

CATALOG
of the
Division of Graduate Studies

1949-50

With 1950-51 Announcements

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COLLEGE CALENDAR FOR 1949-1950

(Containing Events and Dates of Interest to Graduate Students)

Twenty-Fifth Annual Session

SPRING SEMESTER

| | |
|----------------|---|
| Jan. 29 | Sunday, 12 Noon. Dormitory rooms open to new occupants. |
| Jan. 30 | Monday, 8 A. M. Second semester begins. Entering freshmen assemble in Aggie Memorial Auditorium. |
| Jan. 31-Feb. 1 | Tuesday, Wednesday. Registration for spring semester. |
| Feb. 2 | Thursday, 8 A. M. Classes begin. |
| Feb. 3 | Friday. Late registration fee charged after this date. |
| Feb. 7 | Tuesday. Last day a student may register in the second semester. |
| Mar. 15 | Wednesday. Last day for filing with Graduate Dean statement of intention to graduate on May 22. |
| Apr. 6 | Thursday, 10 P. M. Easter vacation begins. |
| Apr. 11 | Tuesday, 8 A. M. Classes resumed. |
| May 6 | Saturday. Last day for submission of first draft of thesis for Master's Degree for May graduates. |
| May 19 | Friday. Last day for submission of thesis for binding. |
| May 20-26 | Saturday-Friday. Final examinations second semester. |
| May 21 | Sunday, 8 P. M. Baccalaureate sermon. |
| May 22 | Monday, 8 P. M. Commencement. |
| May 26 | Friday, 5 P. M. Second semester ends. |

SUMMER SCHOOL, 1950

(For Details of Summer Calendar, Please Request
Summer Session Bulletin from Registrar.)

FIRST TERM

| | |
|---------|---|
| June 1 | Thursday. Summer school begins. Registration for first term. Breakfast served as first meal in dormitories. |
| July 12 | Wednesday. First term ends. |

SECOND TERM

| | |
|---------|--|
| July 13 | Thursday. Registration for second term. |
| Aug. 23 | Wednesday. Second term ends. Summer school closes. Commencement 8 P. M. |

COLLEGE CALENDAR FOR 1950-1951

Twenty-Sixth Annual Session

FALL SEMESTER

1950

- Sept. 10 Sunday, 12 Noon, Dormitory rooms open for occupancy. First meal, breakfast Monday, Sept. 11.
- Sept. 11 Monday. First semester begins.
- Sept. 13 Wednesday. Pre-registration consultations for all students.
- Sept. 14-15 Thursday-Friday. Registration for fall semester.
- Sept. 16 Saturday, 8 A. M. Classes begin.
- Sept. 18 Monday. Late registration fee will be charged after this date.
- Sept. 21 Thursday. Last day a student may register for the first semester. Last day to add courses.
- Nov. 22 Wednesday, 10 P. M. Thanksgiving holidays begin.
- Nov. 27 Monday, 8 A. M. Classes resumed.
- Dec. 20 Wednesday, 10 P. M. Classes dismissed for Christmas holidays.

1951

- Jan. 3 Wednesday, 8 A. M. Classes resumed after Christmas holidays.
- Jan. 20-26 Saturday-Friday. Final examinations first semester.
- Jan. 29 Monday, 8 A. M. First semester ends.
- SPRING SEMESTER
- Jan. 28 Sunday, 12 Noon. Dormitory rooms open to new occupants.
- Jan. 29 Monday, 8 A. M. Second semester begins. Entering freshmen assemble in Aggie Memorial Auditorium.
- Jan. 30-31 Tuesday, Wednesday. Registration for spring semester.
- Feb. 1 Thursday, 8 A. M. Classes begin.
- Feb. 2 Friday. Late registration fee charged after this date.
- Feb. 6 Tuesday. Last day a student may register in the second semester.
- Mar. 14 Wednesday. Last day for filing statement of candidacy for a degree with academic dean.
- Mar. 23 Thursday, 10 P. M. Easter vacation begins.
- Mar. 27 Tuesday, 8 A. M. Classes resumed.
- May 5 Saturday. Last day for submission of first draft of thesis for Master's Degree for May graduates.

| | |
|-----------|--|
| May 18 | Friday. Last day for submission of thesis for binding. |
| May 19-25 | Saturday-Friday. Final examinations second semester. |
| May 20 | Sunday, 8 P. M. Baccalaureate sermon. |
| May 21 | Monday, 8 P. M. Commencement. |
| May 25 | Friday, 5 P. M. Second semester ends. |
| June 4 | Monday. Summer session begins. |

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- Arthur Wesley Young, Ph.D., Professor of Agronomy

DIVISION OF GRADUATE STUDIES

WILLIAM C. HOLDEN, *Dean*

Location

Texas Technological College, with an enrollment of 5,804 in 1949-50, is a state-supported coeducational college. It is located at Lubbock in the South Plains area, approximately 200 miles from the northern line of the Panhandle and 400 miles northwest of the state capital. The elevation is 3,200 feet above sea level. Pleasant days and cool nights make it a climate conducive to study and recreation.

The city and suburbs have a permanent population of approximately 72,000. Excellent churches, schools, hotels, and shopping centers are available. Two railway systems, an interstate bus line, and three air lines operate through the city.

Organization of the Division

In 1927, two years after the opening of the college, plans were perfected to promote advanced study and research in those departments of Texas Technological College which were qualified to give graduate work. A committee was appointed from the faculty of the Division of Arts and Sciences to supervise graduate study leading to the Master of Arts Degree. Beginning in 1932, candidates were accepted for the Master of Arts degree, and graduate work was placed under the supervision of an enlarged Graduate Committee appointed from the faculty of the college. In 1935, the Division of Graduate Studies was created, and in September, 1937, a Dean of the Division of Graduate Studies was appointed. Recognition in November, 1946, of the under-graduate work of the college by the Association of American Universities considerably augments the status of the Division of Graduate Studies.

Division of Graduate Studies

The Division of Graduate Studies is administered by the Dean and the Graduate Council under authority vested by the Board of Directors. All matters of policy are formulated by the Graduate Council. The Dean of the Division, working with the Graduate Council, co-ordinates the graduate activities throughout the college, provides regulations for admission to candidacy for graduate degrees, determines the requirements for the various graduate degrees, and recommends the conferring of such degrees. The Dean of the Division of Graduate Studies is responsible for the execution of all regulations pertaining to the graduate student, and all matters relating to the graduate work should be addressed to him. However, students should not hesitate to write directly to the head of a department if they have specific questions regarding the work of a department.

Library

The Library, erected in 1937, provides two large reading rooms and three special reading rooms for the use of graduate and undergraduate students. On the first floor are located the reference department, including periodicals, federal documents, and general and special reference publications, and a general reading room. The circulation desk and the reserve reading room, including the collateral reading collection, are on the second floor.

Library materials include 75,337 cataloged volumes, most of which are administered from the circulation desk; 13,639 bound periodicals, together with current subscriptions to 880 periodicals and newspapers; and 213,907 federal documents.

The growth of the collection is being directed along definitely planned lines. Files of periodicals and other continuations are being completed for the period which ante-dates the establishment of the library. The public documents collection, which is fairly complete since the Library was made a depository in 1933, is being enlarged through acquisition of important documents published before that date.

Professional staff members are on duty at the service desks from 8 A.M. to 10 P.M. to aid in the use of materials. The reader's adviser gives assistance in the use of the card catalog and other library tools and supervises the 500-volume recreational reading collection. She also collaborates with faculty members in the organization and selection of materials for courses.

The Southwestern Collection, which is housed in a separate reading room on the first floor, was established for the acquisition and preservation of materials of particular interest in this region. It includes at present documents and manuscripts, which are, of course, unique, as well as 745 cataloged volumes, many of which are not obtainable in any other Texas library. It includes, also, among other photographic materials, a large collection of early Texas newspapers on microfilm, a gift of Mr. Lewis W. McNaughton of Dallas, Texas. The archive material includes a group of papers connected with the estate of James Bowie, given to the library by the late Sen. Arthur P. Duggan of Littlefield, Texas; a collection of records of the Matador Land and Cattle Company, the gift of Maurice Reilly; and a collection of records of the Spur Ranch, given by President Emeritus Clifford B. Jones. With the aid of several residents of Spur, a file of the *Texas Spur* from 1909-40 has been secured for the collection. With the cooperation of the research department a microfilm reproduction of this file has been made. These manuscripts and books are excellent source material for thesis research, not only in history but also in any subject the locale of which is the Southwest.

The library is equipped for certain special services to those engaged in research. Nine study rooms in the tower of the Library are available for assignment to individual members of the faculty and students engaged in special projects. Carrells in the stacks, adjacent to books in the subject field of the student's interest, can be obtained on application to the circulation head. A micro-film reader and film collection are housed and administered in the reference department.

The facilities of the library are available to students, faculty members, and all full-time employees of the college. By arrangement with the head of the circulation department, citizens of the State of Texas may obtain borrowing privileges.

Library hours are: 8 A.M. to 10 P.M., Monday through Friday; 8 A.M. to 5 P.M. Saturday, with the exception of certain legal holidays.

Fees and Deposits

The question of expense while attending college is of importance to every student. In a student body of over 5,000 members there are so many different tastes, as well as such a wide range of financial resources, that each student must determine his own budget in keeping with his own needs and financial condition. It is possible to live simply and to participate moderately in the life of the college community on a modest budget. The best help the college authorities can offer the student in planning his budget is to furnish information on certain definite items of expense and acquaint him with others for which he, in all probability, will have to make provision.

Payment of Fees. All fees are payable in full at the time of registration. Payment may be made in check, or in money order payable to Texas Technological College. All checks, money orders, and drafts are accepted subject to final payment.

Registration Fee. For each student enrolled for 12 or more semester credit hours the registration fee is \$25 per semester for legal residents of the State of Texas. For those enrolled for less than 12 semester hours there is a reduction in the amount of the fee charged, as follows:

| | |
|-------------------------|---------|
| For 11 semester hours - | \$23.50 |
| 10 semester hours - | 21.50 |
| 9 semester hours - | 19.50 |
| 8 semester hours - | 17.50 |
| 7 semester hours - | 15.50 |
| 6 semester hours - | 13.50 |
| 5 semester hours - | 11.50 |
| 4 semester hours - | 9.50 |
| 3 semester hours - | 7.50 |

Registration Fee for Non-Resident Students. Each non-resident student* is required to pay a non-resident registration fee of \$150 per semester or \$300 for the nine-month session. For the non-resident student enrolled in the long session for less than 12 semester hours, the registration fee is \$12.50 per semester hour for which the student is enrolled.

It shall be the responsibility of the student to pay all non-resident fees at the beginning of each semester or term he may be enrolled. For failure to pay these fees, a penalty may be assessed, not to exceed \$5 per semester.

Visitor's Fee. A fee of \$5 for each course is required for the privilege of visiting any course. No credit may be obtained for auditing courses in this manner.

* *Definition of Residence*

1. A non-resident is hereby defined to be a student of less than 21 years of age, living away from his family and whose family resides in another state, or whose family has not resided in Texas for the 12 months immediately preceding the date of registration; or a student of 21 years of age or over who resides out of the state or who has not been a resident of the state 12 months subsequent to his twenty-first birthday and for the 12 months immediately preceding the date of registration.
2. All individuals are classified as non-resident students who have come from without the State of Texas and who are within the state primarily for educational purposes as evidenced by registration in this institution.
3. No one shall be deemed a resident of Texas for the purpose of registering in this institution unless he has resided in this state for 12 months immediately preceding the date of his enrollment.
4. The residence of a minor shall be that of the parent or guardian except where guardianship has been established in this state obviously for the purpose of evading the non-resident fee. In no event shall the

Student Health and Activity Fee. Pursuant to an act of the Texas Legislature** each student is required to pay a student health and activity fee of \$30 per year, payable \$15 per semester. This fee covers recreational activities, health and infirmity service (see Health Service), student publications, admission to intercollegiate athletic contests, and admission to the Artists Course numbers.

Late Registration Fee. Any student who fails to register and pay fees within three days of the regular registration period shall be required to pay an additional service charge of \$2.

Property Deposit. Each student enrolled in the college must make a property deposit of \$7. This deposit is subject to charges for property loss or damages or breakage or violation of rules in library or laboratories. If the charges incurred for any semester reduce the deposit by 50 per cent, the student, upon notice from the Auditor, will be required to restore the deposit to its original amount by paying the charges at once. This deposit, less charges, will be returned to the student at the termination of his career here as a student.

resident fee become effective until the expiration of one year from date of appointment.

5. A parent or guardian may not claim residence in this state for school purposes until residence of at least 12 months has been continuously maintained. It shall be the responsibility of the student to submit legal evidence of any change in residence status.
6. All aliens shall be classified as non-resident students. An alien who has applied for naturalization in the United States and who has received his first citizenship papers shall have the same privileges of qualifying for resident status for fee purposes as has a citizen of the United States.
7. The residence status of a student is determined at the time of his first registration in the college and his residence is not changed by his sojourn at Texas Technological College as a student except as provided by law. This policy shall apply to both graduate and undergraduate students regardless of any fellowships, scholarships, student assistantships, or graduate assistantships that may be granted to any student.
8. A student who claims that he has no permanent residence but who has not been a bonafide resident of the state of Texas for at least one year immediately preceding the date of his original or subsequent enrollment in the college may not claim exemption from the non-resident fee.

** Fortieth Legislature, general session. Amended Fiftieth Legislature, general session.

Laboratory Fees. For all courses in which the combined credit of lecture and laboratory is from 1 to 3 semester hours, a laboratory fee of \$1 is charged for each semester. For courses in which the semester credit is 4 semester hours or more, the laboratory fee is \$2 per semester. A laboratory fee of \$2 is charged for each freshman student participating in the early registration counseling and testing program to cover laboratory materials and supplies.

Housing Accommodations

Room and Board in the College Dormitories. The college owns and operates eight dormitories with a normal capacity of 2780 students. Charges for room and board vary with the cost of living and are subject to change without notice. For 1948-49 the price is \$492 for the nine-month period for double rooms occupied by two students.

Off Campus Accommodations. All arrangements for housing accommodations in private dormitories and residences off the campus should be made through the office of the Dean of Men or the Dean of Women.

Student Health Service

Each student currently enrolled in the college is entitled to the medical services given in the out-patient clinic and to admission to the Infirmary within its maximum capacity of 20 beds. The out-patient clinic is open during the day to students in need of consultation and treatment by the College Physician and nurses on the health service staff. Students judged to be in need of infirmary care by the College Physician may be admitted to the Infirmary where they are under the constant supervision of the physician and a registered nurse. Under the present plan, no charge is made for infirmary care up to a maximum of seven days in each semester; a minimum fee to cover the cost of food, drugs, and supplies is charged the student for each additional day in the Infirmary. In case the Infirmary is filled to capacity, the college is not under obligation to provide students with hospital service elsewhere. For further details concerning the Student Health Service see the general College Catalog.

Fellowships and Scholarships

The college has available a considerable number of Teaching Fellowships, either on one-fourth time or one-half time. Persons awarded such fellowships have full charge of classes.

Several Graduate Assistantships are maintained by various departments. Students holding such positions act as laboratory supervisors or do routine work incident to class instruction.

Both Teaching Fellowships and Graduate Assistantships are under the jurisdiction of the various departments, and applications should be directed to the head of the department concerned.

Responsibility of the Student

The student is responsible for reading and following the regulations and requirements of the Division of Graduate Studies. Members of the faculty and the Dean are ready to advise with students, but no faculty member or dean is authorized to waive any of the requirements set forth herein. If any student has a question as to the interpretation of any regulation, he should consult with the Dean of the Division of Graduate Studies.

Admission

Students with a Bachelor's Degree are admitted to the Division of Graduate Studies by the Registrar upon the basis of a complete transcript of undergraduate work.

Registration

The following students come under the supervision of the Dean of the Division of Graduate Studies and should report to him for registration:

1. Candidates for the Master's Degree.
2. Students who have received a Bachelor's Degree from a recognized institution and are not now candidates for a second Bachelor's Degree.
3. A third class of students may pursue graduate work. Students in residence who lack 6 semester hours or less of having completed the requirements for the Bachelor's Degree may, with prior approval of the dean of the division concerned, enroll for courses carrying graduate credit while completing their under-graduate requirements. Although such students are not under his supervision, the Dean of the Division of Graduate Studies must approve

all courses which the student intends to use for graduate credit. Furthermore, in such cases, if graduate credit is desired for any part of the work carried, the combined load of graduate and undergraduate courses must not exceed 15 semester hours.

Candidacy for the Master's Degree

A graduate student enrolled in the Division of Graduate Studies does not automatically become a candidate for a Master's Degree. To become a candidate the student must complete the following requirements:

1. Acceptance as a candidate by the departments in which the major and minor work is to be performed.

To be accepted as a candidate by the department the student shall present undergraduate work equivalent to a major in that department or shall have completed a minimum of 12 semester hours of advanced undergraduate work in the major department together with advanced undergraduate courses in closely allied fields. For a minor subject the student must have completed the equivalent of the minor required for the undergraduate degree in that department or must have completed a minimum of 6 semester hours in advanced undergraduate courses in such department. If the student cannot meet these requirements or if a period of five years has elapsed since the student received his Bachelor's Degree suitable leveling courses may be prescribed which must be completed without graduate credit before the student is accepted as a candidate for the Master's Degree.

An undergraduate record above average is a prerequisite to candidacy. In cases where the grade of B or better has not been received on at least 50 per cent of his undergraduate work the student may become a candidate for a Master's Degree only by satisfactorily completing a preliminary examination over his major and minor fields, as well as over work in which he may be deemed deficient.

2. After 12 semester hours of graduate work have been satisfactorily completed, a formal application must be made for admission to candidacy. This application, approved by the heads of major and minor departments, must be submitted to the Dean of the Division of Graduate Studies not later than 12 weeks prior to the date on which the degree is to be conferred.

No member of the faculty or staff above the grade of instructor shall be eligible to receive a graduate degree from this college. No member of the faculty or staff shall be eligible to receive a Master's Degree in less than three years of nine months each, or the equivalent, and then only in case special arrangements are made.

Requirements for the Master's Degree

Having been accepted as a candidate for a Master's Degree, the student must complete the following requirements:

1. Amount of work: The minimum amount of work beyond the Bachelor's Degree required for the Master's Degree (except the Degree of Master of Education) is 24 hours and a thesis, although a department may increase the number of hours required of a particular candidate. Of the required work at least 15 semester hours and a thesis must be completed in the major subject. At least 6 of the 24 hours must be in a department other than the major department. Two minors may be chosen, but in no case will less than 6 hours be accepted towards a minor. The minor, or minors, must be in subject matter other than the major subject.

Courses open to graduate students for graduate credit are of two levels:

- a. Graduate courses: Those courses are open only to graduate students and cannot be used towards fulfillment of a Bachelor's Degree. Such courses are numbered 500 and above.
- b. Advanced undergraduate courses: These courses are regular junior and senior courses. If such courses, or their equivalents, have not been taken for undergraduate courses, they may be taken for graduate credit,

provided such courses have been approved by the Committee on Graduate Work and with the understanding that additional work over and above that completed by the undergraduate student must be completed by the student seeking graduate credit in these courses.

For completion of requirements for the major at least 9 semester hours must be completed in courses of Class (a) above.

Graduate students are limited to a load of not exceeding 15 semester hours for each semester and a load of not exceeding 6 semester hours for each full summer term of six weeks if any portion of such work is to be counted toward graduate credit. Those who may be employed or otherwise partially engaged are subject to further restrictions as set forth below.

Students, including public school teachers, holding full time positions off the campus may not register for more than three hours of graduate work in any one semester or summer term.

2. Residence Requirements: A minimum of 24 weeks in residence at this institution is required, and in addition, another six weeks of work must be accounted for in one of the following ways:
 - a. As a resident student at Texas Technological College.
 - b. As a resident student in some other college of equal rank.
 - c. As a student in extension courses offered by Texas Technological College.

It is expected that the graduate work offered for a Master's Degree will be completed within a period of five calendar years (or six consecutive summers). Graduate work taken more than five years before graduation and less than ten will be given half credit towards the degree on the recommendation of the departments concerned and the Graduate Council. Work taken more than ten years before graduation will not be accepted towards the degree.

3. Non-residence and extension credit: Either of the following methods, or a combination of the two, may be used to account for 6 hours of graduate credit:

- a. A maximum of 6 semester hours of graduate work may be accepted from another institution of equal rank if the student was enrolled as a resident student of that institution.
- b. A maximum of 6 semester hours of graduate work taken through the Division of Extension of Texas Technological College or another institution of equal rank may be used. No graduate credit will be allowed for work done by correspondence.

An additional 9 semester hours may be accepted when a department recommends that a student be sent to a particular college for the consummation of particular work. Such work must be outlined and approved by the department, the dean of the division concerned, and the Graduate Council before such work is undertaken.

4. Foreign languages: A reading knowledge of a foreign language is required of all candidates for the Master of Arts Degree. In certain departments no candidate may receive a Master of Science Degree without meeting the requirement in foreign language.
5. Thesis: The completion of an acceptable thesis is a requirement of all Masters' Degrees, with the exception of Master of Education.

Research leading to the thesis is supervised by an advisory committee appointed at the candidate's request by the Dean of the Division of Graduate Studies at the time the student selects his thesis subject. Although primary responsibility rests upon the major professor, who will be the chairman of the advisory committee, the candidate should consult freely with members of the advisory committee from the initiation of his research until the acceptance of his thesis. Each member of the committee may call in the candidate for consultation at any time during the preparation of the thesis. The thesis must be acceptable to all members of the advisory committee, not just to the major professor.

A complete draft of the thesis shall be prepared in form and manner acceptable to the major professor and the committee as a whole. The candidate must submit his first draft to the committee in ample time for full consideration. Failure to do so shall be considered ground for non-acceptance of the thesis. This complete draft, with the signed approval of the members of the advisory committee, must be submitted to the dean of the division not later than 30 days prior to Commencement during the regular session, and not later than 20 days prior to end of the summer session.

At least three copies of the final draft of the thesis must be prepared and final approval thereon indicated by the advisory committee and the Dean of the Division of Graduate Studies. These approved copies, together with the deposit of binding, must be submitted to the Dean of the Division of Graduate Studies, who will issue a receipt for the deposit, not later than three days prior to the date set for graduation.

Six copies of an abstract of the thesis, suitable for publication and prepared in a form acceptable to the major professor, must be submitted to the Dean of the Division of Graduate Studies for approval not later than three days prior to the date set for graduation.

6. Grades and Credit. No courses will be accepted for graduate credit unless registration for such courses has been approved by the Dean of the Division of Graduate Studies. This regulation also applies to students in extension courses. However, extension students will be allowed a period not exceeding two weeks from the first meeting of the class to satisfy these requirements.

A student must have a B average on all courses counted towards a Master's Degree. With the grade point system this is equivalent to 2.00. No grade lower than C can be included. Regulations concerning the grade of "Inc." as set forth in the current catalogue apply to graduate as well as undergraduate students.

7. Government Requirement: The Forty-fifth Legislature, by statute, requires the study of state and federal government as a prerequisite to any degree granted by a state-supported college. Each candidate for a Master's Degree should consult with the Dean of the Division of Graduate Studies concerning this requirement.

TEXAS TECHNOLOGICAL COLLEGE

8. **Special departmental requirements:** Each major department, in addition to the foregoing, may impose special requirements, such as written examination, special reading assignments or any other provisions deemed essential.

THE MASTERS' DEGREES

Master of Arts

Prerequisite: A Bachelor of Arts Degree. The Master of Arts Degree is offered by the following departments: Biology, Chemistry, Education and Psychology, English, Foreign Languages (Spanish), Geology, Government, History, Anthropology and Sociology, Mathematics, Physics, and Speech.

In addition to the departments mentioned above, minors may be taken in French, Journalism, Music, Philosophy, and Physical and Health Education.

Master of Science

Prerequisite: A Bachelor of Science Degree or its equivalent. In some departments additional prerequisites are required. The Master of Science degree is offered by the following departments: Accounting and Finance, Agricultural Economics, Agricultural Education, Animal Husbandry, Biology, Chemical Engineering, Chemistry, Clothing and Textiles, Dairy Manufactures, Economics and Management, Electrical Engineering, Foods and Nutrition, Geology, Home Economics Education, Marketing and Salesmanship, Mathematics, Physics, and Plant Industry.

Master of Education

The Degree of Master of Education is designed primarily for teachers and administrators, or those who expect to fill such positions. It is predicated upon the Degree of Bachelor or Science in Education or its equivalent which should include 30 semester hours in education.

All candidates for this degree may select any one of the following plans:

1. Plan I, designed especially for administrators. Required: 24 hours of advanced and graduate courses and a thesis. The courses include 9 hours of graduate level courses, 3 hours in statistics, and 3 hours in technique of research. The major in education consists of 12 hours and a thesis, and the minor of 12 hours in a subject-matter department, or 6 hours in each of two such departments.

2. Plan II, designed especially for classroom teachers.
 - a. Option 1, with thesis. Required: 24 hours of advanced and graduate courses and a thesis. The courses include 3 hours in the technique of research and at least 9 hours at graduate level. As few as 12 hours and as many as 24 hours may be in the Department of Education. The remainder may be in a subject-matter field, or in two subject-matter fields. In either case the usual graduate requirements for a minor must be observed. With the consent of the Graduate Committee upon the advice of the departments concerned, the candidate may write his thesis in the subject-matter department.
 - b. Option 2, without thesis. Forty-two hours required, including 30 hours in advanced and graduate levels. At least 9 hours must be at the graduate level. As few as 12 hours and as many as 18 may be taken in the Department of Education. The remainder of the 30 hours may be taken in a subject-matter, or minor, department, or in two such departments. Twelve of the 42 hours may be selected from any department in the college, and may be of any level.
3. Plan III, without thesis. Required: 30 hours of advanced and graduate courses, 9 of which must be of graduate level. From 12 to 18 hours may be taken in education, the remainder of the 30 hours to be in one or two minor departments in which the candidate has the necessary prerequisites. This plan includes Education 531 and 5311.

Master of Business Administration

Prerequisites: An approved Bachelor's Degree, with 6 hours in the principles of economics and at least 30 hours in business administration, including courses in accounting, business law, finance, marketing, and statistics.

1. Plan I, designed especially for students intending to enter the field of business. Required: 24 hours of senior and graduate courses in business administration and a thesis. The professor directing the student's program may substitute 6 hours of courses approved for graduate credit from any department in the college, provided such courses are advantageous to the objectives of the student.

The student should confer with the professor in charge of his field of concentration and with the Dean of the Division of Business Administration before or at the time of registration in order to arrange a tentative program. His program must be approved by the Dean of the Division of Business Administration.

2. Plan II, designed primarily for students intending to enter government service. Required: 24 hours of senior and graduate courses and a thesis. The professor directing the student's program may include as much as 6 hours of courses approved for graduate credit outside the Division of Business Administration, provided such substitutions are advantageous to the objectives of the student.

It is advisable for a student electing Plan II to confer with the Dean of the Division of Business Administration as early as the junior year and arrange his electives so as to achieve a concentration in the fields of economics and government. The combined graduate and undergraduate work should include: 6 hours of advanced accounting; 6 hours of advanced economics; 3 hours of business writing; 6 hours of business law; 3 hours of statistics; 6 hours of marketing; 3 hours of short term finance; 3 hours of investments; 3 hours of foreign trade; 6 hours of governmental administration.

The student's graduate program must be approved by the Dean of the Division of Business Administration.

Master of Science in Home Economics

Prerequisites: An approved Bachelor's Degree in Home Economics, or its equivalent.

Requirements: 24 hours of courses approved for graduate credit, with due regard for prerequisites, and a thesis. With the approval of the professor directing student's concentration of work and of the Dean of the Division of Home Economics, as much as 6 hours may be taken outside the Division of Home Economics, such courses confined preferably to the physical sciences, natural sciences, education, or the social sciences, and provided the courses are advantageous to the objectives of the student.

The student's graduate program must be approved by the professor in charge of the thesis, the Dean of the Division of Home Economics, and the Dean of the Division of Graduate Studies.

Professional Degrees in Engineering

The professional degrees in engineering, Chemical Engineer, Civil Engineer, Electrical Engineer, Industrial Engineer, Mechanical Engineer, Petroleum Engineer, and Textile Engineer, are open, upon application, to graduates of the Division of Engineering of Texas Technological College, and to others upon invitation from the faculty of the college. The degrees are conferred only upon recommendation of the faculty of the Division of Engineering and the Graduate Council.

Normally the requirements include distinctive professional experience and a thesis. The candidate must have made a superior undergraduate record and since graduation, he must have been an honor and an asset to his profession.

Professional experience will include five years subsequent to graduation and prior to his application for a degree. Two of the five years will have been in positions of direct responsibility and trust from an engineering standpoint. The quality of this experience will be judged by the faculty of the Division of Engineering, and Graduate Council, and such other members of the profession as may be selected. A Master's Degree in engineering may be substituted for two years of the ordinary professional experience.

The thesis project will be on an engineering subject; it will include only personal investigations or discoveries by the applicant; and it will be a distinct contribution to engineering. It will be evaluated upon the standards used in respect to the quality of the professional experience, and by the same people.

Not later than eight months prior to the time when the degree is to be conferred, the candidate will make written application to the Graduate Council. This application will include a statement of the degree desired, a resume of professional experience with pertinent documentary evidence, and a comprehensive outline of the thesis. The applicant will be admitted to candidacy upon approval by the faculty of the Division of Engineering and the Graduate Council.

Eight weeks before the degree is to be conferred a copy of the thesis will be submitted to the Dean of the Division of Graduate Studies. It must be approved by the faculty of the Division of Engineering, or its selected representatives, and by the Committee on Graduate Work. Two weeks before the degree is to be conferred, three complete copies of the approved thesis will be filed with the Dean of the Division of Graduate Studies.

The candidate will be present to receive the degree except under extraordinary circumstances.

THE DOCTOR OF PHILOSOPHY DEGREES

Beginning with the academic year, 1950-51, Texas Technological College will offer the doctorate in those departments and fields of study which meet the minimum requirements for that purpose. In expanding its graduate program, the college will adhere strictly to the standards, both quantitative and qualitative, as set forth by the Conference of Southern Graduate Schools, of which this college is a member. The doctorate will be offered in the following fields: American Civilization, Chemistry, English, Geology, and History.

DOCTOR OF PHILOSOPHY

General Statement

The Degree of Doctor of Philosophy is awarded in recognition of high attainment and original research in a particular field. Candidates are required to show that they have attained such a standard by comprehensive examinations and by a dissertation which should represent an achievement in research. They must have pursued full-time graduate studies for at least three academic years. Students not devoting full time to graduate study will be required to extend the work over a longer period. A minimum of 24 hours must be earned in residence at Texas Technological College, and the student must be in residence at least one long session. In the work for the doctorate, primary stress is not laid upon the completion of a prescribed number of courses or of a specified period of residence. The emphasis is rather upon the work of the students in laboratories, libraries, and seminars. As far as possible, students are set free from rigid course requirements and are expected to exhibit their own initiative and resourcefulness. Such required courses as are necessary in individual cases are prescribed by the student's advisory committee.

Fields of Study

Ordinarily the major fields of study fall within the confines of a major and one or two minor departments. His advisory committee may cross departmental lines in arranging a field of study when it is to the individual's advantage. When the field of study is selected, the student's various committees will include representatives of the various departments concerned.

Language Requirements

In most fields of research a knowledge of foreign languages is necessary because large bodies of source materials are written in such languages. Before being admitted to candidacy for the doctorate, the student is required to satisfy the Department of Foreign Languages and the Dean of Graduate Studies that he has the necessary language proficiency for independent research. Examination or other evidence is required to show that the candidate has a reading knowledge of two foreign languages, usually French and German. With the recommendation of the committee directing his work and the approval of the Dean of Graduate Studies, another language may be substituted for French or German if it is shown that this will be more useful to the student's objectives.

Qualifying Examination

Each student desiring to become a candidate for the doctorate is required to pass an examination in such fields of study as the departments concerned may prescribe. This examination may be taken at the convenience of the student and the departments involved, but must be taken prior to applying for candidacy.

Candidacy for the Doctorate

When a graduate student has completed two full years of graduate work, has met his language requirements, and has passed the qualifying examinations, he will file with the Dean of Graduate Studies a formal application for admission to candidacy for the Doctor's Degree. This application must be filed at least eight months prior to the date on which he expects to receive the degree.

Dissertation

Each candidate is required to present in acceptable form a dissertation based upon original, independent investigation. The subject of the dissertation must be approved by the advisory committee and Dean of Graduate Studies at least seven months before the candidate expects to receive his degree and must have the approval of his advisory committee. Upon completion of the dissertation, and not later than one month before the candidate

wishes the degree conferred, three typewritten or printed copies, approved by the advisory committee and the Dean of Graduate Studies, must be ready for presentation to the library. Six typewritten copies of an abstract of the dissertation, about one thousand words in length, must be submitted with the dissertation. The acceptance of the dissertation by the candidate's advisory committee and the Dean of Graduate Studies is necessary before a candidate is admitted to the final examination. Directions for the form of the dissertation are available at the Office of Dean of Graduate Studies.

Final Examination

Not later than one week before the degree is to be conferred the candidate must have passed a final examination, oral or written, upon the dissertation and related fields given by the advisory committee and such other members of the faculty as the committee may ask to participate.

Summary of the Requirements for the Degree of Doctor of Philosophy

1. Admission: A baccalaureate degree from a recognized institution, an academic transcript showing adequate preparation for graduate work in a chosen field, supplemented by an acceptable report from such examinations as may be deemed necessary.
2. Residence: A minimum of three years of acceptable graduate study, at least one of which must have been continuous.
3. Language requirement: A reading knowledge of two foreign languages, one of which must be French or German.
4. Qualifying examination: The examination administered by a faculty committee appointed by the Dean of Graduate Studies will occur before the student applies for candidacy.
5. Admission to candidacy.
6. A dissertation.
7. Final oral and/or written examinations.

RESEARCH

The legislative act creating Texas Technological College recognized the necessity of research in all branches of academic training. The act also pointed out the responsibility of the college for the industrial development, through research, of the State but with particular reference to the resources of the western portion of the State.

In furtherance of this same belief the legislature has made annual appropriations to aid research. Additional funds have been appropriated for the particular study of cotton and it is anticipated that this study will be broadened to include other textiles, agricultural products and mineral resources.

It is the policy of the college to use such funds as may be allocated to it to further research by co-operative work with industry. Several such projects are underway and numerous others are in prospect. It is believed that by such co-operative work the greatest benefit will accrue to the State by the development of both the producer of the raw materials and the processors of these materials.

DESCRIPTION OF COURSES

Attention is directed to the statements preceding the announcements of courses in the various departments. Here will be found statements of the prerequisites for graduate work in the particular fields, together with other special departmental requirements. These requirements and recommendations are supplementary to the general requirements of the Graduate Division. They cover such matters as departmental prerequisites and requirements for a major or minor in the department or in some subdivision of the departmental work, etc. If no information is given upon a specific point, it is to be assumed that the general and special requirements stated in the preceding pages of this bulletin apply.

In the following pages are listed the courses given in the various departments which may count for graduate credit. The fact that a course is so listed does not mean that it will be accepted toward an advanced degree. To be counted it must be a part of a program of graduate study in harmony with the regulations of the Graduate Division.

Not all the courses listed are available at any one time. Many are given in alternate years. The class schedule which is published just before the beginning of each semester should be consulted for final announcement of courses to be given. The summer school bulletin, available in February, gives complete schedules for the summer session.

Courses numbered above 300 and below 500 are open to undergraduates and graduates. Courses numbered 500 or above are open only to graduates. The first digit in a course number indicates the year that the course is ordinarily taken. The second digit designates the number of semester hours credit. The third digit or the third and fourth digit combination, if the number has a fourth digit, specifies the number of a particular course. For instance: English 4317 means that the course is ordinarily given in the senior year, it carries three hours credit, and is course number 17 in the 400 series.

Only those members of the various departmental staffs who are members of the teaching faculty of the Graduate Division are included in the following announcements of departments.

ACCOUNTING AND FINANCE

Majors and Minors

ACCOUNTING

| | | | |
|-------|----------------------------------|---|-----------------|
| 336 | Principles of Cost Accounting | 3 | Mr. Gibson |
| 337 | Advanced Cost Accounting | 3 | Mr. Gibson |
| 338 | Budgeting | 3 | Mr. Whittington |
| 430 | Income Tax Accounting | 3 | Mr. Taylor |
| 431 | Advanced Income Tax Accounting | 3 | Mr. Taylor |
| 432 | Governmental Accounting | 3 | Mr. Whittington |
| 433 | Petroleum Accounting | 3 | Mr. Rushing |
| 434-5 | Advanced Accounting | 3 | Mr. Rushing |
| 436 | Accounting Systems | 3 | Mr. Taylor |
| 437 | Principles of Auditing | 3 | Mr. Smith |
| 438 | Advanced Auditing | 3 | Mr. Smith |
| 441 | Machine Accounting | 4 | Mrs. Eaves |
| 531 | C. P. A. Problems | 3 | Mr. Rushing |
| 532 | C. P. A. Problems, Second course | 3 | Mr. Rushing |
| 533 | Current Accounting Theory | 3 | Mr. Rushing |
| 601 | Thesis | | Staff |

FINANCE

| | | | |
|-------|---------------------------------|---|------------|
| 331 | Corporation Finance | 3 | Staff |
| 332 | Short-Term Finance | 3 | Staff |
| 333 | Banking Principles | 3 | Staff |
| 334 | Credits and Collections | 3 | Staff |
| 336 | Life Insurance | 3 | Mr. Hooper |
| 337 | Property and Casualty Insurance | 3 | Mr. Hooper |
| 338-9 | Business Law | 3 | Staff |
| 3310 | Oil and Gas Law | 3 | Mr. Carr |
| 431 | The Federal Reserve System | 3 | Staff |
| 432 | Real Estate | 3 | Staff |
| 434 | Investments | 3 | Staff |
| 531 | Current Financial Problems | 3 | Staff |
| 601 | Thesis | | Staff |

AGRICULTURAL ECONOMICS, FARM MANAGEMENT, AND
RURAL SOCIOLOGY*Majors and Minors*

AGRICULTURAL ECONOMICS

| | | | |
|-----|---------------------------------|---|--------------|
| 322 | Marketing Agricultural Products | 2 | Mr. Marshall |
| 323 | Advanced Agricultural Economics | 2 | Mr. Bennett |

| | | | |
|-------|--------------------------------------|---|--------------|
| 331 | Statistical Problems | 3 | Mr. Ashworth |
| 332 | Advanced Agricultural Statistics | 3 | Mr. Ashworth |
| 333 | Cooperative in Agriculture | 3 | Mr. Marshall |
| 411-2 | Agricultural Economics Seminar | 1 | Staff |
| 421 | Land Economics | 2 | Mr. Leonard |
| 422 | Agricultural Prices and Forecasting | 2 | Mr. Leonard |
| 425 | Farm Laws | 2 | Mr. Leonard |
| 431 | Livestock Marketing | 3 | Mr. Marshall |
| 433 | Farm Management and Records | 3 | Mr. Leonard |
| 434 | Advanced Farm Management | 3 | Mr. Leonard |
| 435 | International Agricultural Economics | 3 | Mr. McBride |
| 436 | Marketing Dairy Products | 3 | Mr. Marshall |
| 511 | Problems | 1 | Staff |
| 531 | Problems in Land Use | 3 | Mr. Leonard |
| 533 | Marketing Problems | 3 | Mr. Marshall |
| 534-5 | Agricultural Economics Research | 3 | Staff |
| 601 | Thesis | | Staff |

RURAL SOCIOLOGY

| | | | |
|-----|---|---|-------------|
| 431 | Agricultural Research and Extension and Organization and Methods | 3 | Mr. McBride |
| 432 | Rural Sociology | 3 | Mr. McBride |
| 532 | Current Problems | 3 | Mr. McBride |
| 601 | Thesis | | Mr. McBride |

AGRICULTURAL EDUCATION

Majors and Minors

A student must be qualified to teach vocational agriculture under the Smith-Hughes Act before he can begin work on his Master of Science Degree with a major in agricultural education. Nine hours may be taken in a closely related field when such courses definitely supplement those studies for the major. When such courses are taken, they must be approved by the Head of the Department and the Dean of the Division of Graduate Studies.

AGRICULTURAL EDUCATION

| | | | |
|-------|---|---|-------------------------|
| 321 | Organization and Administration of Vocational Education in Agriculture | 2 | Mr. Leach |
| 421-2 | Practice Teaching | 2 | Mr. Leach, Mr. Hargrave |

| | | | |
|-------|---|---|---------------|
| 423 | Problems | 2 | Staff |
| 431-2 | Agricultural Education | 3 | Mr. Chappelle |
| 511 | Problems | 1 | Staff |
| 512 | Problems | 1 | Staff |
| 522 | Advanced Methods I, | 2 | Mr. Chappelle |
| 523 | Advanced Methods II, | 2 | Mr. Leach |
| 524 | Advanced Methods III, | 2 | Mr. Hargrave |
| 531 | Investigations in the Field of Agricultural Education | 3 | Staff |
| 532 | Investigations in the Field of Agricultural Education | 3 | Staff |
| 537 | Advanced Methods IV, | 3 | Staff |
| 601 | Thesis | | Staff |

ANIMAL HUSBANDRY

Majors and Minors

| | | | |
|-------|--|---|----------------------------|
| 312-3 | Advanced Livestock Judging | 1 | Mr. Mowery Mr. Anderson |
| 322 | Farm Meats | 2 | Mr. Anderson |
| 323 | Advanced Dairy Cattle Judging | 2 | Mr. Neeley |
| 324 | Dairy Breeds, Pedigrees and Records | 2 | Mr. Mowery Mr. Anderson |
| 331 | Animal Nutrition and Principles of Feeding | 3 | Mr. Baumgardner |
| 334 | Wool and Mohair | 3 | Mr. Burkhart |
| 411 | Animal Husbandry Seminar | 1 | Mr. Stangel Mr. Mowery |
| 412 | Dairy Cattle Breeding | 1 | Mr. Neeley |
| 4111 | Dairy Husbandry Seminar | 1 | Mr. Neeley |
| 421 | Purebred Herds and Flocks | 2 | Staff |
| 422 | Animal Breeding | 2 | Mr. Neeley |
| 423 | Animal Nutrition | 2 | Mr. Baumgardner |
| 424 | Beef Cattle Production | 2 | Mr. Stangel |
| 425 | Horse and Mule Production | 2 | Mr. Harbaugh |
| 426 | Sheep and Wool Production | 2 | Mr. Mowery |
| 427 | Swine Production | 2 | Mr. Baumgardner |

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|-------|----------------------------------|---|---------------|
| 428 | Dairy Cattle Production | 2 | Mr. Neeley |
| 429 | Advanced Dairy Cattle Production | 2 | Mr. Neeley |
| 438 | Range Management | 3 | Mr. Burkhardt |
| 441 | Livestock Production | 4 | Mr. Neeley |
| 531 | Advanced Animal Husbandry | 3 | Staff |
| 532 | Advanced Animal Husbandry | 3 | Staff |
| 533-4 | Animal Husbandry Research | 3 | Staff |

POULTRY HUSBANDRY

| | | | |
|-----|-------------------------------|---|---------------------------|
| 324 | Advanced Poultry Judging | 2 | Mr. Mathews, Mr. Turner |
| 331 | Incubation and Brooding | 3 | Mr. Mathews, Mr. Turner |
| 421 | Poultry and Turkey Production | 2 | Mr. Mathews Mr. Turner |
| 422 | Turkey Production | 2 | Mr. Mathews, Mr. Turner |
| 423 | Market Eggs | 2 | Mr. Mathews, Mr. Turner |

APPLIED ARTS

Minors Only

| | | | |
|-----|----------------------------|---|-------|
| 412 | Homes in the United States | 1 | Staff |
| 431 | Wood | | Staff |
| 434 | Metal and Plastic | 3 | Staff |
| 435 | Jewelry and Lapidary | 3 | Staff |
| 436 | Home Planning | 3 | Staff |
| 437 | Special Problems | 3 | Staff |

ARCHITECTURE

Minors Only

| | | | |
|-------|--------------------------------------|---|--------------|
| 324 | History of Sculpture | 2 | Mrs. Sasser |
| 333-4 | Building Construction | 3 | Mr. Bradshaw |
| 420 | Professional Practice | 2 | Mr. Bradshaw |
| 423-4 | Life Drawing II, | 2 | Mr. Hale |
| 426-7 | Oil Painting or Advanced Water Color | 2 | Mr. Hale |

- 428-9 History of Painting (Prerequisite Arch. 324) Mrs. Sasser
 433-4 Commercial Design II, 3 Mr. Lockard
 436 City Planning 3 Mr. Bradshaw
 439-10 Methods of Teaching Art Integrated for the Ele-
 mentary School and the High School 3 Mrs. Sasser
 4311-12 Ceramics 3 Mr. Tracy

BIOLOGY

Majors and Minors

BACTERIOLOGY

- 331-2 Principles of Bacteriology 3 Mr. Sealey
 333 Communicable Disease 3 Mr. Sealey
 334 Bacteriology of Foods and Food
 Sanitation 3 Mr. Sealey

BIOLOGY

- 331 Heredity 3 Staff
 333 Bio-ecology 3 Mr. Studhalter
 334 Bio-ecology 3 Mr. Studhalter
 431 Advanced Heredity 3 Staff
 432-3 Advanced Bio-ecology 3 Mr. Studhalter
 533 Plankton 3 Staff

BOTANY

- 331 Plant Physiology 3 Staff
 339 Plant Anatomy 3 Mr. Studhalter
 411 Botany Seminar 1 Mr. Studhalter
 431 Plant Microtechnique Staff
 433 Advanced Morphology 3 Mr. Studhalter
 435 Advanced Taxonomy 3 Mr. Studhalter
 436-7 Plant Geography 3 Mr. Studhalter
 438 Morphology of Fungi 3 Mr. Studhalter
 531 Problems 3 Staff
 534 Advanced Plant Anatomy 3 Staff
 535 Field Botany 3 Staff
 536 Taxonomy of Grasses 3 Mr. Studhalter
 601 Thesis Staff

ZOOLOGY

- 331 Animal Histology 3 (As minor only) Mr. Landwer
 332 Comparative Vertebrate Embryology 3
 (As minor only) Mr. Landwer

| | | | |
|-----|---------------------------|---|-----------------|
| 333 | Parasitology | 3 | Mr. Strandtmann |
| 334 | Entomology | 3 | Mr. Strandtmann |
| 411 | Zoology Seminar | 1 | Staff |
| 435 | Cytology | 3 | Mr. Cross |
| 436 | Zoological Microtechnique | 3 | Mr. Cross |
| 437 | Mammalogy | 3 | Mr. Landwer |
| 531 | Problems in Zoology | 3 | Staff |
| 535 | Field Zoology | 3 | Mr. Landwer |
| 601 | Thesis | | Staff |

CHEMISTRY AND CHEMICAL ENGINEERING

Majors and Minors

Beginning in September, 1951, candidates for the degree of Doctor of Philosophy will be accepted subject to the general requirements of the Division of Graduate Studies. Prospective candidates for the Doctor's degree are requested to communicate with the chairman of the department.

Special Regulations Concerning a Master of Science Degree in Chemistry and Chemical Engineering

1. Physical Chemistry: No student may receive a Master of Science Degree in chemistry or in chemical engineering without having done satisfactory work in physical chemistry. (Chemistry 441-2 or its equivalent.)
2. Foreign Language: No student may receive a Master of Science Degree in chemistry or in chemical engineering without demonstrating a reading knowledge of German or French. (At the discretion of the Head of the Chemistry Department, some other foreign language may be substituted.) The demonstration of this reading knowledge must be to the satisfaction of the Department of Foreign Languages of this college. Arrangements for the examination for this purpose will be made through the office of the Dean of the Graduate Studies at the request of the student. The examination must be taken before the beginning of the semester in which the degree is to be conferred.
3. Preliminary Examinations: Before being accepted as a candidate for a Master of Science Degree in chemistry or chemical engineering, the student must take written preliminary examinations on undergraduate work as follows:

Candidates for a Master of Science Degree in chemistry will take four two-hour examinations; one examination on each of these: inorganic chemistry, organic chemistry, analytical chemistry, and one examination on the student's choice of physical chemistry, biological chemistry, and chemical engineering. Candidates for a Master of Science Degree in chemical engineering will take five two-hour examinations; one examination in each of these: inorganic chemistry, organic chemistry, analytical chemistry, physical chemistry, and chemical engineering.

These examinations will be given during the first week of each semester, in order that the student may register for remedial courses if such are needed. The schedules of these examinations will be posted on the departmental bulletin board.

4. The Department will accept no thesis which has not been checked experimentally, if the department considers experimental checking to be possible. It shall be the duty of the advisory committee to see that the spirit of this regulation is enforced.

CHEMISTRY

| | | | |
|--------|------------------------------------|------------------------|-------------------------|
| 331-2 | Quantitative Analysis (Minor only) | 3 | Mr. Craig |
| 343-4 | Organic Chemistry (Minor only) | 3 | Mr. Goodwin |
| 411-2 | Seminar (Minor only) | 1 | Staff |
| 434 | Organic Preparations | 3 | Staff |
| 435 | Advanced Quantitative | 3 | Mr. Oberg |
| 436-7 | Biological Chemistry | 3 | Mr. Dennis |
| 438 | Advanced Physical Chemistry | 3 | Mr. Oberg |
| 511-2 | Graduate Seminar | 1 | Staff |
| 5234 | Biochemical Techniques | | Mr. Dennis |
| 5315 | Spectrographic Analysis | | Mr. Craig |
| 5321-2 | Advanced Organic | | Mr. Goodwin, Mr. Dennis |
| | | | Mr. Watson, Mr. Tinsley |
| 5323 | Qualitative Organic Analysis | | Mr. Dennis |
| 5324 | Quantitative Organic Analysis | | Staff |
| 5331 | Advanced Biological Chemistry | Mr. Dennis, Mr. Watson | |
| 5341-2 | Advanced Physical Chemistry | | Staff |
| 537-8 | Advanced Work in Specific Fields | | Staff |
| 601 | Master's Thesis | | Staff |
| 701 | Doctor's Thesis | | Staff |

CHEMICAL ENGINEERING

| | | |
|-------|---|-----------|
| 331-2 | Principles of Chemical Engineering (Minor only) | Mr. Oberg |
| 421 | Fuels and Combustion | Staff |
| 425-6 | Unit Operation Laboratory (Minor only) | Mr. Dodge |
| 431-2 | Chemical Technology (Minor only) | Mr. Dodge |
| 434 | Chemical Engineering Thermodynamics (Minor only) | Mr. Oberg |
| 437 | Advanced Chemical Engineering (Minor only) | Staff |
| 531 | Chemical Engineering Design | Staff |
| 532 | Organic Unit Processes | Staff |
| 536 | Distillation and Absorption | Staff |
| 537-8 | Advanced Work in Specific Fields | Staff |
| 601 | Thesis | Staff |

CHILD DEVELOPMENT AND FAMILY RELATIONS

Minors Only

| | | |
|-----|--------------------------------------|-------------|
| 432 | Nursery School Education 3 | Miss Callan |
| 433 | Family Relations 3 | Miss Callan |
| 435 | Student Teaching in Nursery School 3 | Miss Callan |

CIVIL ENGINEERING

Minors Only

| | | |
|-------|----------------------------------|-----------------------|
| 411 | Soil Mechanics and Foundations 1 | Staff |
| 423 | Economics of Highway Design 2 | Mr. McRee |
| 424-5 | Materials 2 | Mr. McRee, Mr. Decker |
| 431-2 | Reinforced Concrete 3 | Mr. Murdough |
| 433-4 | Structures 3 | Mr. Murdough |
| 435 | Traffic Safety Education | Mr. McRee |
| 437 | Water Supply and Treatment 3 | Mr. Decker |
| 438 | Sewage and Sewage Treatment 3 | Mr. Decker |
| 439 | Law and Ethics in Engineering 3 | Mr. McRee |
| 4312 | Soil Mechanics and Foundations 3 | Staff |
| 4313 | Water Purification 3 | Mr. Decker |
| 4314 | Sewage Treatment 3 | Mr. Decker |

CLOTHING AND TEXTILES

Majors and Minors

To be accepted as a candidate for a Master of Science Degree in clothing and textiles, the applicant must present a Bachelor's degree from an accredited college with the following courses included: English, 12 hours; chemistry, 6 hours; physiology, 6 hours; economics and sociology, 6 hours; psychology, general education and home economics education, 15 hours; government and history, 9 hours; varied phases of home economics, 24 hours; and clothing and textiles, at least 12 hours in advanced courses. Applicants who have majored in vocational home economics education will probably need two advanced clothing courses. Applicants who have majored in clothing and textiles will need to take more home economics education and possibly advanced courses in other phases of home economics.

CLOTHING AND TEXTILES

| | | | |
|-------|------------------------------|---|-------------------------------|
| 331 | Tailoring | 3 | Staff |
| 332 | Advanced Dressmaking | 3 | Staff |
| 334 | Family Clothing Problems | 3 | Staff |
| 336 | Textile Economics | 3 | Mrs. Buster |
| 431 | Textile Economics | 3 | Mrs. Buster |
| 432 | Advanced Textiles | 3 | Mrs. Buster |
| 433 | History of Costume | 3 | Miss Erwin and Staff |
| 435 | Home Furnishings | | Miss Erwin |
| 531 | Advanced Garment Fitting | 3 | Miss Erwin |
| 532-3 | Special Problems in Clothing | 3 | Miss Erwin or Mrs. Kinchen |

DAIRY MANUFACTURES

Majors and Minors

| | | | |
|-------|-------------------------------|---|----------------------------|
| 321 | Testing Dairy Products | 2 | Mr. Willingham, Mr. Harmon |
| 323 | Judging Dairy Products | 2 | Mr. Willingham |
| 331-2 | Market Milk | 3 | Mr. Harmon, Mr. Willingham |
| 333 | Domestic Dairying | 3 | Mr. Willingham |
| 334 | Fundamentals of Dairy Science | 3 | Mr. Harmon |
| 335 | Dairy Bacteriology | 3 | Mr. Harmon, Mr. Tinney |
| 336 | Food Industries | 3 | Mr. Harmon, Mr. Willingham |
| 337 | Dairy Plant Equipment | 3 | Mr. Harmon |
| 411 | Dairy Seminar | 1 | Mr. Willingham |

| | | | |
|-------|---|---|------------------------------|
| 412 | Starters and Cultured Milk | 1 | Mr. Willingham |
| 413 | Advanced Judging | 1 | Mr. Willingham, Mr. Harmon |
| 420 | Dairy Products Merchandising | 2 | Mr. Willingham |
| 421 | Creamery Management | 2 | Mr. Willingham, Mr. Harmon |
| 422 | Condensed and Powdered Milk | 2 | Mr. Willingham Mr. Harmon |
| 431 | Cheese Making | 3 | Mr. Tinney |
| 432 | Dairy Industry Problems | 3 | Staff |
| 433 | Ice Cream Making | 3 | Mr. Willingham |
| 435 | Dairy and Food Inspection | 3 | Mr. Willingham Mr. Tinney |
| 436 | Food Beverages | 3 | Mr. Willingham, Mr. Harmon |
| 441 | Butter Making | 4 | Mr. Tinney, Mr. Harmon |
| 512 | Advanced Dairy Products Quality Control | 1 | Mr. Willingham, Mr. Harmon |
| 531-2 | Dairy Manufactures Research | 3 | Mr. Willingham Mr. Harmon |
| 533-4 | Dairy Manufacturing Problems | 3 | Mr. Willingham Mr. Harmon |
| 601 | Thesis | | Mr. Willingham |

ECONOMICS AND MANAGEMENT

*Majors and Minors**ECONOMICS*

| | | | |
|------|-----------------------------------|---|--------------|
| 332 | Public Utility Economics | 3 | Mr. Moore |
| 333 | Public Expenditures | 3 | Mr. Clover |
| 334 | Taxation | 3 | Mr. Clover |
| 335 | Transportation Economics | 3 | Mr. Moore |
| 337 | Economic Systems | 3 | Mr. Anderson |
| 338 | Foreign Trade | 3 | Mr. Wiesen |
| 3312 | Economics of Labor | 3 | Staff |
| 433 | International Economic Relations | 3 | Mr. Wiesen |
| 434 | Air Transportation | 3 | Mr. Moore |
| 436 | Development of Economic Doctrines | 3 | Staff |
| 437 | Current Economic Problems | 3 | Mr. Clover |

| | | | |
|------|------------------------------------|---|--------------|
| 4310 | Advanced Economic Principles | 3 | Mr. Anderson |
| 531 | Advanced Economic Research | 3 | Mr. Clover |
| 532 | Seminar in Current Economic Trends | 3 | Staff |
| 533 | Seminar in Recent Economic Theory | 3 | Staff |
| 534 | Seminar in Public Finance | 3 | Mr. Clover |
| 535 | Readings in Economics | 3 | Staff |
| 601 | Thesis | | Staff |

MANAGEMENT

| | | | |
|-----|--------------------------|---|------------|
| 331 | Industrial Management | 3 | Mr. Wiesen |
| 432 | Personnel Administration | 3 | Mr. Mize |

EDUCATION

Majors and Minors

| | | | |
|------|---|---|------------------------------|
| 314 | Reading Clinic | 1 | Mr. Livingston, Mr. McDonald |
| 321 | Principles of Education | 2 | Mr. Garlin |
| 322 | Problems in Secondary Education | 2 | Mr. Garlin |
| 325 | The Junior High School | 2 | Mr. Shaver |
| 326 | Education and Vocational Guidance | 2 | Mr. Barnett |
| 3210 | Children's Literature | 2 | Mr. Livingston, Mr. McDonald |
| 3214 | Duties of School Principals | 2 | Mr. Shaver |
| 331 | Principles of Education | 3 | Mr. Garlin |
| 332 | Problems in Secondary Education | 3 | Mr. Garlin |
| 333 | Education of Exceptional Children | 3 | Miss True |
| 335 | The Junior High School | 3 | Mr. Shaver |
| 336 | Education and Vocational Guidance | 3 | Mr. Barnett |
| 338 | Every Teacher's Problem | 3 | Staff |
| 339 | Unit Teaching | 3 | Mr. Jackson |
| 3310 | Children's Literature | 3 | Mr. Livingston, Mr. McDonald |
| 3311 | Remedial Reading in the Elementary School | 3 | Mr. Livingston, Mr. McDonald |
| 3314 | Duties of School Principals | 3 | Mr. Shaver |
| 3315 | Visual-Audio Aids in Education | 3 | Mr. Cooper |
| 425 | Co-Curricular Activities | 2 | Mr. Cooper |
| 4212 | Evaluation of Secondary Schools | 2 | Mr. Jackson |
| 4213 | Evaluation of Elementary Schools | 2 | Mr. Livingston |
| | | | Mr. McDonald |
| 430 | Sociological Principles of Education | 3 | Mr. Jackson |
| 431 | Education in the United States | 3 | Mr. Jackson |
| 432 | Public School Administration | 3 | Mr. Cooper |
| 433 | Public School Relations | 3 | Mr. Garlin |
| 434 | Supervision of Instruction | 3 | Mr. Garlin |

| | | | |
|------|---|---|--------------------------|
| 436 | The High School Curriculum | 3 | Mr. Garlin |
| 437 | Workshop on Educational Leadership and Supervisory Techniques | 3 | Staff |
| 4311 | Problems of the Elementary Curriculum | 3 | Miss True |
| 4315 | Remedial Instruction in the Secondary School | 3 | Staff |
| 4316 | Workshop in Curriculum and Instruction | 3 | Mr. Garlin, Mr. McDonald |
| 4317 | Workshop in Curriculum and Instruction | 3 | Mr. Garlin, Mr. McDonald |
| 531 | Educational Research | 3 | Mr. Cooper |
| 532 | Philosophy of Education | 3 | Mr. Jackson |
| 533 | The Activity Program in the Elementary School | 3 | Miss True |
| 534 | Modern Trends in Education | 3 | Mr. Garlin |
| 535 | Business Administration of Schools | 3 | Mr. Cooper |
| 536 | Educational Statistics | 3 | Mr. Jackson, Mr. Cooper |
| 537 | Student Counseling | 3 | Mr. Barnett |
| 538 | Adult Education | 3 | Mr. Garlin |
| 539 | Seminar | 3 | Mr. Jackson |
| 5310 | Practicum in Vocational Counseling | 3 | Mr. Barnett |
| 5311 | Research Problems | 3 | Staff |
| 601 | Thesis | | Staff |

ELECTRICAL ENGINEERING

Majors and Minors

| | | | |
|---------|---|---|-------------------------|
| 322 | Alternating Current Circuits Laboratory | 2 | Staff |
| 323 | Electronics Laboratory | 2 | Staff |
| 324 | Communication Circuits Laboratory | 2 | Staff |
| 325 | Electronics | 3 | Mr. Stenis |
| 332 | Alternating Current Circuits | 3 | Staff |
| 334 | Communication Circuits | 3 | Staff |
| 336 | Illumination | 3 | Staff |
| 410 | Current Electrical Engineering | 1 | Mr. Bullen |
| 411-2 | Engineering Seminar | 1 | Staff |
| 428-9 | Engineering Electronics | 2 | Mr. Houston, Mr. Stenis |
| 4210-11 | Radio Engineering Laboratory | 2 | Mr. Bennett |

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|---------|--|---|--------------------------|
| 4212-13 | Electrical Machinery Laboratory | 2 | Mr. Smith |
| 4214 | Advanced Circuit Theory | 2 | Mr. Smith |
| 4215-16 | Engineering Electronic Laboratory | 2 | Mr. Houston |
| | | | Mr. Stenis |
| 433 | Transmission | 3 | Mr. Smith |
| 435 | Advanced Illumination | 3 | Mr. Stenis |
| 4310-11 | Radio Engineering | 3 | Mr. Bennett |
| 4312-13 | Electrical Machinery | 3 | Mr. Smith |
| 521-2 | Advanced Electronic Laboratory | 2 | Mr. Houston |
| | | | Mr. Stenis |
| 523 | Symmetrical Components Laboratory | 2 | Mr. Smith |
| 526 | Controls and Serve-Mechanisms Laboratory | 2 | Mr. Smith |
| 531-2 | Electron Tubes | 3 | Mr. Bennett, Mr. Houston |
| 533 | Symmetrical Components | 3 | Mr. Smith |
| 535 | Protection of Electric Power Systems | 3 | Mr. Smith |

ENGLISH

Majors and Minors

Beginning in September, 1950, candidates for the Degree of Doctor of Philosophy will be accepted subject to the general requirements of the Division of Graduate Studies. Prospective candidates for a doctor's degree are requested to communicate with the chairman of the department.

| | | | |
|------|---|---|---------------------|
| 330 | Chaucer | 3 | Mr. Gunn |
| 332 | History of the English Language | 3 | Mr. Gunn |
| 333 | American Prose | 3 | Mr. Smallwood |
| 336 | Eighteenth Century English Poetry and Prose | 3 | Mr. Camp |
| 338 | American Poetry | 3 | Mr. Smallwood |
| 3316 | The American Novel | 3 | Mr. Mills |
| 3317 | The English Novel from Lyly to Scott | 3 | Mr. Allen |
| 3318 | English and Foreign Fiction | 3 | Mr. Murphy |
| 3320 | American Drama | 3 | Mr. Smallwood |
| 3322 | Modern British and American Poetry | 3 | Staff |
| 431 | Restoration and Eighteenth Century Drama | 3 | Mr. Camp, Mr. Mills |
| 432 | Shakespeare | 3 | Mr. Gates, Mr. Camp |
| 433 | Shakespeare | 3 | Mr. Gates, Mr. Camp |
| 434 | Milton and His Age | 3 | Mr. Allen |
| 435 | English Romanticism | 3 | Mr. Strout |

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|------|---|---|------------------------|
| 436 | The Later Romantic Poets | 3 | Mr. Strout |
| 437 | English Drama from the Beginnings to 1642 | 3 | Mr. Gates, Mr. Mills |
| 4310 | The Major Victorian Poets | 3 | Miss Teague |
| 4315 | Tudor Poetry and Prose | 3 | Mr. Strout, Mr. Gunn |
| 4320 | American Literature and Its Background | 3 | Mr. Gates |
| 4321 | American Literature and Its Background | 3 | Mr. Gates |
| 4322 | Life and Literature of the Southwest | 3 | Staff |
| 510 | Methods of Literary Research | 1 | Staff |
| 530 | Middle English Literature | 3 | Mr. Gunn |
| 533 | Elizabethan Drama | 3 | Mr. Gates and Mr. Camp |
| 534 | Old English | 3 | Mr. Gunn |
| 536 | Studies in American Literature | 3 | Mr. Gates |
| 537 | Spenser | 3 | Mr. Strout, Mr. Gunn |
| 538 | Studies in the English Romantic Poets | 3 | Mr. Strout |
| 539 | American Critical Theories | 3 | Mr. Mills |
| 5311 | Literary Criticism | 3 | Mr. Strout |
| 5319 | Studies in Shakespeare | 3 | Mr. Gates |
| 601 | Master's Thesis | | Staff |
| 701 | Doctor's Thesis | | Staff |

FOODS AND NUTRITION

Majors and Minors

To be accepted as a candidate for a degree in foods and nutrition, the applicant must present a bachelor's degree from an accredited college with the following courses included: English, 12 hours; chemistry, 14 to 16 hours; physiology, 6 hours; economics and sociology, 6 hours; psychology and education, 6 hours; bacteriology, 3 hours; home management, 3 hours; nutrition, 6 hours; and foods, 12 hours.

FOODS AND COOKERY

| | | | |
|-----|---------------------------------------|---|---------------|
| 331 | Food Demonstration | 3 | Miss Twyford |
| 332 | Food Purchasing | 3 | Miss Buttrill |
| 335 | Food Preservation | 3 | Miss Buttrill |
| 433 | Advanced Food Preparation and Serving | | Miss Twyford |
| 531 | Research Methods in Cookery | | Mrs. Lamb |

NUTRITION AND DIETETICS

| | | | |
|-----|----------------------------------|---|-------------|
| 431 | Nutrition in Disease | 3 | Mrs. Michie |
| 432 | Nutrition | 3 | Mrs. Lamb |
| 433 | Nutrition of Children | 3 | Mrs. Michie |
| 531 | Techniques of Nutrition Research | 3 | Mrs. Lamb |
| 532 | Studies in Energy Metabolism | 3 | Mrs. Lamb |
| 533 | Readings in Nutrition | 3 | Staff |

FOREIGN LANGUAGES

SPANISH

Majors and Minors

| | | | |
|---------|--|---|--------------|
| 431-2 | The Modern Novel | 3 | Mr. Qualia |
| 433-4 | The Modern Drama | | Mr. Qualia |
| 435 | Teachers' Course in Methods of Teaching Spanish | 3 | Mr. Reynolds |
| 436-7 | Advanced Grammar, Composition and Style | 3 | Mr. Qualia |
| 438 | The Drama before Lope de Vega | 3 | Mrs. Gates |
| 4310-11 | Spanish Civilization | 3 | Mr. Hamilton |
| 4312-13 | The Prose of the Golden Age | 3 | Mr. Hamilton |
| 4314-15 | The Drama of the Golden Age | 3 | Mr. Hamilton |
| 4316-17 | A Survey of Spanish Literature | 3 | Mr. Strehli |
| 4318 | Contemporary Drama | 3 | Mr. Qualia |
| 4320 | Contemporary Spanish Novel | 3 | Mr. Qualia |
| 4324 | Readings in Latin-American Literature | 3 | Mrs. Gates |
| 4325 | Readings in Latin-American Literature | 3 | Mrs. Gates |
| 5312-13 | Studies in Spanish and Spanish-American Literature | 3 | Staff |

FRENCH

Minors Only

| | | | |
|-------|--|---|-------------|
| 431-2 | The Modern Drama | 3 | Mr. Qualia |
| 433-4 | The Literature of the Nineteenth Century | 3 | Mr. Hamlett |
| 435-6 | Readings in French Literature | 3 | Mr. Qualia |
| | | | Mr. Hamlett |

GEOLOGY

Majors and Minors

Beginning in September, 1951, candidates for the Degree of Doctor of Philosophy will be accepted subject to the general requirements of the Division of Graduate Studies. Prospective candidates for a doctor's degree are requested to communicate with the head of the department.

In addition to the general regulations for advanced degrees, the Geology department requires the following:

1. Prior to an application for degree the student must successfully pass a qualifying examination covering the normal undergraduate curriculum of Department of Geology.
2. Should a student be delinquent in any phase of undergraduate preparation he will, under the direction of instructor involved, remove such delinquencies before admittance to candidacy for the degree.

| | | |
|---|---|--------------|
| 333-4 Petrography and Petrology | 3 | Mr. Patton |
| 335-6 General Paleontology | 3 | Mr. Bond |
| 338 Metallic Ores | 3 | Mr. Dennis |
| 363 Field Geology | 6 | Staff |
| 431-2 Advanced General Geology | 3 | Mr. Warn |
| 433 Structural Geology | 3 | Mr. Robinson |
| 434 Petroleum Geology | 3 | Mr. Robinson |
| 435 Index Fossils | 3 | Mr. Brand |
| 436 Micropaleontology | 3 | Mr. Brand |
| 437-8 Sedimentation | 3 | Mr. Sidwell |
| 4310-11 Vertebrate Paleontology | 3 | Staff |
| 4314-15 Stratigraphy of Midcontinent Area | 3 | Staff |
| 511-2 Research Methods | 1 | Staff |
| 531-2 Advanced Sedimentation | 3 | Mr. Sidwell |
| 533-4 Structure of Oil and Gas Reservoirs | 3 | Mr. Robinson |
| 535-6 Advanced Work in Specific Fields | 3 | Staff |
| 5313-14 Stratigraphy of the United States | 3 | Staff |
| 5317-18 Seismology | 3 | Staff |
| 601 Master's Thesis | | Staff |
| 701 Doctor's Thesis | | Staff |

GOVERNMENT

Majors and Minors

| | | | |
|-------|--|---|---------------|
| 331 | Local Government | 3 | Mr. Dauley |
| 332 | Local Administration | 3 | Mr. Jackson |
| 334 | American Political Parties, Party Analysis | 3 | Mr. Jackson |
| 335 | American Foreign Relations | 3 | Staff |
| 336 | American Diplomacy | 3 | Staff |
| 337 | Public Administration, Organization | 3 | Mr. Jackson |
| 338 | Public Administration Procedure | 3 | Mr. Jackson |
| 3311 | Political Institutions | 3 | Mr. Abernethy |
| 3312 | Government and Labor | 3 | Mr. Abernethy |
| 431-2 | American Constitutional Law | 3 | Mr. Davis |
| 433 | European Political Ideas | 3 | Mr. Davis |
| 434 | American Political Ideas | 3 | Mr. Davis |
| 435 | International Organization | 3 | Mr. Adams |
| 436 | International Law | 3 | Mr. Adams |
| 437 | Political Geography | 3 | Mr. Kennedy |
| 438 | World Politics | 3 | Mr. Kennedy |
| 531 | Seminar | 3 | Staff |
| 532 | Reading and Research | 3 | Staff |
| 535 | The Technique of Research | 3 | Staff |
| 601 | Thesis | | Staff |

HISTORY, ANTHROPOLOGY AND SOCIOLOGY

Majors and Minors

Beginning in September, 1950, candidates for the Degree of Doctor of Philosophy will be accepted subject to the general requirements of the Division of Graduate Studies. Prospective candidates for a doctor's degree are requested to communicate with the head of the department.

HISTORY

| | | | |
|-----|--------------------------------|---|-------------|
| 331 | Greek Civilization | 3 | Mr. Eaves |
| 332 | Roman Civilization | 3 | Mr. Eaves |
| 333 | Renaissance and Reformation | 3 | Mr. Eaves |
| 334 | French Revolution and Napoleon | 3 | Mr. Pearce |
| 335 | Geopolitics of World War II | 3 | Mr. Eaves |
| 336 | Tudor England | 3 | Mr. Kinchen |
| 337 | Stuart England | 3 | Mr. Kinchen |
| 338 | Eighteenth Century England | 3 | Mr. Kinchen |

| | | | |
|------|---|---|-------------|
| 339 | Nineteenth Century England | 3 | Mr. Kinchen |
| 3311 | The Canadian Dominion | 3 | Mr. Kinchen |
| 3313 | Europe from 1815 to 1918 | 3 | Mr. Pearce |
| 3314 | Europe since 1919 | 3 | Mr. Eaves |
| 3315 | Japan and China | 3 | Mr. Eaves |
| 3316 | British Empire | 3 | Mr. Kinchen |
| 3319 | Twentieth Century Britain | 3 | Mr. Kinchen |
| 430 | English Colonial America | 3 | Mr. Kinchen |
| 433 | The American Revolution | 3 | Mr. McKay |
| 434 | Early American Constitutional Development | 3 | Mr. McKay |
| 435 | Anglo-American Diplomacy | 3 | Staff |
| 436 | The Federalist and Republican Periods | 3 | Mr. Wallace |
| 437 | The Jacksonian Period | 3 | Mr. Wallace |
| 438 | History of Texas to 1846 | 3 | Mr. Wallace |
| 439 | History of Texas 1846-1900 | 3 | Mr. Wallace |
| 4310 | Expansion of the United States | 3 | Mr. McKay |
| 4311 | The Civil War | 3 | Mr. McKay |
| 4312 | Reconstruction | 3 | Mr. McKay |
| 4313 | History of the United States, 1877-1898 | 3 | Mr. Wallace |
| 4314 | History of the United States, 1898-1918 | 3 | Mr. Wallace |
| 4315 | Constitutional Development in Texas | 3 | Mr. McKay |
| 4316 | History of the United States, 1919-1932 | 3 | Mr. Wallace |
| 4317 | History of the United States since 1933 | 3 | Mr. McKay |
| 4319 | Latin American Diplomacy | 3 | Mrs. Vernon |
| 4320 | Social History of Texas, 1821-1860 | 3 | Mr. Holden |
| 4321 | Recent History of Texas, 1900-1940 | 3 | Mr. McKay |
| 4322 | Life and Literature of the Southwest | 3 | Staff |
| 4323 | History of South America | 3 | Mrs. Vernon |
| 4324 | History of South America | 3 | Mrs. Vernon |
| 4325 | History of Spanish North America | 3 | Mrs. Vernon |
| 4326 | History of Spanish North America | 3 | Mrs. Vernon |
| 530 | Seminar in Southwestern History | 3 | Staff |
| 531 | Seminar in Texas History | 3 | Staff |
| 532 | Seminar in American History | 3 | Staff |
| 533 | Seminar in Latin American History | 3 | Mrs. Vernon |
| 534 | Seminar in English History | 3 | Mr. Kinchen |
| 535 | Technique of Research | 3 | Staff |
| 536 | Seminar in European History | 3 | Mr. Eaves |
| 601 | Master's Thesis | | Staff |
| 701 | Doctor's Thesis | | Staff |

ANTHROPOLOGY

| | | | |
|-------|----------------------------|---|------------|
| 334-5 | The American Indian | 3 | Mr. Holden |
| 336-7 | Mexican Archaeology | 3 | Mr. Pearce |
| 431-2 | Field and Museum Technique | | Mr. Holden |
| 433-4 | Southwestern Archaeology | 3 | Mr. Pearce |
| 531-2 | Seminar in Anthropology | 3 | Staff |

SOCIOLOGY

| | | | |
|-----|---------------------------------|---|------------|
| 334 | Patterns of Cultural Traditions | 3 | Mr. Eaves |
| 433 | Criminology | 3 | Miss Smith |
| 438 | Seminar in Social Problems | 3 | Miss Smith |

HOME ECONOMICS EDUCATION

Majors and Minors

Prerequisite to candidacy for a Master of Science in Home Economics Education is a Bachelor's degree which includes the following courses: English, 12 hours; chemistry, 10 hours; physiology, 6 hours; bacteriology, 3 hours; clothing and textiles, 12 hours (3 hours in textiles and 9 in construction and selection); foods and nutrition, 12 hours (3 hours in nutrition and 9 hours in foods); home management residence, 3 hours; child development, with nursery school observation, 3 hours; art related to the home, 9 hours; economics and sociology, 6 hours; psychology, 3 hours; secondary education, 3 hours; government, 3 hours; and home economics education, 6 hours.

Courses applicable to the Master of Science Degree in Home Economics Education should include subject-matter courses in home economics, 6 to 9 hours; home economics education, 9 to 12 hours; general education, 3 to 6 hours; a minor subject, 6 hours; and a thesis—making a total of 27 hours and a thesis.

HOME ECONOMICS EDUCATION

| | | | |
|-----|--|---|-----------------|
| 432 | Problems in Teaching Clothing | 3 | Miss Erwin |
| 434 | Methods of Teaching Art in the Homemaking Curriculum | 3 | Miss Poindexter |
| 435 | Methods of Adult Leadership | 3 | Staff |
| 441 | Student Teaching in Home Economics | 4 | Staff |
| 532 | The Development of the Homemaking Program | 3 | Staff |
| 534 | Techniques of Research | 3 | Staff |
| 536 | Problems | 3 | Staff |
| 537 | Techniques of Supervision in Home Economics | 3 | Staff |
| 601 | Thesis | | Staff |

HOME MANAGEMENT

Minors Only

| | | |
|-----|-----------------------|-----------|
| 431 | Housing | Miss Drew |
| 433 | Household Equipment 3 | Miss Drew |
| 434 | Consumer Problems 3 | Miss Drew |

INDUSTRIAL ENGINEERING

Minors Only

| | | |
|-------|--|-----------------------|
| 331 | Time and Motion Study 3 | Mr. Penick, Mr. Green |
| 332 | Management—Production Planning and Control 3 | Staff |
| 333 | Manufacturing Methods 3 | Mr. St. Clair |
| 336 | Tool Design 3 | Mr. Penick |
| 421-2 | Chemical Plant Design 2 | Mr. Penick, Mr. Green |
| 432-3 | Industrial Plant Design 3 | Mr. St. Clair |
| 435 | Industrial Safety Engineering 3 | Mr. St. Clair |
| 436 | Principles of Engineering Economics 3 | Mr. Penick |

JOURNALISM

Minors Only

| | | |
|-------|----------------------------|------------|
| 331 | Special Feature Articles 3 | Mr. Horne |
| 332 | Magazine Article Writing 3 | Mrs. Allen |
| 430 | Principles of Journalism 3 | Mr. Horne |
| 432 | High School Publications 3 | Mr. Horne |
| 434 | Editorial Writing 3 | Mrs. Allen |
| 435-6 | Advertising 3 | Mr. Horne |

MARKETING AND SECRETARIAL ADMINISTRATION

Minors Only

MARKETING

| | | |
|-----|---------------------------------|----------------------|
| 332 | Principles of Marketing 3 | Mr. Golden |
| 333 | Marketing Problems 3 | Mr. Golden |
| 346 | Statistics 4 | Mr. Harris and Staff |
| 431 | Commodity Marketing 3 | Mr. Golden |
| 432 | Economics of Advertising 3 | Mr. Harris |
| 433 | Salesmanship 3 | Mr. Leifeste |
| 434 | Distributive Marketing 3 | Mr. Golden |
| 435 | Business Cycles and Forecasts 3 | Mr. Harris |
| 436 | Retail Store Management 3 | Mr. Leifeste |
| 437 | Advanced Business Statistics 3 | Mr. Harris and Staff |
| 438 | Display 3 | Mr. Leifeste |
| 439 | Sales Administration 3 | Mr. Leifeste |
| 531 | Research in Marketing 3 | Staff |

SECRETARIAL ADMINISTRATION

- 432 Methods of Teaching Commercial Subjects Mrs. Terrell

MATHEMATICS

Majors and Minors

- | | | | |
|---------|---|---|---------------|
| 332 | Differential Equations | 3 | Staff |
| 337 | Higher Geometry | 3 | Staff |
| 433 | Theory of Equations | 3 | Mr. Heineman |
| 434-5 | Advanced Calculus | 3 | Staff |
| 436 | Introduction to the Theory of Finite Groups | 3 | |
| | | | Mr. Heineman |
| 438 | Solid Analytic Geometry | 3 | Staff |
| 439 | Vector Analysis | 3 | Mr. Hazlewood |
| 5312-13 | Functions of a Complex Variable | 3 | Mr. Sparks |
| 533 | Advanced Topics in Analysis | 3 | Mr. Hazlewood |
| 534 | Synthetic Projective Geometry | 3 | Mr. Parker |
| 535 | Analytic Projective Geometry | 3 | Mr. Underwood |
| 538 | Theory of Numbers | 3 | Mr. Underwood |
| 601 | Thesis | | Staff |

MECHANICAL ENGINEERING

Minors Only

- | | | | |
|---------|--|---|-------|
| 322 | Dynamics of Machinery | 2 | Staff |
| 330-1 | Thermodynamics | 3 | Staff |
| 423-4 | Internal Combustion Engines | 2 | Staff |
| 438-9 | Heating Ventilation and Air Conditioning | 3 | Staff |
| 4310-11 | Aerodynamics | 3 | Staff |
| 411-2 | Engineering Seminar | 1 | Staff |

MUSIC

Minors Only

MUSIC EDUCATION

Due to reorganization of the Department of Music the deletion of certain courses now shown may be effected. A maximum of 6 semester hours credit will be offered in applied music. Students desiring to enroll for applied music on the graduate level are required to pass a placement examination and must receive permission from the Head of the Department of Music before enrolling for such courses.

MUSIC EDUCATION

| | | | |
|------|---------------------------------------|---|------------|
| 337 | Elementary Methods | 3 | Mr. Hemmle |
| 415 | Minor Instruments | 1 | Mr. Haddon |
| 416 | Minor Instruments | 1 | Mr. Haddon |
| 421 | Band Conducting & Methods | 2 | Mr. Wiley |
| 422 | Band Conducting & Methods | 2 | Mr. Wiley |
| 4215 | Advanced Band Conducting & Methods | 2 | Mr. Wiley |
| 4216 | Advanced Band Conducting & Methods | 2 | Mr. Wiley |
| 431 | Administration of the School Band | 3 | Mr. Haddon |
| 432 | Survey of Teaching Materials for Band | 3 | Mr. Haddon |
| 438 | Secondary Methods | 3 | Mr. Hemmle |
| 521 | Graduate Band Conducting | 2 | Mr. Wiley |
| 522 | Graduate Band Conducting | 2 | Mr. Wiley |

MUSIC LITERATURE

| | | | |
|-----|------------------------------|---|------------|
| 335 | History of Music | 3 | Mr. Hemmle |
| 336 | History of Music | 3 | Mr. Hemmle |
| 523 | Symphonic Literature | 2 | Mr. Wiley |
| 524 | Symphonies & Symphonic Poems | 2 | Mr. Wiley |

*PETROLEUM ENGINEERING**Minors Only*

| | | | |
|--------|---------------------------------|---|--------------|
| 331 | Petroleum Development Methods | 3 | Mr. Johnson |
| 333 | Petroleum Production Methods | 3 | Mr. Johnson |
| 410-11 | Seminar | 1 | Mr. Ducker |
| 433 | Advanced Production Engineering | 3 | Mr. Johnston |
| 434 | Natural Gas Engineering | 3 | Mr. Ducker |
| 435 | Natural Gas and Gasoline | 3 | Mr. Ducker |

*PHILOSOPHY**Minors Only*

| | | | |
|-----|-----------------------------------|---|------------|
| 431 | Aesthetics | 3 | Mr. Little |
| 436 | Philosophy of Religion | 3 | Mr. Little |
| 438 | Seminar in Philosophical Problems | 3 | Mr. Little |

PHYSICAL AND HEALTH EDUCATION

Minors Only

| | | | |
|-----|---|---|---------------|
| 434 | Principles of Physical Education | 3 | Mrs. Langford |
| 435 | Modern Trends in Physical Education | 3 | Mrs. Langford |
| 436 | Physical Examination in Physical Education | 3 | Mrs. Langford |
| 437 | Tests and Measurements in Physical Education | 3 | Mrs. Langford |
| 438 | Problems in Curriculum Construction in Physical Education | 3 | Mrs. Langford |

PHYSICS

Majors and Minors

| | | | |
|--------|---------------------------------|---|--------------|
| 331 | Light | 3 | Mr. Merrymon |
| 332 | Heat | 3 | Mr. Steffy |
| 333-4 | Electricity and Magnetism | 3 | Mr. Day |
| 337-8 | Introduction to Modern Physics | 3 | Mr. Elliott |
| 411-2 | Physics Seminar | 1 | Mr. Schmidt |
| 413-4 | Physics Seminar | 1 | Mr. Schmidt |
| 415-6 | Special Projects | 1 | Staff |
| 423-4 | Electrical Measurements | 2 | Mr. Schmidt |
| 435 | Mechanics | 3 | Mr. Merrymon |
| 531-2 | Theoretical Physics | 3 | Staff |
| 539-10 | Geometrical and Physical Optics | 3 | Mr. Merrymon |
| 601 | Thesis | | Staff |

PLANT INDUSTRY

Majors and Minors

The Department of Plant Industry offers major work in the fields of agronomy, farm machinery and horticulture. Major work in plant industry as a field of work is not offered. Courses under the plant industry designation may be used to meet minor requirements or may be accepted as part of the work required toward a major, when approved by the Head of the Department and the Dean of the Division of Graduate Studies.

PLANT INDUSTRY

| | | | |
|-----|---|---|------------------------|
| 421 | Plant Industry Problems | 2 | Staff |
| 431 | Advanced Plant Breeding and Improvement | 3 | Mr. Leidigh, Mr. Ayers |

| | | | |
|-----|-------------------------|---|-----------|
| 432 | Plant Industry Problems | 3 | Staff |
| 535 | Research Methods | 3 | Mr. Young |

AGRONOMY

| | | | |
|---------|---|------------|-------------|
| 333 | Range Plants | 3 | Mr. Morrow |
| 421 | Cotton and Other Fiber Crops | 2 | Mr. Ayers |
| 422 | Soil Management | 2 | Mr. Young |
| 423 | Soil Management | 2 | Mr. Young |
| 434 | Soil Conservation and Land Use Planning | 3 | Mr. Burnett |
| 435 | Soil Morphology and Genesis | 3 | Mr. Burnett |
| 436 | Soil Chemistry | 3 | Mr. Young |
| 437 | Range Management | 3 | Mr. Morrow |
| 439 | Soil Microbiology | 3 | Mr. Young |
| 512-3-4 | Agronomy Seminar | 1, 2, or 3 | Staff |
| 531-2-3 | Agronomy Problems | 3, 6, or 9 | Staff |

HORTICULTURE

| | | | |
|---------|-----------------------|------------|-----------|
| 431-2 | Advanced Pomology | 3 | Mr. Yocum |
| 433 | Systematic Pomology | 3 | Mr. Yocum |
| 512-3-4 | Horticulture Seminar | 1, 2, or 3 | Mr. Yocum |
| 531-2-3 | Horticulture Problems | 3, 6, or 9 | Staff |

AGRICULTURE ENGINEERING

| | | | |
|-----|------------------------------|---|--------------|
| 411 | Soil Management Laboratory | 1 | Mr. Williams |
| 412 | Soil Management Laboratory | 1 | Mr. Williams |
| 432 | Land Mapping and Measurement | 3 | Mr. Williams |
| 433 | Advanced Farm Shop | 3 | Mr. Sullivan |
| 434 | Advanced Farm Machinery | 3 | Staff |

PSYCHOLOGY

Majors and Minors

(The Department of Psychology becomes effective in September, 1950.)

| | | | |
|-----|---|---|-------|
| 230 | Introduction to Psychology | 3 | Staff |
| 231 | Educational Psychology | 3 | Staff |
| 232 | Psychology of Modern Elementary Education | 3 | Staff |
| 233 | Measurements in Education | 3 | Staff |

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|-----|---------------------------------------|---|-------|
| 331 | Child Psychology | 3 | Staff |
| 333 | Measurements in Education | 3 | Staff |
| 335 | Psychology of Adolescence | 3 | Staff |
| 338 | Psychology Applied to Business | 3 | Staff |
| 431 | Mental Testing | 3 | Staff |
| 433 | Mental Hygiene | 3 | Staff |
| 434 | Social Psychology | 3 | Staff |
| 435 | Psychology of the Abnormal | 3 | Staff |
| 436 | Personality and Character Development | 3 | Staff |
| 530 | Practicum in Intelligence Testing | 3 | Staff |

SPEECH

Majors and Minors

| | | | |
|---------|--|---|----------------|
| 432 | Speech Correction | 3 | Miss Lindell |
| 433 | Speech Correction | 3 | Miss Lindell |
| 435 | Interpretative Reading | 3 | Miss Thompson |
| 439 | The Teaching of Speech | 3 | Miss Pendleton |
| 4310-11 | Advanced Stage Directing | | Miss Thompson |
| 4312 | History and Appreciation of Theatre | | Miss Thompson |
| 4314 | Speech Pathology | 3 | Miss Lindell |
| 531 | Studies in the Field of Speech Therapy | 3 | Miss Lindell |
| 532 | Studies in the Field of Speech Therapy | 3 | Miss Lindell |
| 533 | Problems in Research | 3 | Staff |
| 534 | Problems in Research | 3 | Staff |

*Additional copies of this Bulletin and other information
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Lubbock, Texas*