utah, Salt Lake City**  
  June 12 to August 27
- **University of Wyoming, Laramie**  
  June 14 to August 20
- **Western State College of Colorado, Gunnison**  
  June 7 to August 6
Calendar for Summer School 1954
and for Academic Year 1954-55

Summer Quarter, 1954

June 1, Tues. Coaching School and Industrial Education Classes begin.
June 7, Mon. Registration.
June 8, Tues. Instruction begins.
July 5, Mon. Holiday.
July 16, Fri. First session ends.
July 19, Mon. Second session begins.
July 24, Sat. Holiday.
Aug. 20, Fri. Second session ends.

Fall Quarter

Sept. 20, Mon. First faculty meeting.
Sept. 23, Thurs. Guidance tests for new students.
Sept. 24, Fri. Registration, former students
Sept. 25, Sat. Registration, new students.
Sept. 27, Mon. Instruction begins.
Nov. 24, Wed. Thanksgiving Recess, begins 12 noon.
Dec. 14, Tues. Examination period begins.
Dec. 17, Fri. Fall Quarter ends.

Winter Quarter

Jan. 3, Mon. Registration.
Jan. 4, Tues. Instruction begins.
March 15, Tues. Examination period begins.
March 18, Fri. Winter Quarter ends.

Spring Quarter

March 21, Mon. Registration.
May 30, Mon. Memorial Day (Holiday).
May 31, Tues. Examination period begins.
June 3, Fri. Examination period ends.
June 3, Fri. Evening Baccalaureate Service.
June 4, Sat. 62nd Commencement.
CENTRAL PORTION, LOGAN CAMPUS

1. Old Main  
2. Mechanic Arts Building  
3. Utah Scientific Research Foundation  
4. Engineering Building  
5. Home Economics Building  
6. Library  
7. Lund Hall  
8. Extension Service  
9. President's Home  
10. Smart Gymnasium  
11. Forestry Building  
12. L.D.S. Institute of Religion  
13. Home Management House  
14. Student Union Building  
15. Field House  
16. Stadium  
17. Military Science Building  
18. Veterinary Science Building  
19. Animal Industry Building  
20. Plant Industry Building  
21. Rural Arts Building  
22. Site of New Ag Science Building  
23. Technology Building  
24. Maintenance Building  
25. College Housing Units  
26. Tennis Courts