

**The Agricultural and Mechanical
College of Texas**



**GENERAL
INFORMATION**

BULLETIN
OF THE
AGRICULTURAL AND MECHANICAL
COLLEGE OF TEXAS

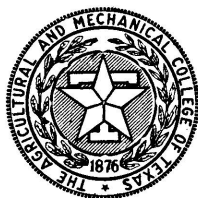
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GENERAL INFORMATION

1950-51



COLLEGE STATION, TEXAS

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COLLEGE CALENDAR

FIRST SEMESTER 1950

- September 8 Friday, opening day of Freshman Week.
- September 15 Friday, 8 a.m. to 5 p.m., registration for new students.
- September 16 Saturday, 8 a.m. to 5 p.m., registration for old returning students.
- September 18 Monday, 8 a.m., beginning of classes.
- September 23 Saturday, last day for making changes in registration.
- September 30 Saturday, last day for registering in the college division for credit during the fall semester.
- November 11 Saturday, a holiday.
- November 15 Wednesday, mid-semester grade reports.
- November 30-December 2 Thursday, Friday, Saturday, inclusive, Thanksgiving recess.
- December 19 Tuesday, 5 p.m., beginning of Christmas recess.
- January 3, 1951 Wednesday, 8 a.m., end of Christmas recess.
- January 20-26 Inclusive, semester examinations.

SECOND SEMESTER 1951

- January 29-30 Monday, Tuesday, registration for old students.
- January 30 Tuesday, registration for new students.
- January 31 Wednesday, 8 a.m., beginning of classes.
- February 6 Tuesday, last day for making changes in registration.
- February 12-16 Religious Emphasis Week.
- February 13 Tuesday, last day for registering in the college division for credit during the spring semester.
- March 23-26 Inclusive, spring recess.
- March 28 Wednesday, mid-semester grade reports.
- May 26-June 1 Inclusive, semester examinations.
- June 1 Friday, Commencement.
- June 2 Saturday, Final Review.

The Agricultural and Mechanical College of Texas

Administrative Officers

- *FRANK C. BOLTON, M.S., LL.D.*President*
- †MARION T. HARRINGTON, PH.D.....*Dean of the College*
- HOWARD W. BARLOW, ENG.SC.D.....*Dean, School
of Engineering*
- CHARLES N. SHEPARDSON, M.S...*Dean, School of Agriculture*
- IVAN B. BOUGHTON, D.V.M.....*Dean, School
of Veterinary Medicine*
- IDE P. TROTTER, PH.D.....*Dean, Graduate School*
- JOHN P. ABBOTT, PH.D....*Dean, School of Arts and Sciences*
- WALTER L. PENBERTHY, B.S.....*Dean of Men*
- HAYDON L. BOATNER, M.S., Colonel, Inf., U.S.A.....
.....*Commandant, School of Military Science*
- CHARLES A. ROEBER, B.A., B.B.A.....*Auditor*
- H. LLOYD HEATON, M.S.....*Registrar, Secretary of
the Academic Council*
- ROBERT A. HOUZE, B.S., B.L.S.....*Acting Librarian*
- J. E. MARSH, B.A., M.D.....*College Physician*

*President emeritus effective June 5, 1950.

†President of the College effective June 5, 1950.

THE AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

With the opening of the session of 1950-51, the Agricultural and Mechanical College of Texas begins its seventy-fifth year of service as the oldest state-supported institution of higher education in Texas. The College was established in 1871, receiving as an endowment 180,000 acres of land from the national government, in accordance with the Morrill Land Grant Act of 1862. It was first opened for the reception of students on October 4, 1876, and from that small beginning has grown until the current enrollment is approximately 8,500 students annually.

The College campus consists of 500 acres, while the experimental farms owned by the College total 8,156 additional acres. The physical plant of the College includes buildings with a total valuation of approximately \$12,000,000, while equipment and lands of the College represent an additional valuation of \$7,000,000. There are numerous buildings used for instructional purposes, twenty-six dormitories, and two dining halls. Two new buildings, the Memorial Student Center and the Biological Sciences Building, are under construction and will be ready for use by the opening of the fall semester of 1950.

The College is located at College Station, Brazos County, Texas, 100 miles north of Houston, 100 miles east of Austin, and 170 miles south of Dallas. It is served by the Southern Pacific and Missouri Pacific Railroads, with convenient connections to all parts of the State; by bus lines; and by Pioneer Airlines, which maintain a terminal about twelve miles from the campus. A modern system of paved highways affords direct communication with the principal cities and towns of the State.

The following pages of this bulletin contain the answers to some of the questions most commonly asked by prospective students. Each curriculum offered by the various schools of the College is discussed briefly so that the student may judge for himself the nature of the work and the possibilities awaiting a graduate in his field. The freshman year of each curriculum is given to show the specific courses studied during that year. Admission requirements, expenses, and such general information as a discussion of the new Basic Division are included. A directory of administrative officers, heads of departments of instruction, and others whom students might like to contact personally appears at the back of this bulletin. Further information may be obtained from the Registrar upon request.

ACADEMIC REGULATIONS

Certain academic regulations have been set up by the faculty for the purpose of assisting the student to secure the maximum benefit from his studies. These regulations, a copy of which is given to the student when he enters the College, serve as a guide in such important matters as choice of course and subjects, methods of study, attendance, examination, promotion, and graduation.

By means of reports at regular intervals, frequent conferences with the deans, the Registrar, Student Affairs Office, and members of the teaching staff, the authorities of the College keep in close touch with the student's progress; and such advice and counsel are offered from time to time as seem justified in each case. For failure to keep up with his studies, the student may at any time be dropped from the rolls of the College.

The College reserves the right to modify the curricula or withdraw any course when it is wise to do so.

DEGREES OFFERED

On the basis of resident study, the following degrees are offered by the College:

1. Bachelor of Arts (B.A.)
2. Bachelor of Business Administration (B.B.A.)
3. Bachelor of Science (B.S.)
4. Bachelor of Architecture (B.Arch.)
5. Bachelor of Food Technology (B.F.T.)
6. Bachelor of Petroleum Engineering (B.P.E.)
7. Doctor of Veterinary Medicine (D.V.M.)
8. Master of Business Administration (M.B.A.)
9. Master of Education (M.Ed.)
10. Master of Engineering (M.Eng.)
11. Master of Science (M.S.)
12. Doctor of Philosophy (Ph.D.)

On the basis of acceptable professional experience the following professional degrees in engineering are offered to graduates of the College:

1. Agricultural Engineer (A.E.)
2. Architectural Engineer (Arch.E.)
3. Chemical Engineer (Ch.E.)
4. Civil Engineer (C.E.)
5. Electrical Engineer (E.E.)
6. Geological Engineer (G.E.)

7. Management Engineer (Man.E.)
8. Mechanical Engineer (M.E.)
9. Petroleum Engineer (P.E.)

Graduates of this college with two years in residence are eligible for the Ph.B. degree upon the satisfactory completion of 36 credit hours of acceptable correspondence work from this school.

Requirement In Government

In order to meet the legal requirement for a degree from the College, all students must have credit for History 306, or its equivalent, and credit for basic military science. For those students who do not take military science, six hours in government must be completed. Such students should complete History 307, plus one elective hour.

In satisfying the requirements for a teacher's certificate, six hours of American government must be completed. Credit for basic military science can not be used in satisfying this requirement.

Requirement in Military Science and Physical Education

All first and second year students under the age of 21 are required to take the basic course of military science and Physical Education 101, 102, 201, and 202 unless granted an exemption by the faculty. The faculty has established the following policy in granting exemptions:

1. **Transfer Students.** Transfer students who are admitted directly to one of the degree granting schools of the College will not be required to take the basic course of military science and will be given exemption for one semester of required physical education for each semester of course work completed satisfactorily at the other institution.

2. Students with Military Service Records.*

(a) Students who hold commissions presented by one of the Armed Forces before June 1, 1948, are exempt from the basic course of military science and from the required physical education and may be given academic credit not to exceed 16 hours for the uncredited portion of the basic and advanced R.O.T.C. course. Those enrolling before June 1, 1948, may be given credit for 4 hours of physical education.

(b) Students who entered the College before June 1, 1948, with at least 90 days of active enlisted military service completed be-

*Academic credit for military service will be given only to students currently enrolled in the College.

fore that date are exempt from the required physical education and may be given academic credit for both.

(c) Students who entered the College after June 1, 1948, and before September 1, 1950, with at least 90 days of active enlisted military service completed before September 2, 1945, are exempt from basic military science and required physical education, and may be given academic credit for basic military science.

(d) Students who entered the College after June 1, 1948, with less than 90 days of active enlisted military service completed before September 2, 1945, but with all of their military service completed before June 1, 1948, are granted exemption from basic military science and required physical education on the basis of one year for each six months of military service.

(e) Students who entered or will enter the College after June 1, 1948, with enlisted military service completed after that date are exempt from basic military science and required physical education on the basis of one year for each year of active military service completed before their registration.

Eligibility for an Advanced R.O.T.C. Contract

To be eligible for an advanced R.O.T.C. contract a student must be physically fit, must have attained junior academic classification, and must have completed the basic course of military science or at least one year of active military service. In practice, a student must satisfy the requirements of the College as determined above.

THE GRADING SYSTEM

Since one comes to college for an education, his grades are usually taken as an indication of the proficiency of his endeavors. The student's semester grade in a course is based upon recitation, written exercises, quizzes, laboratory work, and final examinations. The weight assigned to each of these factors is in the main determined by the head of the department.

There are four passing grades signifying various degrees of accomplishment. Grade points are awarded on the basis of these grades.

Grade	Description	Range (Inclusive)	Grade Points per Semester Hour
A	Excellent	100-92	3
B	Good	91-84	2
C	Fair	83-76	1
D	Passing	75-70	0

The lowest passing grade is 70. There is one failing grade, F, below 70, indicating work of unsatisfactory quality. An F grade may be removed only by repeating the work satisfactorily in class.

The temporary grade "Inc." (Incomplete) indicates that the student has completed the course with the exception of a major quiz, final examination, or other work. This grade is given only when the deficiency is due to authorized absence or other cause beyond the control of the student and when the work already done has been of a quality acceptable for the completion of the course. For an undergraduate student the privilege of completing such work is limited to the end of the first month of his succeeding semester in college; otherwise the final grade is F, and the student must repeat the course in order to receive credit, unless for good reason his dean grants an extension of time.

Permission to remove the grade "Inc." received because of absence from a quiz or examination is granted only on receipt of official notice that the absence was authorized or evidence that the cause for the absence prevented making normal preparation to take the quiz or examination before the close of the semester.

When a student resigns or is dropped one week after the beginning of a semester, or any time thereafter, the Registrar will call for his grades and enter on his permanent record the symbol WP after each course in which he is passing and WF after each course in which he is not making a passing grade. All WF's and F's will be taken into account in determining his grade point average thereafter unless for cause the Executive Committee directs otherwise.

GRADE REPORTS

Preliminary Report: A preliminary report of the student's progress is sent to the parent or guardian about eight weeks after the beginning of each semester.

Semester Reports: At the close of each semester, a report of the student's work during the semester is sent directly to the parent or guardian.

Unsatisfactory Work: During the session the deans receive reports from the members of the teaching staff on students doing unsatisfactory work. These reports form the basis for personal conferences with the students concerned and for special notices to parents and guardians.

Reports to High Schools: At the close of the first semester, a report is sent to each accredited high school showing the grades made by the freshmen entering the College from that school.

DISTINGUISHED STUDENTS

At the end of each semester, students who have no grade below C, who have completed during the semester at least 16 semester hours, and who have a grade point average of not less than 2.25 grade points per credit hour for the semester, shall be designated as "Distinguished Students."

ADMISSION

APPLICATION FOR ADMISSION

Any person who wishes to enter the College should write to the Registrar, Agricultural and Mechanical College of Texas, College Station, Texas, for formal application blanks. The student should fill out the application sheet in his own handwriting, have his high school superintendent or principal fill out the entrance certificate, and return both forms to the Registrar. When admission requirements have been satisfied, the Registrar will then send the applicant a letter of acceptance and a physical examination form to be filled out by his personal physician. The physical examination form is to be completed and sent to the College Physician, and the letter of acceptance should be brought to the College for use in registration. It is of the highest importance that credentials be submitted in advance; but in no case should an applicant submit his credentials before his high school graduation or, in the case of a transfer student, before the completion of his work in another institution. If this cannot be done, the candidate should bring them at the opening of the session. Without the credentials the student cannot be admitted, and valuable time will be lost if he has to send for them after arriving at the College.

All applicants for admission to the College must be of good moral character, at least sixteen years old, and free from contagious or infectious diseases. Since the Agricultural and Mechanical College of Texas is not a coeducational institution, only men are admitted to the regular session.

BASIC DIVISION

Effective with the opening of the fall semester of 1950, the Agricultural and Mechanical College of Texas places in operation the Basic Division to provide for the special needs of entering students and to administer their work during the first year in the College or until they are admitted into one of the degree granting schools. The following groups of students will be enrolled in the Basic Division: (1) All acceptable high school graduates entering for the first time upon their college program of studies; (2) All students transferring from other colleges and universities who

are not admitted directly to one of the schools of the College; and (3) All other students who do not meet the requirements for admission to the degree granting school of their choice. The requirements for admission to the degree granting schools are found on page 15.

The aims of the Basic Division are (1) to give first year students closer supervision than is ordinarily given, (2) to assist students who have not definitely decided on a field of study in making this decision during their first year of college work, (3) to give beginning college students the benefit of guidance by people professionally trained to operate a guidance program, (4) to supply the various schools of the College with a selected group of students qualified to pursue training necessary for a profession and outstanding citizenship.

METHODS OF ADMISSION

By Certificate: Graduation from an accredited secondary school, with a minimum of fifteen approved units, is required for admission by certificate to the Basic Division. These units shall include three units in English, one unit in algebra, one unit in plane geometry, two units in the social sciences, one unit in a natural science, and seven acceptable elective units. No credit is granted for work done in an accredited school unless the applicant is a graduate of the school.

If an applicant intends to pursue in the Basic Division the regular first year program of the school he ultimately expects to enter, he must have from eight to nine and one-half units of prescribed work. This number depends upon the course of study to be followed. The distribution of units is indicated in List A. The units of social science, natural science, and elective subjects are to be chosen from List B.

LIST A—REQUIRED UNITS

Program in—	Number of Units Required in—							Total
	English	Algebra	Plane Geom.	Solid Geom.	Social Science	Natural Science	Elective Subjects	
Agriculture: All curricula except Agricultural En- gineering	3	1	1		2	1	7	15
Agricultural En- gineering (See Note 1)	3	2	1	1/2	2	1	5 1/2	15

(Continued on Next Page)

Arts and Sciences:	3	1	1		2	1	7	15
Engineering:								
All curricula except								
Industrial Educ.								
(See Note 1)	3	2	1	1/2	2	1	5 1/2	15
Industrial Education	3	1	1		2	1	7	15
Pre-Veterinary								
Medicine	3	1	1		2	1	7	15

LIST B—ELECTIVE UNITS

	Units		Units
English (4th unit)	1	Natural Sciences:	
Mathematics:		Biology	1
Advanced Algebra	1/2 or 1	Botany	1
Solid Geometry	1/2	Chemistry	1
Trigonometry	1/2	General Science	1
Advanced Arithmetic	1/2	Physics	1
Social Sciences:		Physiography	1/2
Ancient History	1	Physiology	1/2 or 1
Modern History	1	Zoology	1
English History	1/2 or 1	Vocational Subjects:	
American History	1/2 or 1	(See Note 2)	
Texas History	1/2	Agriculture	1 to 4
World History	1	Bookkeeping	1
Civics	1/2 or 1	Drawing	1 to 4
Economics	1/2	Com. Arithmetic	1/2
Foreign Languages:		Commercial Law	1/2
Latin	2 to 4	Com. Geography	1/2
French	2 to 4	Shop Work	1 to 4
German	2 to 4	Journalism	1
Spanish	2 to 4	Stenography and	
		Typing	1
		Public Speaking	1/2 or 1

- NOTES: 1. A student whose ultimate objective is pursuance of a course of study in one of the fields of engineering is advised to present one unit of credit in physics.
2. A student who expects to enter either the School of Arts and Sciences or the field of engineering can use a maximum of three units in vocational subjects in satisfying admission requirements. Four such units can be used in satisfying requirements for admission to the industrial education and pre-veterinary medicine curricula and to all curricula in the School of Agriculture except agricultural engineering, in which case only three vocational units can be used.

By Examination: Any or all of the scholarship requirements for admission may be met by passing the entrance examinations. These will be held at the beginning of each semester under the supervision of the College authorities and will cover all the subjects required or accepted for admission as outlined above. Candidates desiring to take examinations at the College should notify the Registrar well in advance of registration.

By Individual Approval: An applicant over twenty-one years of age who has not recently attended school and who cannot satisfy the entrance requirements in full may be admitted without examination, subject to the following requirements:

1. He must make application on the official entrance blanks.
2. He must furnish evidence that his preparation is substantially equivalent to that required of other applicants and that he possesses the ability and seriousness of purpose necessary to pursue his studies with profit to himself and to the satisfaction of the College.
3. He must show by a test in composition that he has an adequate command of the English language.
4. The candidate should forward his credentials to the Registrar in advance of his coming, but in no case will he be admitted without a personal interview.

A student admitted by individual approval will not be considered a candidate for a degree until he has satisfied the entrance requirements in full.

Of Superior Students: Any superior student, as indicated by his entrance tests and his high school record, who presents evidence of outstanding preparation in any subject matter field may be relieved of the introductory course in that field and permitted to substitute another course with the approval of the dean of his school provided he passes a validating examination in the course with a grade of C or better.

To Advanced Standing: Admission to advanced standing may be granted under the following conditions:

1. The candidate must present evidence of honorable dismissal from the institution last attended.
2. An official transcript of the record of all previous high school and college work must be submitted, together with a marked catalogue showing the college courses referred to in the transcript.
3. On the basis of these credentials, credit will be given for work completed with a grade of C or better, so far as the work

is equivalent in character and extent to subjects included in the course of study to be pursued here. Credits given by transfer are provisional and may be cancelled at any time if the student's work in the College is unsatisfactory.

Students who fail a course in any subject at this College and later take such course or subsequent courses in the same subjects at another college may be required to pass validating examinations in such course or courses before these will be accepted for transfer credit toward degree requirements.

4. A Texas resident who has attended another college or university must be eligible to return to that institution and also must have for each of the last two semesters of attendance a grade point average of 1.00 or better on all courses undertaken whether passed or failed.

5. Those students who transfer as many as 30 semester hours of credit and 36 grade points may be admitted to one of the degree granting schools of the College. All others will be admitted to the Basic Division until they have qualified for admission to one of the degree granting schools.

6. A continuing unsatisfactory scholastic record will be considered grounds for refusing admission.

An applicant, whether a new student applying for admission for the first time or a former student of the College who has attended another college or university, is not at liberty to disregard any part of his academic record and apply for admission to the College on the basis of his high school record or a partial record of his college work.

It is essential that all credentials be forwarded to the Registrar in advance.

College credit for work done in secondary schools will be given only on the basis of examination at the College and shall not include work presented in satisfaction of the entrance requirements.

7. Candidates for a baccalaureate degree in the School of Agriculture will be expected to complete approximately the last two years in residence at this institution. Acceptance of transfer credit for courses in agriculture will generally be limited to those courses normally taught in the freshman and sophomore years at this institution.

The foregoing is based on the premise that a candidate for a degree in agriculture should complete the major portion of his work in agriculture at the degree granting institution.

Of Special Students: A limited number of young men over twenty-one years of age may be admitted to the College as special students, not candidates for a degree, subject to the following regulations:

1. The candidate must show good reason for not taking a regular course and must submit satisfactory evidence that he is prepared to profit by the special studies he wishes to pursue.

2. Record of his previous scholastic work must be submitted on the official entrance blanks and must be accompanied by a statement showing (1) his experience; (2) a plan of study, enumerating the courses he desires to pursue; and (3) the purpose or end expected to be accomplished by his study.

3. In order to be admitted to the work of any department, a special student must secure the consent of the head of the department; and his course of study as a whole must be approved by the dean concerned.

Special students are subject to the rules and regulations governing regular students and are required to take the prescribed military training.

A special student who may desire to become a candidate for a degree must satisfy the entrance requirements and obtain the consent of the dean concerned.

To One of the Degree Granting Schools: A student may be admitted into one of the degree granting schools of the College, or into the pre-veterinary medicine curriculum, when he has earned a minimum of 6 grade points in English 103-104, and when at the end of two semesters in the Basic Division he has completed a minimum of 30 semester hours and earned 36 grade points, or when at the end of three semesters in the Basic Division he has completed a minimum of 42 semester hours and earned 51 grade points, or when at the end of four semesters in the Basic Division he has completed 54 semester hours and earned 66 grade points. Work completed in residence in a summer session may apply towards satisfying these requirements.

Of Nonresident Students: 1. Applicants not residents of Texas who have attended another college or university must have a grade point average of 1.50 or better on all work undertaken, whether passed or failed, in each of the last two semesters of attendance as a regular student, or on the total attendance if less than two semesters.

2. A limited number of applicants who are high school graduates will be accepted from nearby states so long as facilities may be available. Such students in addition to satisfying all ad-

mission requirements must rank in the upper half of their graduating classes.

3. Students who are admitted to the College in one curriculum may not be permitted to change to another which is restricted except under the same conditions as apply to new students.

4. The status of the residence 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 A. and M. as a student. His residence may not thereafter be changed by him, but, in the case of a minor, it may be changed by his parents, should they move to and become legal residents of the State and maintain such residence for at least one calendar year.

EXPENSES

The expenses for a regular session of nine months will vary with the individual concerned and with the course of study pursued. In the case of new students for the school year of 1950-51 the total costs should range from \$690 to \$820 for those enrolled in agricultural or pre-veterinary courses, \$685 to \$820 for those enrolled in arts and science courses, and from \$735 to \$885 for those enrolled in engineering courses. These expenses are itemized in the paragraphs which follow.

Each student is required to pay the following fees to the Fiscal Department during the first and second semesters:

	First Semester	Second Semester
Matriculation Fee	\$ 25.00	\$ 25.00
Medical Service Fee	5.50	5.00
Students Activities Fee	9.20	10.00
Board	140.40	146.40
Room Rent	44.70	42.00
Laundry	12.85	13.50
Room Key Deposit, returnable	1.00	
Total	<u>\$238.65</u>	<u>\$241.90</u>

New students will also have the following expenses when registering for the first time:

Supplementary items to the uniform issued by the Government	\$ 48.00
Physical education uniform	20.00
Expenses of Freshman Week	11.50
Total	<u>\$ 79.50</u>

The cost of textbooks and supplies varies with the course of study the student selects and with the quality he chooses to use.

The College Exchange Store estimates the cost of textbooks and equipment **for a year** as follows for the course of study indicated:

Agriculture and Pre-Veterinary Courses	.....	\$30.00 to \$ 60.00
Arts and Science Courses	.....	\$25.00 to \$ 60.00
Engineering Courses	.....	\$75.00 to \$125.00

The purchase of some used books will reduce the cost considerably in all courses of study, and the purchase of drawing instruments and a slide rule of cheaper quality will materially reduce the cost for an engineer. It should be remembered, however, that an engineer will use his drawing instruments and slide rule throughout his college career, and the purchase of adequate equipment originally may prove to be an economy in the end.

Personal incidental expenses will vary with the student's means, of course, but from \$100.00 to \$200.00 should be sufficient.

All fees except room rent, board, and laundry are payable in full at the beginning of the semester; these fees may be paid to the Fiscal Office in installments as shown below. The last three installments for each semester are due on the dates shown below; the fees for delayed payments shall be \$1.00 per day extra for each day of delayed payment of fees for board, room rent, and laundry or for either of these fees. Students who are delinquent five days will be dropped from the rolls.

First Semester

Amount due at time of registration, September 15	.....	\$ 96.50
Amount due October 1-18	.....	55.80
Amount due November 1-18	.....	40.70
Amount due December 1-18	.....	45.65
Total	.....	<u>\$238.65</u>

Second Semester

Amount due at time of registration, January 29-30	.....	\$ 79.35
Amount due February 1-20	.....	45.95
Amount due March 1-20	.....	46.00
Amount due April 1-20	.....	70.60
Total	.....	<u>\$241.90</u>

DAY STUDENTS

Day students pay all specified fees and charges except board, laundry, room rent, and room key deposit.

PART-TIME STUDENTS

A student registering for less than twelve credit hours is required to pay a matriculation fee of \$2.00 per credit hour with a minimum fee of \$7.50.

NONRESIDENT STUDENTS

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 A. and M. College as a student except as provided by law. This policy shall apply to both graduate and undergraduate students regardless of any scholarships, student assistantships, or graduate assistantships that may be granted to any student.

In compliance with the State law, the matriculation fee for nonresident students is \$150.00 per semester. A nonresident student is hereby defined to be a student of less than twenty-one 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 twelve months immediately preceding the date of registration; or a student of twenty-one years of age or over who resides out of the State or who has not been a resident of the State twelve months subsequent to his twenty-first birthday or for the twelve months immediately preceding the date of registration. A nonresident student registering for less than twelve credit hours is required to pay a matriculation fee of \$12.50 per credit hour.

The term "residence" means "legal residence" or "domicile;" and the term "resided in" means "domiciled in."

The legal residence of one who is under twenty-one years of age is that of the father. Upon death of the father, the legal residence of the minor is that of the mother. Upon divorce of the parents, the residence of the minor is determined by the legal residence of the person to whom custody is granted by the court. In the absence of any grant of custody, the residence of the father continues to control. Upon death of both parents, the legal residence of the minor continues to be that of the last surviving parent until he becomes twenty-one unless he makes his home with his grandparents, whereupon their residence is controlling.

A student under twenty-one years of age shall not be classified as a resident student until his parent shall have maintained legal residence in this state for at least twelve months. A student under twenty-one years of age whose parent leaves the State and establishes legal residence in another state shall be classified as a nonresident student. It shall be the responsibility and duty of the student to submit legal evidence of any change of residence.

All individuals who have come from without the State of Texas and who are within the State primarily for educational purposes are classified as nonresidents. Registration in an educational institution in the State is evidence that residence is primarily for educational purposes even though such individuals may have become qualified voters, have become legal wards of residents of Texas, have been adopted by residents of Texas, or have otherwise attempted to establish legal residence within the State.

A student twenty-one years of age or older who comes from without the State and desires to establish a status as a resident student must be a resident of the State for a period of at least twelve months other than as a student in an educational institution and must have the intention of establishing a permanent residence within the State during the entire period.

All aliens shall be classified as nonresident students except that an alien who has applied for naturalization in the United States and has received his first citizenship papers shall have the same privilege of qualifying as a resident student as a citizen of the United States. The twelve months' residence required to establish the status of a resident student shall not begin until after such first citizenship papers have been issued to the alien.

Members of the Army, Navy, or Marine Corps of the United States who are stationed in Texas on active military duty shall be permitted to enroll their children by paying the tuition fees and charges provided for resident students without regard to the length of time such member of the Armed Service shall have been stationed on active duty within the State. This provision shall extend only during active military service in Texas; and upon such member of the Armed Service being transferred outside the state of Texas, his children shall be classified as to residence under the second paragraph of these regulations. Any student claiming the privilege of this section shall submit at each registration a statement by the commanding officer of the post or station at which his parent is on active duty verifying the fact of his parent's military status.

Appointment as a member of the teaching or research staffs or the holding of a fellowship, scholarship, or assistantship shall not affect a student's residence status or the tuition fee to be paid.

• It shall be the responsibility of the student to pay the correct fee at the beginning of each semester or term for which he may register, and a penalty of \$5.00 shall be assessed for failure to pay the proper fee.

PAYMENTS

Payments to the Fiscal Department should be made by cashier's check or money order, payable to the Agricultural and Mechanical College of Texas. All checks, money orders, and drafts are accepted subject to final payment. Personal checks will not be accepted.

REFUNDS

Any student withdrawing officially (a) during the first week of class work in a semester will receive a refund of four-fifths of the matriculation fee and medical fee; (b) during the second week of class work, three-fifths; (c) during the third week of class work, two-fifths; (d) during the fourth week of class work, one-fifth; (e) after the fourth week of class work, nothing. No refunds will be made until ten days have elapsed from the time the fees were paid.

A refund of board and laundry payment will not be made unless there is a consecutive absence of not less than ten days due to illness of the student or a member of his family, or for some other unavoidable cause.

DEDUCTIONS

No deductions will be made from charges for board, laundry, and room rent in case of entrance within ten days after the opening of a semester, nor will a refund be made in case of withdrawal during the last ten days of a semester or the last ten days for which payment is made.

UNPAID CHECKS

If a check or draft accepted by the Fiscal Department is returned unpaid by the bank on which it is drawn, the person presenting it will be required to pay a penalty of \$1.00.

DUPLICATE RECEIPTS

Duplicate receipts covering fees paid by students will be issued on payment of twenty-five cents.

MATRICULATION FEE

The matriculation fee, fixed by the State law, includes the cost of necessary classroom and laboratory supplies and entitles the student to the usual college privileges, including the use of the library.

MEDICAL SERVICE FEE

The medical service fee covers the professional services of the college physician and the hospital staff. Surgical operations and charges for consultations with outside physicians requested by parents are not included in the medical fee.

ROOM RENT FEE

Rooms are furnished with single bedsteads, mattresses, tables and chairs, and running water. The charge for room rent also includes heat, light, and cleaning the corridors but not the rooms.

STUDENT ACTIVITIES FEE

The student activities fee is for the support of student activities. This fee includes subscription to the Battalion newspaper, admission to all athletic events, the College annual, and the use of the swimming pool.

VOCATIONAL REHABILITATION PROGRAM

The State Board for Vocational Education, through the Vocational Rehabilitation Division, offers payment of tuition and other services to civilian students who have certain physical handicaps, provided the vocational objective selected by the student has been approved by a representative of the Division. Application for Vocational Rehabilitation should be made to the State Rehabilitation Office, Room 36, PMA Building, College Station, Texas, or to Mr. J. J. Brown, Director of Vocational Rehabilitation, 302 Walton Building, Austin, Texas.

STUDENT LIFE

SUPERVISION AND DISCIPLINE

The over-all supervision of student life is the responsibility of the Dean of Men. The Professor of Military Science and Tactics is Commandant of Cadets and is directly responsible for the discipline and control of the Cadet Corps, while the supervision of civilian students is the direct responsibility of the Dean of Men.

The student government of the College is carried out through the Student Senate, which is composed of 43 student senators. Representation is on the basis of one senator from each dormitory, one from each College housing area, two from the day students, the four vice-presidents of the classes, and the proper number elected at large to make the total 43.

The Student Life Committee is the liaison agency between the Student Senate and the Faculty of the College. It is composed of nine members of the College staff and eleven students. The staff representatives on this committee represent all phases of the school program. The student representatives are selected so as to represent all groups on the campus. The committee is concerned with all matters relating to student life.

THE OFFICE OF DEAN OF MEN

Responsibility for the development and welfare of the student other than academic is placed with this office. One of the principal objectives of the office is the improvement of living conditions of the student body. Another objective is to encourage and recognize outstanding performance in student leadership, extra curricular activities, and all worthwhile endeavors which will aid the student in becoming a well-rounded citizen. This office is glad to consult and work with parents and guardians of all students, as well as with groups of students. It is also the policy of this office to work closely with other departments and agencies on the campus, so that the best possible service may be rendered to the student body. The Office of the Dean of Men is in Room 102, Goodwin Hall.

STUDENT AFFAIRS

The office of the Assistant Dean of Men for Student Affairs coordinates the activities and functions of the Veterans Advisor's Office, the Housing Office, the Counselors for non-military dormitories, the Campus Security Office, the College Hospital, the religious activities, the Y.M.C.A., and the Student Labor and Loan Office.

ADVISORY PROGRAM FOR FRESHMEN

There is a well-rounded advisory program for freshmen. All new students are required to report a week in advance of the beginning of classes for Freshman Week. During this period they are given a series of examinations, the results of which are used for advisory and placement purposes. Included among these examinations are a psychological test, an interest locator test, and five achievement tests. Any student whose scores on his tests indicate that he may have difficulty in pursuing the course he has chosen is advised to register in special sections designed to fit his particular needs. In addition to the testing program, the advisory program includes group conferences and individual conferences with deans and advisors. Each student is required to have at least one conference prior to his actual registration for class work. Other phases of the program include orientation by the Dean of

Men with regard to College regulations and military organizations.

All freshmen are required also to take a vocational guidance course during their first semester in the College. This course, Freshman Orientation 101, is designed to assist the student in personal adjustment and in selecting a vocational career by means of lectures, visual aids, and demonstrations. A portion of the instruction is provided by the representatives of the deans of the several schools.

VETERANS ADVISORY SERVICE

The A. and M. College of Texas has provided a full-time employee to serve as Veterans Advisor and assist ex-servicemen and their families with their problems. His office, which is located in Room 104 of Goodwin Hall, is especially equipped to assist in the advisement on personal matters and with applications for "G. I. Bill" benefits, admission to the College, selection of courses, clearing insurance and service pay difficulties, and receiving disability pay. The Veterans Advisor and his staff are sincerely interested in every problem of the veteran and welcome his inquiries by correspondence or by personal office calls.

HOUSING AND MEALS

Unless they are living with their families, all students are required to live in College-owned dormitories on the campus. Dormitories are designed especially to meet the student's needs of living and study.

Reservations are filed in the order in which they are received and will be held only until 3 p. m. of the regular registration day. Reservations made by students who do not complete their registration on the regular registration day by 5 p. m. may be cancelled, and the space will be assigned to another applicant.

New students may file room reservation applications beginning March 1 for the summer session, June 16 for the fall semester, and October 15 for the spring semester. As soon as a new student has been accepted for admission, he will be mailed a room reservation request card, which should be filled out as directed and returned to the Fiscal Office with a check or money order for \$6.00 for room reservation fee and key deposit. As soon as the reservation has been made, the student will be notified of his assignment to dormitory space. The room reservation fee will be credited to the student as part of his first installment of room rent upon his registration in June, September, or February. Should a student decide that it will be impossible for him to register, he may have his reservation cancelled not later than May 15 for the

summer session, August 15 for the fall semester, and January 15 for the spring semester, and the fees will be returned. Cancellations made after these dates will result in a forfeit of the reservation fee. The room assignment card and room reservation fee receipt will be secured at the Dean of Men's Office, 102 Goodwin Hall, when the student reports for registration.

Three housing areas have been designated on the campus: one known as the Basic Division Area, one as the Corps Area, and one as the Non-military Area. All freshmen students will live in dormitories located in the Basic Division Area. Sophomore students who elect to live with the Corps of Cadets and all juniors and seniors who have R.O.T.C. contracts will live in the Corps Area. Graduate students, students not physically qualified for military training, transfer students above freshman classification who do not elect to take military training, veterans exempt from military training, and sophomores who elect to live in civilian dormitories will be housed in the Non-military Area.

Freshmen will be organized into their own military units and will be housed by these units. Members of the three other classes who are in the Corps of Cadets will be housed by military units. Senior cadets who are not cadet officers will be formed into separate organizations. Transfer students taking military training will have a choice of going into military units made up of all three classes or of going into separate units made up of transfer students only. Sophomore students who choose to live in non-military dormitories but are not exempt from military training will wear the uniform habitually and participate in military classes and drills as do those who live with the Corps of Cadets.

All cadets residing on the campus are required to take their meals in one of the two dining halls on the campus. Each has a seating capacity of 4,000 and furnishes the students at cost well-balanced meals prepared under the direction of experienced supervisors.

REGISTRATION OF CARS

All students and employees who drive automobiles on the campus must have them registered in the Office of Campus Security within 48 hours of the time they are brought on the campus.

COLLEGE HEALTH SERVICE

The services of the College Medical Department become available to the student as soon as he has registered. Besides providing medical care and advice at all times during the college session, the Department treats cases of acute illness as they ap-

pear and supervises the maintenance of healthful living conditions at the College.

The College Hospital is a modern brick building, steam heated, with 150 beds for patients. Students are given hospitalization, including room, board, general nursing service, doctor's service, and medicine. The X-ray department provides all necessary picture and fluoroscopic work, including that for teeth, chest, and bones. The clinical laboratory makes blood examinations, urine examinations, smears, and cultures. The physiotherapy department provides heat treatments by means of ultra-violet, diathermy, and infra-red lamps. Two doctors, twelve nurses, two technicians, one bookkeeper, three student assistants, one ambulance driver, and two student part-time ambulance drivers compose the Department staff.

Sanitary work is carried on throughout the entire year. The water of the College is supplied from artesian wells, and milk and other dairy products used by the student body are supplied by the College dairies, which are among the most scientific and modern in the State. The College laboratories make bacteriological checks of the milk and water supplies.

All College buildings are located on the crest of a wide divide with sufficient slope in every direction to insure proper drainage. The three units of dormitories are modern and comfortable, located in spacious and beautifully landscaped areas on the campus. The dormitories, as well as the College swimming pool and other places frequented by the students, are inspected at regular intervals.

The College is particularly concerned with the maintenance of the health and physical development of its students. It provides one of the finest indoor swimming pools in the State, as well as tennis courts, athletic fields, and physical training and education.

RELIGIOUS ACTIVITIES

Religious Services: The churches bordering the campus constitute a large religious force ministering to the spiritual needs of the students. Their respective programs are adapted to the special needs of students; and every effort is made through the regular program of worship services, Sunday Schools, young people's organizations, and personal conferences by the church leaders to stimulate clear and constructive thinking in this important field. One week during each year is officially designated as Religious Emphasis Week in which the entire College cooperates in making it possible for an outstanding religious leader to address voluntary convocations of the students and for the denominations to sponsor intensive religious programs in their respective churches.

Young Men's Christian Association: For the many services rendered to the students, the Y.M.C.A. holds a coveted spot in the hearts of all Aggies. The Y.M.C.A. Building, erected in 1912 from funds given by the ex-students and friends of the College, is a four-story structure in the center of the campus. It provides a small chapel for religious services; parlors used for the meetings of students, friends, and visitors; office space and conference rooms; and a few dormitory rooms for unmarried teachers. In the lobby a student directory, writing materials, and telephones are available; while in the basement are located recreational facilities.

The Y.M.C.A. carries on a varied and vigorous program of religious group meetings, Bible study, discussion groups in the dormitories, and similar activities to maintain and stimulate the moral and spiritual lives of the students.

The Y.M.C.A. has a program for ex-servicemen which will give them an opportunity to participate in the religious and social activities of the College, and the Association will assist in finding living quarters for married students.

STUDENT ACTIVITIES

Office of Student Activities: The Office of Student Activities is charged with the management and fiscal operation of many student activities. This office is concerned primarily with student publications, musical activities, Town Hall, Guion Hall Theater, social activities, student concessions, clubs, and intramural athletics. The primary aim of the student concessions is to furnish employment to the largest group of students possible. The profits realized through management of the concessions are returned to the student body in the form of recreational facilities, entertainment, and grants to recognize groups and organizations for approved projects, such as judging teams, conventions, speakers, and others considered to be in the interest of the cadet corps. The Office of Student Activities utilizes all resources at its command to stimulate and enrich the student life.

The office of the Assistant Dean of Men for Student Activities is in Room 213, Goodwin Hall.

Student Publications: **The Battalion** is the students' newspaper, which they edit and produce. It is the official paper of the A. and M. College of Texas and of the city of College Station. The co-editors of the paper are elected by the student body. Students who begin work as freshmen or sophomores as a rule become paid employees in editorial capacities during their senior year. Students with high school experience in journalism are urged to join the staff in their freshman year.

The Aggieland is the yearbook of the student body and is published by the Senior Class. The editor is elected by the class and appoints his staff from volunteers. Many opportunities for participation are available because of the amount of work necessary to produce a complete record of the school year.

The Engineer, designed to promote talent for technical writing, is published by students in the School of Engineering. The editor is selected by the Student Engineering Council, and the staff is appointed by the editor. Students who have ability in research, in reporting scientific material, and in creative writing are welcomed as members of the staff.

The Agriculturist is published by the students of the School of Agriculture. The editor is selected by the Agricultural Council, and staff members are recruited from volunteers. The magazine publishes research, scientific, and technical articles.

The Commentator is a magazine published four times each year by the students in the School of Arts and Sciences. The editor is elected by the Arts and Science Council.

The Southwestern Veterinarian is published bi-monthly by the students of the School of Veterinary Medicine.

Clubs: Many opportunities exist for the student who is interested in extra-curricular club activity. There are more than 150 organizations ranging in interest from home town clubs to technical societies. The clubs formulate their organizations at the beginning of the school year and usually hold two meetings a month. Activities include discussion meetings, movies, smokers, barbecues, dances, and inspection trips.

Intramural Athletics: Intramural athletics feature contests between military units and between non-military organizations in seventeen different sports. Students are encouraged to match their athletic ability with fellow students to develop a competitive spirit, sound bodies, self control, and good sportsmanship. The intramural program, which is one of the most outstanding in the country, includes flag football, softball, volleyball, handball, basketball, track, swimming and diving, boxing, wrestling, bowling, horseshoes, fencing, weight lifting, golf, cross country, tennis, and table tennis. Every vacant field is a practice place for these various sports. There are five football fields, four basketball courts, twenty-two tennis courts, seventeen softball fields, ten volleyball courts, eighteen horseshoe courts, and other miscellaneous facilities. An eighteen-hole golf course near the campus is available to the students, and another eighteen-hole course is under construction on the campus.

The Ross Volunteer Company: This unit was organized in 1887 by Colonel T. M. Scott, business manager of the College, for

the purpose of banding together the most proficient military men in A. and M. into a crack drill team. They were first called the Scott Volunteers. The name was changed to Ross Volunteers in 1891 to honor Governor Lawrence Sullivan Ross, who in that year became President of the College. It was originally the plan of the organization to change its name in honor of each succeeding president of the College, but in 1902, at President Harrington's request, the idea was dropped and the name, Ross Volunteers made permanent.

MUSICAL ORGANIZATIONS

The Texas Aggie Band: The Texas Aggie Band, under the direction of Lt. Col. E. Vergne Adams, is the official band of A. and M. College and is of foremost importance on the campus. It is the pulse of the Spirit of Aggieland. The band furnishes the music for cadet reviews, parades, open air concerts, yell practices, and retreat formations. It leads the cadets in marching to the Mess Halls. It plays for all football, basketball, and baseball games held at the College. When possible, the band accompanies the football team on its trips.

Upon arrival at the College, prospective bandsmen should report as early as possible to the bandmaster. It is advised that those owning band instruments bring them.

The Singing Cadets: This widely known singing unit consists of more than one hundred well trained voices under the direction of W. M. Turner. The group has appeared in more than a hundred Texas cities, on numerous broadcasts, and on other entertainment programs. Membership is selected from the entire corps after tryouts held early in the regular school year. There are two divisions of the club: the College Club, which is open to all whether they have ability or not, and the Traveling Club, open to those who successfully pass the tryout. Suitable awards are made to those who are selected for membership. One or two quartets are chosen from the group, and they often furnish entertainment for campus functions.

The Aggieland Orchestra: The Aggieland Orchestra is an outstanding collegiate band sponsored by Student Activities and directed by W. M. Turner. The orchestra plays for most of the college dances during the social season. It also plays for dances held by various campus organizations, including the Cotton Ball sponsored by the Agronomy Society each year. Tryouts for membership are given when vacancies occur.

The Music Hall: For the student interested in music, the College has provided a building with practice rooms and practice pianos. The building is supervised by W. M. Turner, who acts

as counselor for those who practice there. There is a library of piano, vocal, and other instrumental literature which can be checked out by the students. The building is located in the new area across from the Campus Corner. It is open for use from 8 a.m. until 5 p.m. but can be used by special permission at night for instrumental or vocal groups.

ENTERTAINMENT

Lectures: During the school year the College seeks to bring outstanding lecturers to the College for appearances before small groups, organizations, or the entire student body.

Guion Hall Theater: The Guion Hall Theater is operated to provide economical and convenient movie entertainment for the student body and College staff. Good pictures are shown, though they are usually second run shows in order to keep costs as low as possible. Continuous filmings are shown while school is in session.

The Grove: The Grove is an outdoor concrete slab which is utilized by the Student Activities Department for movies, concerts, dancing, skating, games, and festivals.

Town Hall: The Town Hall program includes the best obtainable artists in the fields of dramatics, art, music, and dance. Since its inception, its popularity has grown each year. The sale of season tickets, together with funds made available by the College, makes it possible to bring outstanding programs to the student body at low prices.

Dances: Social life at the College is highlighted by the numerous dances held during the school year. During the school year the freshmen, sophomore, and junior classes sponsor dances, and regimental dances honoring the senior members of the regiment feature outstanding name bands. The most elaborate function is the annual Senior Ring Dance and Banquet when graduating seniors and their guests dance to the outstanding orchestra of the year. On week-ends of the more important dances, one of the dormitories is cleared and made available for the visiting guests of the students.

INTERCOLLEGIATE ATHLETICS

The A. and M. College of Texas is a member of the Southwest Athletic Conference, which embraces the leading major colleges and universities of Texas. In normal times the intercollegiate program includes football, baseball, basketball, track, cross country, swimming, tennis, golf, pistol and rifle shooting, and fencing. Varsity teams in each sport are known as the Texas Aggies, and

uniforms used by the players are in the school's colors, maroon and white. The A. and M. College of Texas has won more than its share of conference championships, especially in football. The track team, which has held the Southwest Conference championship for the past three years, had the distinction of having one of its members, Arthur Harnden, a member of the victorious United States Olympic Team in the 1948 Olympic Games. The golf team won the championship for the year 1947-48.

Center of athletics is Kyle Field, which contains the football stadium seating 33,000 and bleachers seating an additional 5,000; a quarter-mile cinder track with a 220-yard straight-away; a baseball diamond with 4,000 seats; P. L. Downs, Jr., Natatorium with swimming pool 100 by 60 feet, lockers, showers, and seats for 600; DeWare Field House with showers, lockers, dressing rooms, classrooms, offices, and storerooms, and seats for 3,500 around the basketball court; auxiliary gymnasium with handball courts and large rooms for physical education classes.

EMPLOYMENT FOR UNDERGRADUATE STUDENTS

All part-time employment of resident students is supervised by the Student Labor Office under the Dean of Men, and every effort is made to develop such employment opportunities outside of the College as may be available. To become eligible for such employment or for operation of any of the student agencies or concessions, the student must have been admitted to the College by the Registrar and have an accepted application on file with the Student Labor Office. Continued eligibility for employment is contingent on satisfactory performance of work and on the ability of the student to maintain a good scholastic standing.

Ordinarily only those students whose financial resources are limited may be considered for employment. Work assignments are made primarily on the basis of need and sincerity of purpose. In so far as possible, work assignments are made to jobs allied with the student's major field of study, or to work that requires the least amount of study time. No student should expect to earn more than one third of his expenses. First-term students should not plan to do outside work, since most of their energies will be required to make proper adjustment to college life.

LOAN FUNDS

The Association of Former Students administers a series of loan funds, which are available to any student who has been in the College for at least three semesters and whose record in

scholarship and in conduct is satisfactory. The amount of the loan depends in each case on the student's actual needs.

Other student loan funds are operated through the Office of Student Affairs by Mr. George Long in Room 106 of Goodwin Hall. They are the Lucy Jane Breazeale Loan Fund, sponsored by W. G. Breazeale as a memorial to his mother; the Ernestine Gaber Loan Fund, sponsored by Leo Gaber as a memorial to his mother; and the Davis Buck Fund, sponsored by William K. Davis.

SCHOLARSHIPS, FELLOWSHIPS, AND AWARDS

The Scholarships Committee of the College has been established for the purpose of aiding and administering the entire scholarships program. This committee is composed of the Dean of the College, who serves as chairman; the Dean of Men; Secretary of the Former Students Association; and a representative of each school of the College.

In general there are three types of scholarships and awards available: those limited to entering freshmen, scholarships designed for the more advanced undergraduate students, and fellowships for graduate students.

A folder describing scholarships, fellowships, and awards now available may be secured from the Office of the Registrar. All other inquiries concerning scholarships should be directed to the Secretary of the Scholarships Committee, Office of the Registrar, A. and M. College of Texas, College Station, Texas.

CURRICULA

TWO-YEAR CURRICULUM

Pre-Veterinary Medicine

FOUR-YEAR CURRICULA

Aeronautical Engineering	Industrial Education
Agriculture	Landscape Architecture
Agricultural Administration	Liberal Arts
Agricultural Education	Management Engineering
Agricultural Engineering	Mechanical Engineering
Agricultural Journalism	Military Science
Animal Science	Petroleum Engineering
Business Administration	Plant and Soil Science
Chemical Engineering	Range and Forestry
Civil Engineering	Science
Electrical Engineering	Veterinary Medicine
Geological Engineering	Wildlife Management
Geology	

FIVE-YEAR CURRICULA

Architecture	Petroleum Engineering—
Chemical Engineering—	Chemical Engineering
Business	Petroleum Engineering—
Food Technology	Geological Engineering
*Management Engineering	Petroleum Engineering—
Petroleum Engineering	Mechanical Engineering
Petroleum Engineering—	
Business	

*NOTE: A degree of Bachelor of Science in Management Engineering may be awarded on the basis of a student's having satisfactorily completed the degree of Bachelor of Science in Aeronautical, Chemical, Civil, Electrical, Mechanical, or Petroleum Engineering as outlined in the general catalogue with the addition of certain prescribed courses.

The School of
AGRICULTURE
CURRICULA

FOUR-YEAR CURRICULA

Agriculture	Animal Science
Agricultural Administration	Landscape Architecture
Agricultural Education	Plant and Soil Science
Agricultural Engineering	Range and Forestry
Agricultural Journalism	Wildlife Management

FIVE-YEAR CURRICULUM

Food Technology

AGRICULTURE

The curriculum in agriculture has as its main objectives the preparation of young men for the business of farming and ranching, including floriculture and ornamental horticulture; for the pursuit of scientific investigation in the field of agriculture; for work with the various governmental and private agricultural agencies; for farm managers; and for teaching in high schools and agricultural colleges. It also affords excellent preparation for young men who intend to enter the field of processing and marketing food and fibre products, including dairy manufacturing, fruits and vegetables, flowers and ornamentals, meats and poultry, and wool and cotton. Systematic training is given in the sciences of biology, chemistry, and entomology, which are fundamental to the study of scientific agriculture, and in technical subjects covering the main divisions of agriculture, including agronomy, animal husbandry, dairy husbandry, dairy manufacturing, entomology, floriculture, horticulture, and poultry husbandry. As shown in the curriculum, the work in the junior and senior years is arranged so as to provide for a choice by the student of one of eight groups of studies. This arrangement affords the student a wide range of subjects from which to choose his major work.

AGRICULTURAL ADMINISTRATION

The curriculum in agricultural administration is designed to prepare students for professional work as agricultural economists, for commercial work with agricultural industries, for the operation of farms and ranches, and for rural social service work.

The first two years are planned to give students the fundamental studies. In the sophomore year students may choose either Group 1 (agricultural economics), Group 2 (farm management), Group 3 (rural sociology), or Group 4 (pre-seminary training of rural ministers and agricultural missionaries).

The program in agricultural economics affords opportunity for students to prepare themselves for professional work with governmental agencies and private concerns in such capacities as research analysts, teachers, and field representatives. By electing courses in business administration, students may also qualify for various types of work in the commerce of agriculture. Adequate electives are available to enable students to select a number of courses dealing with one farm product with view to becoming specialists in the marketing of that commodity.

The program in farm management is intended to prepare students for the operation of farms and ranches. It includes fundamental subjects in all the fields of agriculture, yet provides enough electives to permit the students to emphasize the study of the particular agricultural enterprises in which they are most interested.

The program in rural sociology affords training in the field of social work with special emphasis on rural social problems and organization. Graduates are qualified for service with various public and private rural social agencies.

The program for pre-seminary training of rural ministers and agricultural missionaries is designed to give students expecting to enter upon such work the necessary general education to enter theological seminary and a knowledge of technical agriculture that will enable them the better to understand farm people and their problems.

AGRICULTURAL EDUCATION

This curriculum, which includes a minimum of 60 semester hours of credit in technical agriculture, is designed to give the teacher of vocational agriculture the preparation and training in both technical agriculture and education, including practice teaching, required to qualify under the Federal Vocational Education Act.

Graduates of approved institutions having satisfactory training in the sciences underlying the study of agriculture will be awarded the degree of Bachelor of Science in Agricultural Education upon satisfying the following requirements: (1) the curriculum for majors in agricultural education and (2) at least one year's residence.

AGRICULTURAL ENGINEERING

The curriculum in agricultural engineering is under the joint supervision of the School of Agriculture and the School of Engineering. Agricultural engineering deals with the application of the fundamental branches of engineering to the peculiar conditions and requirements of agriculture as an industry and as a field of applied science. The term "agricultural engineer" denotes an engineer who has been trained in both engineering and agriculture, with experience in combining the two, and who is qualified to develop, design, organize, and direct engineering work in the agricultural and closely allied industries. It is the work of the agricultural engineer to strive for maximum efficiency and economy in agricultural operations and equipment just as engineers in other branches of the profession seek to promote progress in their respective industries.

In general, agricultural engineering may be broken down into four major phases of activity—farm power and machinery, farm buildings and structures, farm electrification, and soil and water control and conservation which includes drainage, flood control, irrigation, land clearing, soil erosion control, and related problems.

The need for men with this training is being felt more and more as the demand grows for farms better equipped with power machinery, farm buildings and home utilities, and for land reclamation by soil erosion control, drainage, and irrigation.

Graduates of this curriculum are prepared for service with the colleges and the government in teaching, extension, and research work; with government soil erosion control projects; with manufacturers of farm machinery, tractors, and other farm equipment; in advertising, sales, and design work; with engineering and contracting firms doing soil erosion control, irrigation, and drainage work; and as rural electrification specialists.

AGRICULTURAL JOURNALISM

The curriculum in agricultural journalism is designed to prepare students for professional careers as agricultural writers and editors, including work on bulletins and magazines as well as on rural and metropolitan newspapers.

The first two years are planned to give students the fundamental studies. The program affords opportunities for students to prepare themselves as specialists in certain phases of agricultural writing but with an adequate background for general journalistic work.

This curriculum is administered by the Department of Journalism in the School of Arts and Sciences.

ANIMAL SCIENCE

The demand for qualified leaders in the various fields of science and especially in the agricultural sciences is far in excess of the supply. The need is particularly acute for college teachers, extension leaders, research workers in state and federal (USDA) agricultural agencies, and in industrial laboratories. There is also a demand for qualified agricultural leaders or advisors in foreign countries. To meet this demand the animal science curriculum was developed. This curriculum is designed to give more adequate training in the basic sciences. Those who complete this course of study will be qualified for graduate work in the fields of nutrition, animal breeding, genetics, physiology of reproduction, zoology, biostatistics or related fields, and at the same time may qualify as majors in one of the regular animal curricula in the School of Agriculture. This curriculum may be considered, therefore, as either terminal or as preparation for graduate study.

In order to obtain a major in one of the regular courses in agriculture, the student should select electives in relation to that major.

LANDSCAPE ARCHITECTURE

The curriculum in landscape architecture is arranged to help students attain proficiency in the arrangement of ground and water forms for the purpose of securing the greatest returns in human use and enjoyment. The projects developed by landscape architects include private gardens, farmsteads, country estates, public building sites, industrial areas, golf courses, cemeteries, and arboretums. Designing of public recreation areas such as public gardens, playgrounds, and parks of all types is also included in the field of landscape architecture.

A successful landscape architect must possess or develop an artistic sense, engineering ability, and the fundamentals of architecture in addition to a knowledge of the basic elements of land, water, vegetation, and the forces of nature. He must possess the ability to present his ideas for design and construction by means of drawings in plan and perspective, as well as by means of written or spoken words.

Graduates are engaged in private practice; in the employ of city, state, and regional planning boards; as managers of city park systems, university campuses, large private estates, memorial park cemeteries, arboretums; in various phases of work with the National Park Service; as teachers; and as landscape architects with many of the larger nurseries.

PLANT AND SOIL SCIENCE

Advancements in the field of agriculture are creating a demand for highly trained and specialized personnel. More and

more students in agriculture are becoming interested in preparing themselves for graduate study or specialized work. The curriculum in plant and soil science is designed to give more adequate preparation in the basic sciences for those students interested in studies leading to advanced degrees or in preparation for technical work as plant breeders, plant pathologists, plant physiologists, soil scientists, etcétera. This curriculum provides a better foundation for extension, research, or teaching in government branches or in industries.

There is no separate department of plant and soil science. Students interested in soils or in field crops should group their electives in the Department of Agronomy; those selecting floriculture, in the Department of Floriculture and Landscape Architecture; and students selecting botany, horticulture, plant physiology and pathology, or range management, in those respective departments.

RANGE AND FORESTRY

Range management is one of the important professions associated with agriculture, and for those students who wish preparation for service in this major, the Department of Range and Forestry offers a curriculum which emphasizes the following: (1) The importance of the plant sciences through plant and range ecology, (2) the production of livestock on native range and forest areas, (3) the fundamentals of plant and soil conservation on native range lands, and (4) principles and practices of forestry that are associated with range management and management of farm woodlots and other timber areas.

The sciences of zoology, botany, animal husbandry, and agronomy are emphasized to give the student basic information for practical application. The basic educational fields of mathematics, chemistry, and English contribute to the firm foundation students in this field of study must acquire. The curriculum is unusually broad in scope to train one for the great variety of problems met in the multiple use and conservation of uncultivated lands.

Upon completion of range management training, graduates are prepared to enter the ranch business either as owners or as managers. There are some openings to men trained in this field in commercial enterprises. Graduates often qualify for work as county agricultural agents, with the Experiment Station, or with other state organizations. Men meeting Civil Service requirements are eligible for appointments with the United States Soil Conservation Service, the United States Forest Service, the Bureau of Land Management, the Indian Service, the National Park Ser-

vice, and other federal agencies. Graduates in this field are needed as teachers and instructors in educational institutions of Texas and elsewhere as well as in other agricultural and range areas.

WILDLIFE MANAGEMENT

This curriculum includes work in fisheries and wildlife. At the beginning of the sophomore year, the student should elect one of the two options, fisheries or wildlife, because of differences in the basic sciences required. The junior and senior years are largely years of specialization.

This curriculum is designed (1) to train young men in the art of managing wildlife on the land and maintaining populations at levels consistent with good land use practices and the desirability of the wildlife species involved and (2) to train men for research in taxonomy, distribution, and ecology of fishes, reptiles and amphibians, birds, and animals. Also, opportunities are provided, in cooperation with the Department of Journalism, for training in the field of wildlife journalism.

Upon completion of the wildlife management curriculum, graduates are prepared to enter occupations in the fisheries or wildlife fields, including management, research, and teaching. Men meeting Civil Service requirements are eligible for appointments with the United States Fish and Wildlife Service, the United States Soil Conservation Service, and other federal agencies. Also, graduates are eligible for employment by the various state game and fish commissions. A few positions open from time to time as wildlife managers on private ranches.

The curriculum emphasizes the sciences of zoology, botany, and chemistry but also gives a firm foundation in mathematics, English, and other liberal arts and agricultural courses.

FOOD TECHNOLOGY

The curriculum in food technology is designed to train students in the technical and scientific problems of food processing and manufacture. The work includes a broad foundation in the chemistry and bacteriology of food products and in the mechanics of food plant operation; and the packaging, storage, and distribution of foods.

This course of study includes a considerable number of elective hours, enabling the student to take a block of electives in the sources, production, processing, inspection, and grading of dairy products; fruit and vegetable products; meat, fish, and poultry products; and miscellaneous foods and beverages.

Graduates in this field should find employment in dairy plants, creameries, dehydrating and freezing plants, food locker plants, and meat products packing plants as well as a variety of miscellaneous food and beverage plants. There is also a need for men trained in this field in the federal and state inspection work and marketing services. Some men will find opportunities in food products research with state and commercial agencies.

There is no separate Department of Food Technology. The subjects included in this curriculum are offered by several departments in the College, but the curriculum and students majoring in it are under the supervision of a Committee on Food Technology appointed from the agricultural teaching staff by the Dean of Agriculture.

NOTE: In the curricula shown on subsequent pages, figures in parentheses following the number of the course indicate the clock hours per week devoted to theory and practice respectively. Theory includes recitations and lectures; practice includes work done in the laboratory, shop, drawing room, or field. The credit value of the course is indicated in the column headed "Credit." The unit of credit is the semester hour, which involves one hour of theory, or from two to four hours of practice per week for one semester of eighteen weeks.

FRESHMAN YEAR OF CURRICULA
in
SCHOOL OF AGRICULTURE

Curriculum in
AGRICULTURE

(FOR MAJORS IN AGRONOMY, ANIMAL HUSBANDRY, DAIRY PRODUCTION,
DAIRY MANUFACTURING, ENTOMOLOGY, HORTICULTURE, AND POULTRY
HUSBANDRY)

First Semester	Credit	Second Semester	Credit
Agronomy 105	(2-2) 3	Animal Husbandry 107	(2-2) 3
Fundamentals of Crop Production		General Animal Husbandry	
Biology 107	(2-4) 3	Biology 101	(3-4) 4
Animal Biology		General Botany of Seed Plants	
Chemistry 101	(3-3) 4	Chemistry 102	(3-3) 4
General Chemistry		General Chemistry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Military Science	(1-2) 1
Mathematics 101	(3-0) 3	Poultry Husbandry 201	(2-2) 3
Algebra		Poultry Production	
Military Science	(1-2) 1	Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		18
	18		

NOTES: 1. Students whose high school records and entrance tests indicate inadequate preparation will omit Biology 107 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 101a. Such students will still be required to take Biology 107.

2. Superior students who plan to continue in graduate study should consult their dean about transfer to the curriculum in animal science or plant and soil science.

(FOR A MAJOR IN FLORICULTURE)

Agronomy 105	(2-2) 3	Animal Husbandry 107	(2-2)
Fundamentals of Crop Production		General Animal Husbandry	
Biology 101	(3-4) 4	or	
General Botany of Seed Plants		Dairy Husbandry 202	(2-2)
Chemistry 101	(3-3) 4	Dairying	
General Chemistry		or	
English 103	(3-0) 3	Poultry Husbandry 201	(2-2) 3
Composition and Rhetoric		Poultry Production	
Freshman Orientation 101	(1-0) 1	Biology 102	(2-3) 3
Mathematics 101	(3-0) 3	Taxonomy of Flowering Plants	
Algebra		Biology 205	(2-3) 3
Military Science	(1-2) 1	Fundamental Plant Morphology	
Physical Education 101	(0-3) R	Chemistry 102	(3-3) 4
	19	General Chemistry	
		English 104	(3-0) 3
		Composition and Rhetoric	
		Military Science	(1-2) 1
		Physical Education 102	(0-3) R
			17

Curriculum in
AGRICULTURAL ADMINISTRATION

(FOR MAJORS IN AGRICULTURAL ECONOMICS, FARM MANAGEMENT, AND RURAL SOCIOLOGY)

First Semester	Credit	Second Semester	Credit
Agricultural Economics 105	(3-0) 3	Agronomy 105	(2-2) 3
Introduction to Rural Economy		Fundamentals of Crop	
Biology 107	(2-4) 3	Production	
Animal Biology		Animal Husbandry 107	(2-2) 3
Chemistry 101	(3-3) 4	General Animal Husbandry	
General Chemistry		Biology 101	(3-4) 4
English 103	(3-0) 3	General Botany of Seed Plants	
Composition and Rhetoric		Chemistry 102	(3-3) 4
Freshman Orientation 101	(1-0) 1	General Chemistry	
Mathematics 101	(3-0) 3	English 104	(3-0) 3
Algebra		Composition and Rhetoric	
Military Science	(1-2) 1	Military Science	(1-2) 1
Physical Education 101	(0-3) R	Physical Education 102	(0-3) R
	<hr/>		<hr/>
	18		18

NOTE: Students whose high school records and entrance tests indicate inadequate preparation will omit Biology 107 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 101a. Such students will still be required to take Biology 107.

(PROGRAM PREPARATORY TO SEMINARY TRAINING OF RURAL MINISTERS AND AGRICULTURAL MISSIONARIES)

Agronomy 105	(2-2) 3	Animal Husbandry 107	(2-2) 3
Fundamentals of Crop		General Animal Husbandry	
Production		Biology 101	(3-4) 4
Biology 107	(2-4) 3	General Botany of Seed Plants	
Animal Biology		Chemistry 102	(3-3) 4
Chemistry 101	(3-3) 4	General Chemistry	
General Chemistry		English 104	(3-0) 3
English 103	(3-0) 3	Composition and Rhetoric	
Composition and Rhetoric		Military Science	(1-2) 1
Freshman Orientation 101	(1-0) 1	Poultry Husbandry 201	(2-2) 3
Mathematics 101	(3-0) 3	Poultry Production	
Algebra		Physical Education 102	(0-3) R
Military Science	(1-2) 1		<hr/>
Physical Education 101	(0-3) R		18
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	18		

NOTE: Students whose high school records and entrance tests indicate inadequate preparation will omit Biology 107 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 101a. Such students will still be required to take Biology 107.

Curriculum in
AGRICULTURAL EDUCATION

Agronomy 105	(2-2) 3	Animal Husbandry 107	(2-2) 3
Fundamentals of Crop		General Animal Husbandry	
Production		Biology 101	(3-4) 4
Biology 107	(2-4) 3	General Botany of Seed Plants	
Animal Biology		Chemistry 102	(3-3) 4
Chemistry 101	(3-3) 4	General Chemistry	
General Chemistry		English 104	(3-0) 3
English 103	(3-0) 3	Composition and Rhetoric	
Composition and Rhetoric		Military Science	(1-2) 1
Freshman Orientation 101	(1-0) 1	Poultry Husbandry 201	(2-2) 3
Mathematics 101	(3-0) 3	Poultry Production	
Algebra		Physical Education 102	(0-3) R
Military Science	(1-2) 1		<hr/>
Physical Education 101	(0-3) R		18
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	18		

NOTE: Students whose high school records and entrance tests indicate inadequate preparation will omit Biology 107 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 101a. Such students will still be required to take Biology 107.

**Curriculum in
AGRICULTURAL ENGINEERING**

First Semester	Credit	Second Semester	Credit
Chemistry 101	(3-3) 4	Chemistry 102	(3-3) 4
General Chemistry		General Chemistry	
Engineering Drawing 111	(0-6) 2	Engineering Drawing 124	(2-2) 3
Engineering Drawing		Descriptive Geometry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Mathematics 104	(4-0) 4
Mathematics 102	(3-0) 3	Analytics	
Algebra		Mechanical Engineering 102	(1-2) 2
Mathematics 103	(3-0) 3	Engineering Problems	
Plane Trigonometry		Military Science	(1-2) 1
Mechanical Engineering 101	(1-2) 2	Physical Education 102	(0-3) R
Engineering Problems			
Military Science	(1-2) 1		17
Physical Education 101	(0-3) R		
	19		

NOTE: Students whose high school records and entrance tests indicate inadequate preparation will omit Mathematics 102, 103 and Mechanical Engineering 101 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 111. Such students will still take Mathematics 103 and Mechanical Engineering 101, and their degree requirements will be increased by 3 credit hours.

**Curriculum in
AGRICULTURAL JOURNALISM**

Agronomy 105	(2-2) 3	Animal Husbandry 107	(2-2) 3
Fundamentals of Crop Production		General Animal Husbandry	
Biology 107	(2-4) 3	Biology 101	(3-4) 4
Animal Biology		General Botany of Seed Plants	
Chemistry 101	(3-3) 4	Chemistry 102	(3-3) 4
General Chemistry		General Chemistry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Military Science	(1-2) 1
Mathematics 101	(3-0) 3	Poultry Husbandry 201	(2-2) 3
Algebra		Poultry Production	
Military Science	(1-2) 1	Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		18
	18		

NOTE: Students whose high school records and entrance tests indicate inadequate preparation will omit Biology 107 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 101a. Such students will still be required to take Biology 107.

**Curriculum in
ANIMAL SCIENCE**

Animal Husbandry 107	(2-2) 3	Biology 101	(3-4) 4
General Animal Husbandry		General Botany of Seed Plants	
Biology 105	(2-4) 3	Biology 106	(2-4) 3
General Zoology		General Zoology	
Chemistry 101	(3-3) 4	Chemistry 102	(3-3) 4
General Chemistry		General Chemistry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Mathematics 103	(3-0) 3
Mathematics 101	(3-0) 3	Plane Trigonometry	
Algebra		Military Science	(1-2) 1
Military Science	(1-2) 1	Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		18
	18		

Curriculum in
LANDSCAPE ARCHITECTURE

First Semester	Credit	Second Semester	Credit
Architecture 101	(1-9) 4	Architecture 102	(1-9) 4
Architecture I		Architecture I	
Biology 101	(3-4) 4	Biology 102	(2-3) 3
General Botany of Seed Plants		Taxonomy of Flowering Plants	
Chemistry 101	(3-3) 4	Chemistry 102	(3-3) 4
General Chemistry		General Chemistry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Mathematics 101	(3-0) 3
Military Science	(1-2) 1	Algebra	
Physical Education 101	(0-3) R	Military Science	(1-2) 1
—	17	Physical Education 102	(0-3) R
		—	18

Curriculum in
PLANT AND SOIL SCIENCE

Agronomy 105	(2-2) 3	Biology 205	(2-3) 3
Fundamentals of Crop Production		Fundamental Plant Morphology	
Biology 101	(3-4) 4	Chemistry 102	(3-3) 4
General Botany of Seed Plants		General Chemistry	
Chemistry 101	(3-3) 4	English 104	(3-0) 3
General Chemistry		Composition and Rhetoric	
English 103	(3-0) 3	Mathematics 103	(3-0) 3
Composition and Rhetoric		Plane Trigonometry	
Freshman Orientation 101	(1-0) 1	Military Science	(1-2) 1
Mathematics 101	(3-0) 3	Elective	3
Algebra		Physical Education 102	(0-3) R
Military Science	(1-2) 1	—	17
Physical Education 101	(0-3) R		
—	19		

NOTE: Students must select all electives with the advice of the head of the department in which they expect to take their major work.

Curriculum in
RANGE AND FORESTRY

Animal Husbandry 107	(2-2) 3	Agronomy 105	(2-2) 3
General Animal Husbandry		Fundamentals of Crop Production	
Biology 101	(3-4) 4	Biology 102	(2-3) 3
General Botany of Seed Plants		Taxonomy of Flowering Plants	
Chemistry 101	(3-3) 4	Chemistry 102	(3-3) 4
General Chemistry		General Chemistry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Mathematics 103	(3-0) 3
Mathematics 101	(3-0) 3	Plane Trigonometry	
Algebra		Military Science	(1-2) 1
Military Science	(1-2) 1	Physical Education 102	(0-3) R
Physical Education 101	(0-3) R	—	17
—	13		

NOTE: Students whose high school records and entrance tests indicate inadequate preparation will omit Biology 101 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 101a. Such students will still be required to take Biology 101.

Curriculum in
WILDLIFE MANAGEMENT

First Semester	Credit	Second Semester	Credit
Animal Husbandry 107	(2-2) 3	Agronomy 105	(2-2) 3
General Animal Husbandry		Fundamentals of Crop	
Biology 101	(3-4) 4	Production	
General Botany of Seed Plants		Biology 102	(2-3) 3
Chemistry 101	(3-3) 4	Taxonomy of Flowering Plants	
General Chemistry		Chemistry 102	(3-3) 4
English 103	(3-0) 3	General Chemistry	
Composition and Rhetoric		English 104	(3-0) 3
Freshman Orientation 101	(1-0) 1	Composition and Rhetoric	
Mathematics 101	(3-0) 3	Mathematics 103	(3-0) 3
Algebra		Plane Trigonometry	
Military Science	(1-2) 1	Military Science	(1-2) 1
Physical Education 101	(0-3) R	Physical Education 102	(0-3) R
	19		17

NOTE: Students whose high school records and entrance tests indicate inadequate preparation will omit Biology 101 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 101a. Such students will still be required to take Biology 101.

Curriculum in
FOOD TECHNOLOGY

Chemistry 101	(3-3) 4	Biology 101	(3-4) 4
General Chemistry		General Botany of Seed Plants	
English 103	(3-0) 3	Biology 107	(2-4) 3
Composition and Rhetoric		Animal Biology	
Freshman Orientation 101	(1-0) 1	Chemistry 102	(3-3) 4
Mathematics 102	(3-0) 3	General Chemistry	
Algebra		English 104	(3-0) 3
Mathematics 103	(3-0) 3	Composition and Rhetoric	
Plane Trigonometry		Mathematics 104	(4-0) 4
Mechanical Engineering 101	(1-2) 2	Analytics	
Engineering Problems		Military Science	(1-2) 1
Military Science	(1-2) 1	Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		
	17		19

NOTE: Students whose high school records and entrance tests indicate inadequate preparation will omit Mathematics 102, 103 and Mechanical Engineering 101 in the first semester of the freshman year and take Chemistry 101a, English 103a, and Mathematics 111. Such students will still be required to take Mathematics 103 and Mechanical Engineering 101, and their degree requirements will be increased by 3 credit hours.

The School of
ARTS AND SCIENCES
CURRICULA

LIBERAL ARTS

Economics	Mathematics
English (Language and Literature)	Modern Languages
History (Including Government)	Studies Preparatory to Law
Journalism	

BUSINESS ADMINISTRATION

Accounting	Insurance
Building Products Marketing	Marketing
Finance	Personnel Administration
General Business	Statistics

PREPARATION FOR TEACHING

Education	Physical Education
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SCIENCE

Bacteriology	Physics
Botany	Program Preparatory to Certificate as Medical Technologist
Chemistry	Studies Preparatory to Medicine, Dentistry, and Related Fields
Entomology	Zoology
Oceanography (Senior and Graduate Level only)	

LIBERAL ARTS

The curricula in liberal arts leading to the degree of Bachelor of Arts offer carefully planned programs of study in selected areas of the humanities and social sciences. They are intended for students whose interests, abilities, and aims are better served by a broad general education than by more specialized technological and scientific studies.

After completing one of these curricula, many students enter directly upon their life work. Others make their liberal arts course the foundation for additional education in a professional or grad-

uate school. Special provision is made for those who wish to begin the study of law before they have completed the program for the Bachelor's degree.

In all of the programs the first two years are given over to introductory work in fundamental subjects. The purpose is to enable the student to attain experience and breadth of view so that he may take a more intelligent part in his own further education. During the last two years the student selects a major and a minor field of study and appropriate electives, under the advice and direction of the Dean of the School of Arts and Sciences.

MAJOR AND MINOR STUDIES

By April 15 of his sophomore year the student selects a major and a minor field of study, according to the following directions:

1. One of the following departments must be chosen as the field of major study: economics, English, history, journalism, mathematics, or modern languages.

2. For his minor study the student may select one of the above departments other than that of his major study, or one of the following: biology, business administration, chemistry, education, entomology, geography, geology, journalism, physical education, physics, psychology, or rural sociology.

3. The remainder of the elective work may be taken in any of the departments indicated above, or other departments of the College, subject to the approval of the Dean of the School of Arts and Sciences.

4. Before graduation the student must complete (in addition to such courses as are prescribed in the freshman and sophomore years) a minimum of from eighteen to twenty-four semester hours in his major study and of twelve semester hours in his minor study.

REQUIREMENT IN ENGLISH COMPOSITION

Any student passing English 103, 104 without making at least six grade points on the course will be required to take other courses in English composition, in addition to other requirements in English, until he has accumulated a total of six grade points in such courses.

THE FOREIGN LANGUAGE REQUIREMENT

All students are required to complete a minimum of twelve semester hours in one foreign language, except where three units in one language, or two units in each of two languages, are pre-

sented for admission, in which case six semester hours of advanced work in one of the languages presented will cover the requirement. The satisfactory completion of four years of a modern foreign language in preparatory school will exempt the student from the language requirement if he can give evidence of an adequate reading knowledge of that language.

LATIN AMERICAN STUDIES

A number of departments offer courses relating to Latin America, so that it is possible for many students (including some who are registered in the other schools of the College) to combine some concentration in Latin American studies with their regular departmental major. The program of offerings on Latin America is designed to meet the needs of four classes of students: (1) those who expect to enter into business in Latin America or into trade with Latin America, (2) those who contemplate a career in the foreign service of the United States Government or in any of the several government agencies in Washington which employ specialists on Latin America, with assignments both in the United States and in the foreign field, (3) those who expect to enter into teaching or research with emphasis upon Latin America, and (4) those who wish to broaden their education and acquire a better understanding of the people and the problems of Latin America. Any student who elects to coordinate some study of Latin America with a regular major in one of the college departments should consult the head of his major department for guidance in working out his program of study.

BUSINESS ADMINISTRATION

The several curricula in business administration provide the type of training for business careers usually offered in schools of business administration. The freshman year is the same in all curricula with the exception of building products marketing. A student who plans to major in building products marketing should follow the prescribed course of study beginning with his freshman year. Other students elect a major field at the beginning of the sophomore year, choosing one of the following: accounting, finance, general business, insurance, marketing, personnel administration, statistics.

Each curriculum contains courses essential to a general education and permits the election of Spanish or another foreign language. Upon the completion of his chosen curriculum, the student receives the degree of Bachelor of Business Administration.

PREPARATION FOR TEACHING

The credit courses in education and physical education provide the necessary professional training for those who plan to

teach in secondary schools. All of these, except those entering on vocational agriculture and industrial education, should carefully follow one or another of the following programs:

1. Students following any catalogued program of studies leading to a bachelor's degree may secure a general teacher's certificate valid for four years by electing the following courses: Education 121, 321, 322; History 307; and Psychology 301. Since employment as a teacher will often be contingent on credit for courses in physical education, such students should, if possible, elect Physical Education 415 and one of the following: Physical Education 213, 214, 315, 316.

2. Students who major in education or physical education may follow programs leading either to the B.A. or the B.S. degree, the degree awarded depending on the field in which they prepare to teach and on the inclusion or omission of a foreign language in their undergraduate work. Preparation for teaching in some one of the usual high school fields (commercial work, English, history and social studies, mathematics, modern languages, natural sciences) is an essential part of the program for students who major in education or physical education, each of whom will be required to complete as nearly as possible some one of the group of courses so designated in the general catalogue.

TEACHER PLACEMENT

The Placement Office of the College, with the special cooperation of the School of Arts and Sciences, endeavors to assist graduates and students of the College in securing suitable teaching positions and to assist boards of education and other school officials in securing teachers. While no one is assured of a position, every reasonable effort will be made to place all worthy candidates registered for this service. Information obtained from professors and others is confidential. No charge is made for this service.

REQUIREMENT IN ENGLISH COMPOSITION

Any student passing English 103, 104 without making at least six grade points will be required to take other courses in English composition, in addition to other requirements in English, until he has accumulated a total of six grade points in such courses.

SCIENCE

The curricula in science are planned with the following purposes in view:

1. To prepare students for research in pure science and for practical work in the fields of biology (bacteriology, botany, zool-

ogy), chemistry, entomology, and physics, especially as they relate to agriculture, engineering, and other allied industries.

2. To train teachers in science in secondary schools and other institutions of learning.

3. To provide the necessary fundamental preparation for students planning to enter upon the study of medicine and kindred fields.

4. To provide introductory courses for students planning to do additional work at the graduate level in oceanography.

MAJOR STUDIES

1. By April 15 of his sophomore year, the student must designate as his major department one of the following: biology (bacteriology, botany, zoology), chemistry, entomology, physics.

2. Before graduation he must complete in his major department a minimum of from 24 to 30 semester hours, not including prescribed subjects. Certain studies from other departments closely allied to his major subject will be required.

REQUIREMENT IN ENGLISH COMPOSITION

Any student passing English 103, 104 without making at least six grade points on the course will be required to take other courses in English composition, in addition to other requirements in English, until he has accumulated a total of six grade points in such courses.

THE FOREIGN LANGUAGE REQUIREMENT

French or German is to be taken in satisfaction of the foreign language requirement. All students are required to complete a minimum of twelve semester hours in one of these languages, except where at least three units in French or German are presented for admission, in which case six semester hours of advanced work in the same language will satisfy the requirement. The satisfactory completion of four years of either French or German in preparatory school will exempt the student from the language requirement in the course in science if he can give evidence of an adequate reading knowledge of that language.

NOTE: In the curricula shown on subsequent pages, figures in parenthesis following the number of the course indicate the clock hours per week devoted to theory and practice respectively. Theory includes recitations and lectures; practice includes work done in the laboratory, shop, drawing room, or field. The credit value of the course is indicated in the column headed "Credit." The unit of credit is the semester hour, which involves one hour of theory, or from two to four hours of practice per week for one semester of eighteen weeks.

FRESHMAN YEAR OF CURRICULA*in***SCHOOL OF ARTS AND SCIENCES****Curriculum in
LIBERAL ARTS****(FOR MAJORS IN ECONOMICS, ENGLISH, HISTORY, MATHEMATICS, AND
MODERN LANGUAGES)**

First Semester	Credit	Second Semester	Credit
Biology 111	(2-3) 3	Biology 112	(2-3) 3
General Biology		General Biology	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	History 106	(3-0) 3
History 105	(3-0) 3	History of the United States	
History of the United States		Mathematics 103	(3-0) 3
Mathematics 101 or 102	(3-0) 3	Plane Trigonometry	
Algebra		Military Science	(1-2) 1
Military Science	(1-2) 1	Modern Language	(3-0) 3
Modern Language	(3-0) 3	French, German, or Spanish	
French, German, or Spanish		Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		
	<hr/> 17		<hr/> 16

- NOTES: 1. Transfers who have credit for any 6 hours of college biology may substitute such credit for Biology 111, 112.
2. Students who have a good high school record in mathematics and make a satisfactory showing on the mathematics achievement test may enter at once Mathematics 102 instead of Mathematics 101.

(FOR A MAJOR IN JOURNALISM)

Biology 115	(3-3) 4	Chemistry 106	(3-3)
Survey of Biology		General Chemistry	
English 103	(3-0) 3	or	
Composition and Rhetoric		Geology 205	(3-3)
Freshman Orientation 101	(1-0) 1	Elementary Geology	
History 105	(3-0) 3	or	
History of the United States		Physics 211	(3-3) 4
Mathematics 101	(3-0) 3	A Brief Survey of Physics	
Algebra		English 104	(3-0) 3
Military Science	(1-2) 1	Composition and Rhetoric	
Modern Language	(3-0) 3	History 106	(3-0) 3
Spanish Recommended		History of the United States	
Physical Education 101	(0-3) R	Mathematics 110	(3-0) 3
	<hr/> 18	Survey Course in Mathematics	
		Military Science	(1-2) 1
		Modern Language	(3-0) 3
		Spanish Recommended	
		Physical Education 102	(0-3) R
			<hr/> 17

PROGRAM PREPARATORY TO LAW

First Semester		Credit	Second Semester		Credit
Biology 111	.....	(2-3) 3	Biology 112	.....	(2-3) 3
General Biology			General Biology		
English 103	.....	(3-0) 3	English 104	.....	(3-0) 3
Composition and Rhetoric			Composition and Rhetoric		
Freshman Orientation 101	.....	(1-0) 1	History 106	.....	(3-0) 3
History 105	.....	(3-0) 3	History of the United States		
History of the United States			Mathematics 103	.....	(3-0) 3
Mathematics 101 or 102	.....	(3-0) 3	Plane Trigonometry		
Algebra			Military Science	.....	(1-2) 1
Military Science	.....	(1-2) 1	Modern Language	.....	(3-0) 3
Modern Language	.....	(3-0) 3	French, German, or Spanish		
French, German, or Spanish			Physical Education 102	.....	(0-3) R
Physical Education 101	.....	(0-3) R			
					<u>16</u>
		<u>17</u>			

- NOTES: 1. Transfers who have credit for any 6 hours of college biology may substitute such credit for Biology 111, 112.
2. Students who have a good high school record in mathematics and make a satisfactory showing on the mathematics achievement test may enter at once Mathematics 102 instead of Mathematics 101.

Curriculum in
BUSINESS ADMINISTRATION

(FOR MAJORS IN ACCOUNTING, FINANCE, GENERAL BUSINESS, INSURANCE, MARKETING, PERSONNEL ADMINISTRATION, AND STATISTICS)

Biology 115	.....	(3-3) 4	Business Administration 102	.....	(3-3) 4
Survey of Biology			Principles of Accounting		
Business Administration 101	.....	(3-3) 4	Chemistry 106	.....	(3-3)
Principles of Accounting			General Chemistry		
English 103	.....	(3-0) 3	or		
Composition and Rhetoric			Geology 205	.....	(3-3)
Freshman Orientation 101	.....	(1-0) 1	Elementary Geology		
History 105	.....	(3-0) 3	or		
History of the United States			Physics 211	.....	(3-3) 4
Mathematics 101	.....	(3-0) 3	A Brief Survey of Physics		
Algebra			English 104	.....	(3-0) 3
Military Science	.....	(1-2) 1	Composition and Rhetoric		
Physical Education 101	.....	(0-3) R	History 106	.....	(3-0) 3
			History of the United States		
		<u>19</u>	Mathematics 110	.....	(3-0) 3
			Survey Course in Mathematics		
			Military Science	.....	(1-2) 1
			Physical Education 102	.....	(0-3) R
					<u>18</u>

NOTE: Students who desire to take Spanish or another modern foreign language may substitute 6 credit hours of the language for History 105, 106 and continue the language for the 6 elective credit hours in the sophomore year.

(FOR A MAJOR IN BUILDING PRODUCTS MARKETING)

Business Administration 101	.....	(3-3) 4	Agricultural Engineering 222	.....	(1-3) 2
Principles of Accounting			Farm Shop		
Engineering Drawing 111	.....	(0-6) 2	Business Administration 102	.....	(3-3) 4
Engineering Drawing			Principles of Accounting		
English 103	.....	(3-0) 3	Chemistry 106	.....	(3-3) 4
Composition and Rhetoric			General Chemistry		
Freshman Orientation 101	.....	(1-0) 1	Engineering Drawing 112	.....	(0-4) 1
Mathematics 101	.....	(3-0) 3	Engineering Drawing		
Algebra			English 104	.....	(3-0) 3
Mechanical Engineering 105	.....	(1-6) 3	Composition and Rhetoric		
Bench Work in Wood			Mathematics 103	.....	(3-0) 3
Military Science	.....	(1-2) 1	Plane Trigonometry		
Physical Education 101	.....	(0-3) R	Military Science	.....	(1-2) 1
			Physical Education 102	.....	(0-3) R
		<u>17</u>			<u>18</u>

**Curriculum in
EDUCATION**

First Semester	Credit	Second Semester	Credit
Biology 111	(2-3) 3	Biology 112	(2-3) 3
General Biology		General Biology	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	History 106	(3-0) 3
History 105	(3-0) 3	History of the United States	
History of the United States		Mathematics 103	(3-0) 3
Mathematics 101 or 102	(3-0) 3	Plane Trigonometry	
Algebra		Military Science	(1-2) 1
Military Science	(1-2) 1	Modern Language	(3-0) 3
Modern Language	(3-0) 3	French, German, or Spanish	
French, German, or Spanish		Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		16
	17		

**Curriculum in
PHYSICAL EDUCATION**

Biology 111	(2-3) 3	Biology 112	(2-3) 3
General Biology		General Biology	
English 103	(3-0) 3	Chemistry 106	(3-3) 4
Composition and Rhetoric		General Chemistry	
Freshman Orientation 101	(1-0) 1	Education 121	(3-0) 3
History 105	(3-0) 3	An Introduction to Education	
History of the United States		English 104	(3-0) 3
Mathematics 101	(3-0) 3	Composition and Rhetoric	
Algebra		History 106	(3-0) 3
Military Science	(1-2) 1	History of the United States	
Rural Sociology 205	(3-0) 3	Military Science	(1-2) 1
Principles of Sociology		Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		17
	17		

**CURRICULA IN SCIENCE
(FOR A MAJOR IN BACTERIOLOGY)**

Biology 101 ¹	(3-4)	Biology 101 ²	(3-4)
General Botany of Seed Plants		General Botany of Seed Plants	
Or	4 or 3	And	
Biology 105 ²	(2-4)	Biology 106 ²	(2-4)
General Zoology		General Zoology	
Biology 225	(2-0) 2	Or	7 or 6
Personal and Public Health		Biology 102 ¹	(2-3)
Chemistry 101	(3-3) 4	Taxonomy of Flowering Plants	
General Chemistry		And	
English 103	(3-0) 3	Biology 105 ¹	(2-4)
Composition and Rhetoric		General Zoology	
Freshman Orientation 101	(1-0) 1	Chemistry 102	(3-3) 4
Mathematics 102	(3-0) 3	General Chemistry	
Algebra		English 104	(3-0) 3
Military Science	(1-2) 1	Composition and Rhetoric	
Physical Education 101	(0-3) R	Mathematics 103	(3-0) 3
	18 or 17	Plane Trigonometry	
		Military Science	(1-2) 1
		Physical Education 102	(0-3) R
			18 or 17

¹ For those emphasizing plant bacteriology.

² For those emphasizing animal bacteriology.

(FOR A MAJOR IN BOTANY)

First Semester	Credit	Second Semester	Credit
Biology 101	(3-4) 4	Biology 102	(2-3) 3
General Botany of Seed Plants		Taxonomy of Flowering Plants	
Chemistry 101	(3-3) 4	Biology 105	(2-4) 3
General Chemistry		General Zoology	
English 103	(3-0) 3	Chemistry 102	(3-3) 4
Composition and Rhetoric		General Chemistry	
Freshman Orientation 101	(1-0) 1	English 104	(3-0) 3
Mathematics 102	(3-0) 3	Composition and Rhetoric	
Algebra		Mathematics 103	(3-0) 3
Military Science	(1-2) 1	Plane Trigonometry	
Physical Education 101	(0-3) R	Military Science	(1-2) 1
	16	Physical Education 102	(0-3) R
			17

(FOR MAJORS IN ENTOMOLOGY AND ZOOLOGY)

Biology 105	(2-4) 3	Biology 106	(2-4) 3
General Zoology		General Zoology	
Chemistry 101	(3-3)	Chemistry 102	(3-3)
General Chemistry		General Chemistry	
or		or	
Chemistry 103	(3-4) 4	Chemistry 104	(3-4) 4
General Chemistry		General Chemistry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Mathematics 103	(3-0) 3
Mathematics 101	(3-0) 3	Plane Trigonometry	
Algebra		Military Science	(1-2) 1
Military Science	(1-2) 1	Modern Language	(3-0) 3
Modern Language	(3-0) 3	French or German	
French or German		Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		17
	18		

(PROGRAM PREPARATORY TO MEDICINE, DENTISTRY, AND RELATED FIELDS)

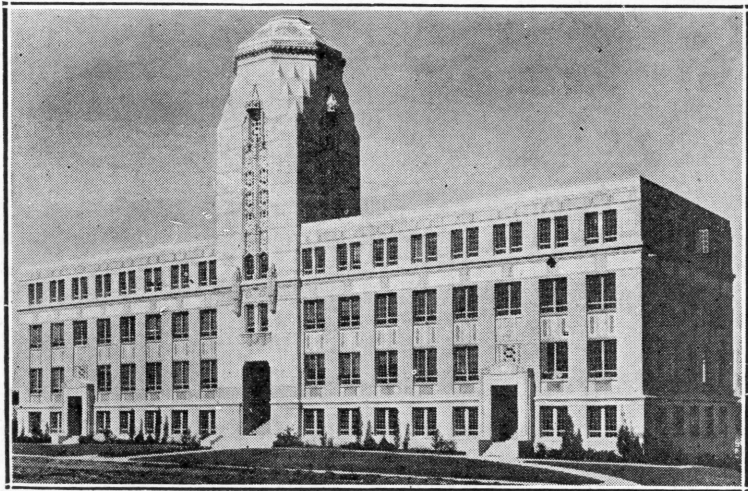
Biology 105	(2-4) 3	Biology 106	(2-4) 3
General Zoology		General Zoology	
Chemistry 103	(3-4) 4	Chemistry 104	(3-4) 4
General Chemistry		General Chemistry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Mathematics 103	(3-0) 3
Mathematics 101	(3-0) 3	Plane Trigonometry	
Algebra		Military Science	(1-2) 1
Military Science	(1-2) 1	Modern Language	(3-0) 3
Modern Language	(3-0) 3	French or German	
French or German		Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		17
	18		

(PROGRAM PREPARATORY TO CERTIFICATE AS MEDICAL TECHNOLOGIST)

First Semester		Credit	Second Semester		Credit
Biology 105	General Zoology	(2-4) 3	Biology 106	General Zoology	(2-4) 3
Chemistry 103	General Chemistry	(3-4) 4	Chemistry 104	General Chemistry	(3-4) 4
English 103	Composition and Rhetoric	(3-0) 3	English 104	Composition and Rhetoric	(3-0) 3
Freshman Orientation 101		(1-0) 1	Mathematics 103	Plane Trigonometry	(3-0) 3
Mathematics 101	Algebra	(3-0) 3	Military Science	French, German, or Spanish	(1-2) 1
Military Science		(1-2) 1	Modern Language	French, German, or Spanish	(3-0) 3
Modern Language		(3-0) 3	Physical Education 102		(0-3) R
Physical Education 101		(0-3) R			
		<u>18</u>			<u>17</u>

(FOR MAJORS IN CHEMISTRY AND PHYSICS)

Biology 111	General Biology	(2-3) 3	Biology 112	General Biology	(2-3) 3
Chemistry 101	General Chemistry	(3-3)	Chemistry 102	General Chemistry	(3-3)
Chemistry 103	General Chemistry	(3-4) 4	Chemistry 104	General Chemistry	(3-4) 4
English 103	Composition and Rhetoric	(3-0) 3	English 104	Composition and Rhetoric	(3-0) 3
Freshman Orientation 101		(1-0) 1	Mathematics 104	Analytics	(4-0) 4
Mathematics 102	Algebra	(3-0) 3	Mechanical Engineering 101	Engineering Problems	(1-2) 2
Mathematics 103	Plane Trigonometry	(3-0) 3	Military Science		(1-2) 1
Military Science		(1-2) 1	Physical Education 102		(0-3) R
Physical Education 101		(0-3) R			
		<u>18</u>			<u>17</u>



Petroleum-Geological Engineering

The School of
ENGINEERING
CURRICULA

FOUR-YEAR CURRICULA

Aeronautical Engineering	Geology
Chemical Engineering	Industrial Education
Civil Engineering	Management Engineering
Electrical Engineering	Mechanical Engineering
Geological Engineering	Petroleum Engineering

FIVE-YEAR CURRICULA

Architecture	Petroleum Engineering—
Chemical Engineering—	Chemical Engineering
Business	Petroleum Engineering—
*Management Engineering	Geological Engineering
Petroleum Engineering	Petroleum Engineering—
Petroleum Engineering—	Mechanical Engineering
Business	

GENERAL STATEMENT

The courses of study outlined under the various engineering curricula leading to degrees in engineering are planned for those students who expect to enter the engineering profession upon graduation. The curricula include English, public speaking, economics, government, physical training, and military science and tactics. Emphasis is placed on studies in mathematics and the physical sciences.

The principal portions of all curricula are devoted to the fundamentals of engineering science and the basic material related to the several fields of endeavor. Practice work and problem courses are provided so that the student may learn more readily the application of these fundamentals to the solution of problems encountered in the practice of engineering.

These courses are professional engineering courses and are not training courses for any of the mechanical or manipulative skills. The curricula are planned to provide preparation for re-

***NOTE:** A degree of Bachelor of Science in Management Engineering may be awarded on the basis of a student's having satisfactorily completed the degree of Bachelor of Science in Aeronautical, Chemical, Civil, Electrical, Mechanical, or Petroleum Engineering and additional required courses.

search, design, operation, management, testing, or maintenance of engineering projects. With the exception of architecture and industrial education, all curricula are the same through the freshman year.

AERONAUTICAL ENGINEERING

The profession of aeronautical engineering includes the technical activities associated with design, manufacture, maintenance, and testing of aircraft, and also aeronautical research.

The curriculum in aeronautical engineering includes sound preparation in mathematics, physics, chemistry, English, and economics. The junior and senior years are devoted largely to the professional courses in aerodynamics, aircraft structures, aircraft power plants, and aircraft design. The opportunity to elect courses in a desired specialty is provided in the senior year.

Excellent facilities are provided on the campus and at the College-owned Easterwood Airport. The airport is one of the best in the Southwest and offers unequalled facilities for flight training and flight test work. The large wind tunnel is also located at the airport.

Graduates of the course are also well qualified for positions in other fields of engineering since men trained in aerodynamics and the design of high-strength, light-weight structures are in demand in many industries.

ARCHITECTURE

The program in architecture is designed primarily to prepare young men for professional careers in the design and construction of buildings.

The method of teaching is that of individual criticism accompanied by careful direction in the use of the library and in materials of construction. The work of the first two years is common and is designed to give the student fundamental training in the techniques of drafting and an appreciation and understanding of the elementary principles of design and construction. The work of the upper years is built around the larger problems of architecture which, in many instances, become individual student projects.

Two options are offered: I, Design Option; II, Construction Option. The program is the same during the first two years. This makes it possible for the student to defer his decision until the beginning of his junior year, when he can more intelligently select his course of study for his upper years. Both options are five-

year courses. Option I leads to the degree of Bachelor of Architecture; Option II, to the degree of Bachelor of Science in Architectural Construction.

While the programs are designed primarily to prepare young men for professional careers in architecture and building construction, the training forms a good foundation for those who may wish to enter other fields. Graduates find their way into the profession as draftsmen, designers, estimators, superintendents of construction, and develop careers as architects, contractors, and city and regional planners.

The department is a member of the Association of Collegiate Schools of Architecture, is on the approved list of schools accepted by the Texas State Board of Architectural Examiners, and is accredited by the National Architectural Accrediting Board.

CHEMICAL ENGINEERING

Chemical engineering is that branch of engineering concerned with the development and application of manufacturing processes in which chemical or certain physical changes of materials are involved. These processes may usually be resolved into a coordinated series of unit physical operations and unit chemical processes. The work of the chemical engineer is concerned primarily with the design, construction, and operation of equipment and plants in which series of these unit operations and processes are applied. Chemistry, physics, and mathematics are the underlying sciences of chemical engineering, and economics is its guide in practice.

Chemical engineering became a separate division of engineering with the growth of strictly chemical industries, and it is now recognized as one of the important divisions of engineering, dealing with combustion of fuels, heat treatment of metals and alloys, the preparation of water for potable and industrial use, the refining of petroleum, processing of vegetable oils, the development of electric furnace products, portland cement, lime gypsum, plaster, heavy chemicals, soaps, rubber, corn products, textiles, paper, artificial leather and silks, food products, and other products.

The work of the chemical engineer is the changing of raw materials into finished products with the greatest efficiency and economy. He substitutes a rigid control of processes for guess work and uncertainty and increases the productivity of labor by supplying more efficient processes where the standard and quality of the finished product are revised and the amount of seconds and rejections is reduced. The chemical engineer must also be able to modify a process in order to adapt it to commercial condi-

tions and to select his material for construction with special reference to its use. His work is distinct from that of the chemist on the one hand and the mechanical engineer on the other, though he must have a thorough training in both chemistry and engineering.

The curriculum in chemical engineering is planned to prepare students for the design, construction, and operation of industries in which materials undergo chemical and physical change. The unit operations, such as fluid flow, heat flow, evaporation, drying, distillation, gas absorption, filtration, crushing and grinding, and size separation are basic studies that may be applied to any industry. General chemical processes are also included in the laboratory and classroom work. Research in both of these divisions is fostered by cooperative projects with the Texas Engineering Experiment Station and industrial organizations of the State.

As chemical engineering treats of the processes whereby materials undergo a chemical and physical change, it is apparent that a large number of diversified industries have use for the chemical engineer, not only in the operation and control of processes but in the design of special equipment. Many chemical engineers enter the research laboratory, investigating processes in the laboratory and supervising their operation in the plants, considering carefully the controlling interest of cost as a factor in all industrial operations.

In addition to the regular four-year course in chemical engineering, it is possible for a student to spend an additional year and receive two degrees. Five-year curricula are available in chemical engineering combined with petroleum engineering or with general business. They lead to a Bachelor of Science degree in both Chemical Engineering and Petroleum Engineering or a Bachelor of Science degree in Chemical Engineering and the degree of Bachelor of Business Administration.

CHEMICAL ENGINEERING—GENERAL BUSINESS

The five-year curriculum in chemical engineering—general business leads to a Bachelor of Science degree in Chemical Engineering and the degree of Bachelor of Business Administration. This curriculum includes all the courses required in the four-year chemical engineering and the four-year general business curricula and will provide the student with an excellent technical background as well as a sound business foundation.

CHEMICAL ENGINEERING—PETROLEUM ENGINEERING

The five-year curriculum in chemical engineering—petroleum engineering leads to a Bachelor of Science degree in both Chemi-

cal Engineering and Petroleum Engineering. This curriculum includes all of the courses required in the four-year chemical engineering and the four-year petroleum engineering curricula and is intended to provide a background so that the graduate may have the necessary fundamentals to engage in the refining, natural gasoline, development, production, transportation phase of the petroleum industry, or in allied industries which employ similar techniques or materials.

The curriculum is described under the five-year curriculum in petroleum engineering—chemical engineering.

CIVIL ENGINEERING

The curriculum in civil engineering has for its object the thorough grounding of young men in the underlying principles of the basic sciences and engineering. Training or practice in the art of applying these principles to problems encountered in practice is given in the drafting room, laboratories, and in the field so as to enable the graduate to give satisfactory service in an engineering organization immediately upon graduation.

During the first three years the subject matter of the courses is common to all phases of civil engineering, such as surveying, highway engineering, mechanics, strengths of materials, hydraulics, and stress analysis. In the fourth year the student is given an opportunity to specialize moderately in structural engineering, highway engineering, hydraulic engineering, or municipal and sanitary engineering. In addition, courses in cost estimating and construction methods are required of all the students so as to give them an understanding of the importance of these matters in the practice of civil engineering. It is possible for students who are interested in construction engineering to specialize to some extent in that phase of the profession.

The moderate specialization indicated above does not restrict the student to securing employment in a special field. The curriculum is so planned as to make it possible for him to undertake professional practice embracing the following: surveying, water supply; sewerage; the planning, design, and construction of buildings, bridges, earthen dams, reservoirs, canals, and the conventional types of foundations required for all of the structures; planning, design, construction, and maintenance of roads and highways; planning and execution of sanitary measures for rural and urban communities; administration of city business as city manager; industrial, academic, and governmental research of civil engineering matters; and technical service of various kinds for industries leading to executive positions.

ELECTRICAL ENGINEERING

The curriculum in electrical engineering is designed to give the student thorough training in the principles of direct and alternating current phenomena and of electronics. It provides training in the subjects fundamental to the general practice of engineering, in the theory of electricity, and in the application of the theory to practical problems in engineering.

The work of the first three years includes courses in mathematics, chemistry, physics, drawing, and mechanics which are common to all branches of engineering. Electrical engineering subjects begin in the sophomore year and continue in increasing amount through the junior and senior years. Much emphasis is put on the fundamental principles of electricity, but the fundamentals are vitalized with illustrations of their application in engineering practice. Some opportunity for specialization is offered in the senior year with electives in radio and communication engineering, power machinery, and industrial electronics. These courses tend to impress more firmly on the students' minds the principles already covered and to give the student specific information about some branch of electrical engineering.

Electrical engineering offers broad opportunities for young men with proper training. Graduates in this course may find employment in any of the following fields: construction and operation of generating stations and electric power systems, installation and operation of electrical equipment in industrial plants, manufacture and sale of electrical equipment, geophysical exploration in the petroleum industry, rural electrification and the application of electricity to agriculture, radio communications, television, telephone and telegraph systems, illumination, urban and trunk line transportation systems, aircraft electrical installations, teaching, and research.

Recently the application of electron tubes to the control of all sorts of processes in industry, as well as in communications and television, has resulted in what is known as the field of electronics. While this field is especially promising and new developments in it are constantly being made, it should be pointed out that it is not something distinct and apart from electrical engineering, but it is merely the newest of the many fields in which electrical engineers work. The course in electrical engineering prepares its graduates for work in electronics, which includes television, radar, and other recent war developments.

A student branch of the American Institute of Electrical Engineers and a branch of the Institute of Radio Engineers have been organized among the students of the College. These afford a means of keeping students in touch with the latest developments in the electrical and communication fields.

GEOLOGY

Training in geology is designed to prepare the student in the fundamentals of the earth sciences. These include the study of rocks, minerals, fossils, earth structures, the physical features of the earth's surface, and the economic application of this knowledge.

The curriculum is broad, yet it allows the student the choice of a major in geology, geology with a geophysics option, or geological engineering. A major in any one of these three leads to the degree of Bachelor of Science in a normal period of four years.

CURRICULUM IN GEOLOGY

This curriculum is designed for the student who approaches geology as a science, with the inherent obligation of exploring, observing, analyzing, inquiring, classifying, describing, and finally interpreting the record and the content of the rocks. It is based upon the related sciences of chemistry, physics, mathematics, and biology. It prepares a man either for general geological investigation or for graduate study in geology.

GEOLOGY, GEOPHYSICS OPTION

This curriculum is designed for the student who plans to apply geology to the physical measurement of earth structures, especially to exploration geophysics. The training prepares a man to use geology with an organization that uses seismic, gravimetric, magnetic, electric, or other techniques of geophysical surveying. Emphasis is placed on structural geology, physics, mathematics, and related fundamentals of engineering.

GEOLOGICAL ENGINEERING

The curriculum in geological engineering provides training in the fundamental principles of engineering as well as specialized training in geology. Although this course is designed primarily for the student who expects to be employed as a petroleum geologist, the curriculum is such that the graduate is also qualified for work with railroads, public utilities, construction, ceramic, and other companies in which a knowledge of both geology and engineering is desirable.

INDUSTRIAL EDUCATION

In general the industrial education curriculum under Group 1 aims to prepare young men for the following types of occupations:

Employees in industrial relations departments of industries which include such work as employee training, employment, personnel, and accident prevention. (Students preferring to enter this field will elect subjects dealing with management, personnel, and labor problems.)

Teachers of industrial arts subjects in junior, senior, or technical schools. (Industrial arts in these schools include such subjects as laboratory of industry, electrical work, metal work, wood-work, technical drawing, plastics, and other craft courses.)

Teachers of occupational courses and sponsors of guidance, safety, and personnel programs in public schools.

The industrial education curriculum under Group 2 is intended for teachers, supervisors, and directors for the vocational industrial schools and classes of Texas. Since the men completing this course are to qualify as teachers under the State Plan for Vocational Education, a candidate for a degree must satisfy the requirements for one of the classes of vocational teachers as specified in the State Plan.

MANAGEMENT ENGINEERING

This curriculum prepares its graduates to become industrial engineers.

Surveys have shown that some seventy-five per cent of all engineering graduates are sooner or later employed in fields other than their specialty in college. Many of these engineers who are no longer doing strictly engineering work have moved into executive positions where their background knowledge of engineering principles is invaluable, but where their pressing need is knowledge of the principles of management. As the executive's responsibility grows, it becomes necessary for him to have a working knowledge of accounting principles, including cost accounting, of scientific planning and control of production, of what constitutes an efficiently performed job, of the intricacies of human relations in industry, of personnel problems in general, and of effective administrative technics. These phases and similar phases of managing an enterprise are emphasized in all the curricula of management engineering.

Industry is in need of young men who have a technical background which informs them of the nature of the technological forces, who have in addition an adequate knowledge of the details of organizing and operating an enterprise, and who are cognizant of the human and humane elements involved. The curricula in management engineering are designed with these needs in mind.

Four-Year Curriculum

The four-year curriculum leading to the degree of Bachelor of Science in Management Engineering covers the basic engineering subjects founded on the physical sciences which are common to most engineering curricula. Specialized fields of study in management engineering, also called industrial engineering, include the principles of organizing and operating an industrial enterprise, of devising efficient methods of production, and of handling personnel. A foundation is laid with the intention of providing substantial aid to young engineers seeking greater responsibilities.

Five-Year Curricula

Since there is an insistent and growing demand for men versed in the fundamentals of other branches of engineering and also in the fundamentals of executive control, there are offered five-year curricula designed for students who wish training in management and in aeronautical, chemical, civil, electrical, mechanical, or petroleum engineering. Thus, in five years the student may complete the requirements for two Bachelor of Science degrees, one in his preferred specialty of engineering and the other in the field of management. The completion of the requirements for these two degrees should admirably prepare the engineering graduate for rapid advancement.

These curricula are largely the outgrowth of the rapid industrialization of Texas and the Southwest, a process in part due to the tendency toward the decentralization of industry from the older industrial areas and in part due to the economic advantages of Texas. While the opportunities in the industries of Texas are emphasized, graduates are finding employment in all parts of the nation.

MECHANICAL ENGINEERING

The breadth of the field of mechanical engineering is such that extensive specialization in undergraduate work is impossible and undesirable. Industry needs mechanical engineers for such a variety of work that it is deemed wise to make the curriculum broad and fundamental.

Practice work in pattern shop, foundry, machine shop, and welding is designed to instruct in methods rather than to develop skill.

During the senior year it is possible for the student to elect courses in definite fields, such as refrigeration, internal combus-

tion engines, marine engineering, automotive engineering, and air conditioning.

Training in habits of accurate analysis and logical thinking, the prerequisites of a good engineer, is emphasized.

Engineering work may be grouped into **design, construction, and erection and maintenance** of machinery of all kinds, such as machine tools, automobiles, airplanes, marine machinery, power plant equipment, oil well machinery, internal combustion engines, air conditioning equipment, welding equipment, wood-working machinery, and iron and steel producing equipment.

A **design engineer** may work in nearly any industry where the basic required knowledge of design is the same as that of another, but the specialized knowledge of the industry's products must be quite different. A designer of air conditioning equipment might know very little about the design of steam boilers, steam turbines, machine tools, jigs, or fixtures. The specialized knowledge is gained largely in the industry.

Every machine, instrument, or piece of equipment produced by any manufacturing plant involves the knowledge of materials, machines, equipment, tools, and processes. Here again the mechanical engineer is needed.

Erection and maintenance engineers are needed in every plant and building where a considerable amount of machinery and equipment is used. The water systems, the air conditioning and refrigeration equipment, the elevators, the installation and replacement of production machines, and the like create demands for skilled engineers.

Among the industries that employ large numbers of mechanical engineers are air conditioning concerns, oil companies, power plants, and all types of manufacturers. Sales engineers are probably as much in demand as any other group.

PETROLEUM ENGINEERING

The curricula in petroleum engineering are intended to prepare students for the petroleum industry and particularly for those branches which have to do with drilling, production, and transportation of petroleum as well as with the natural gas industry.

Six courses in petroleum engineering are available to the students in this department: (1) A regular four-year curriculum in petroleum engineering, which leads to a degree of Bachelor of Science; (2) A five-year curriculum in petroleum engineering, which leads to a degree of Bachelor of Petroleum Engineering;

(3) A five-year curriculum in petroleum engineering—general business, which leads to a Bachelor of Science degree in Petroleum Engineering and the degree of Bachelor of Business Administration; (4) A five-year curriculum in petroleum engineering—chemical engineering, which leads to a Bachelor of Science degree in both Petroleum Engineering and Chemical Engineering; (5) A five-year curriculum in petroleum engineering—geological engineering, which leads to a Bachelor of Science degree in both Petroleum Engineering and Geological Engineering; (6) A five-year curriculum in petroleum engineering—mechanical engineering, which leads to a Bachelor of Science in both Petroleum Engineering and Mechanical Engineering.

The five-year courses include all of the subjects given in the four-year curriculum.

The four-year curriculum in petroleum engineering includes sufficient training in civil, mechanical, and electrical engineering to prepare the graduate for the application of engineering principles to the petroleum industry. Courses in geology give an understanding of the geological structures and conditions favorable for petroleum deposits. To the basic subjects are added courses in petroleum engineering which illustrate the application of engineering principles to the type of problems met in the petroleum industry and which also give some understanding of the technique of the industry. Emphasis is placed on thorough grounding in the fundamentals rather than on application to particular problems.

The five-year curriculum in petroleum engineering is designed to provide a broader educational background. This curriculum contains all the courses included in the four-year curriculum and courses in psychology, accounting, English, economics, business administration, geography, and advanced mathematics.

PETROLEUM ENGINEERING—GENERAL BUSINESS

The five-year curriculum in petroleum engineering—general business leads to a Bachelor of Science degree in Petroleum Engineering and the degree of Bachelor of Business Administration. This curriculum includes all the courses required in the four-year petroleum engineering and the four-year general business curricula and will provide the student with an excellent engineering background particularly applicable to the development, production, and transportation phases of the petroleum industry as well as a broad business foundation applicable to any industry.

PETROLEUM ENGINEERING—CHEMICAL ENGINEERING

The five-year curriculum in petroleum engineering—chemical engineering leads to a Bachelor of Science degree in both Petro-

leum Engineering and Chemical Engineering. This curriculum includes all of the courses required in the four-year petroleum engineering and the four-year chemical engineering curricula and is intended to provide a background so that the graduate may have the necessary fundamentals to engage in refining, natural gasoline, development, production, or transportation phase of the petroleum industry.

PETROLEUM ENGINEERING—GEOLOGICAL ENGINEERING

The five-year petroleum engineering—geological engineering course includes all of the subjects given in the four-year petroleum engineering course and all of the subjects in the four-year geological engineering course. This course is intended to give a student interested in geology a background in engineering and the application of geology and engineering to the petroleum industry.

PETROLEUM ENGINEERING—MECHANICAL ENGINEERING

The five-year curriculum in petroleum engineering—mechanical engineering leads to Bachelor of Science degrees in both Petroleum Engineering and Mechanical Engineering. The scope of the work in the petroleum industry is so broad and so varied that it is desirable for the man who expects to enter this field to have a very comprehensive training. This course is designed to give such breadth of training by including the essential courses in both the petroleum and mechanical curricula. The production, transportation, and refining of oil involves the generation and utilization of power, the design and operation of mechanical equipment, the principles of heat transfer, and the handling of men and finances. Thus, a five-year curriculum combining the two courses was deemed desirable.

NOTE: In the curricula shown on subsequent pages, figures in parenthesis following the number of the course indicate the clock hours per week devoted to theory practice respectively. Theory includes recitations and lectures; practice includes work done in the laboratory, shop, drawing room, or field. The credit value of the course is indicated in the column headed "Credit." The unit of credit is the semester hour, which involves one hour of theory, or from two to four hours of practice per week for one semester of eighteen weeks.

FRESHMAN YEAR OF CURRICULA

in

SCHOOL OF ENGINEERING

Curriculum in
ARCHITECTURE

First Semester	Credit	Second Semester	Credit
Architecture 101	(1-9) 4	Architecture 102	(1-9) 4
Architecture I		Architecture I	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Mathematics 116	(4-0) 4
Mathematics 102	(3-0) 3	Plane Trigonometry and	
Algebra		Analytics	
Mechanical Engineering 101	(1-2) 2	Mechanical Engineering 102	(1-2) 2
Engineering Problems		Engineering Problems	
Mechanical Engineering 105	(1-6) 3	Mechanical Engineering 106	(1-6) 3
Bench Work in Wood		Cabinet Making	
Military Science	(1-2) 1	Military Science	(1-2) 1
Physical Education 101	(0-3) R	Physical Education 102	(0-3) R
	17		17

Curriculum in
ENGINEERING

(With the exception of agricultural engineering, architecture, and industrial education, the curricula for all engineering programs are identical in the freshman year.)

Chemistry 101	(3-3) 4	Chemistry 102	(3-3) 4
General Chemistry		General Chemistry	
Engineering Drawing 111	(0-6) 2	Engineering Drawing 112	(0-4) 1
Engineering Drawing		Engineering Drawing	
English 103	(3-0) 3	Engineering Drawing 124	(2-2) 3
Composition and Rhetoric		Descriptive Geometry	
Freshman Orientation 101	(1-0) 1	English 104	(3-0) 3
Mathematics 102	(3-0) 3	Composition and Rhetoric	
Algebra		Mathematics 104	(4-0) 4
Mathematics 103	(3-0) 3	Analytics	
Plane Trigonometry		Mechanical Engineering 102	(1-2) 2
Mechanical Engineering 101	(1-2) 2	Engineering Problems	
Engineering Problems		Military Science	(1-2) 1
Military Science	(1-2) 1	Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		18
	19		

**Curriculum in
AGRICULTURAL ENGINEERING**

(See page 42.)

**Curriculum in
INDUSTRIAL EDUCATION**

(Group 1)

For General Industries and
Industrial Arts Teachers

Engineering Drawing 111 .....(0-6) 2 Engineering Drawing Engineering Drawing 127 .....(1-3) 2 Industrial Freehand Sketching English 103 .....(3-0) 3 Composition and Rhetoric Freshman Orientation 101 .....(1-0) 1 Industrial Education 105 .....(1-5) 3 Wood Craft Mathematics 101 .....(3-0) 3 Algebra Mathematics 103 .....(3-0) 3 Plane Trigonometry Mechanical Engineering 201 .....(0-3) 1 Welding and Foundry Military Science .....(1-2) 1 Physical Education 101 .....(0-3) R	Chemistry 106 .....(3-3) 4 General Chemistry Engineering Drawing 112 .....(0-4) 1 Engineering Drawing Engineering Drawing 124 .....(2-2) 3 Descriptive Geometry Engineering Drawing 128 .....(0-2) 1 Methods of Industrial Reproduction English 104 .....(3-0) 3 Composition and Rhetoric Industrial Education 106 .....(1-5) 3 Sheet Metal Mechanical Engineering 202 .....(0-3) 1 Welding and Foundry Military Science .....(1-2) 1 Physical Education 102 .....(0-3) R
19	17

The School of

MILITARY SCIENCE AND TACTICS

The School of Military Science and Tactics was authorized by the Board of Directors on November 29, 1944, to replace the Department of Military Science.

The four-year curriculum leading to the degree of Bachelor of Science in Military Science and Tactics covers those same basic engineering subjects founded on the physical sciences which are included in all engineering curricula.

The Agricultural and Mechanical College of Texas offers a choice of two services, the United States Army and the United States Air Force. The field of military endeavor in each service is unlimited.

THE ARMY COMBAT ARMS

The mission of the entire Army is to support the fighting teams on the battle lines—the men who get there first. These teams are made up of infantrymen, armored cavalrymen, and artillerymen. These are the *raison d'être* of the Army—highly trained in specialities which can be learned nowhere but in the Army and its training units such as the ROTC.

The young officer who aims for a career in one of the combat arms will follow in the footsteps of many illustrious Americans. He will command greatest respect at every Army gathering. His training, more than any other, fits him for high commands and positions of great responsibility. Most of the top men in the Army today of necessity have risen through one of the combat arms.

The Infantry

The infantry officer of today is the key to success in battle. He is the bulwark of Americanism throughout the world. To keep his know-how in tip-top shape, he attends fine schools, travels widely, serves in command and staff jobs with famous infantry divisions, the airborne, the constabulary, and armored divisions. He does technical research, keeps up on communications, languages, physics, personnel management. He is the jack of all missions, and no mission can succeed without him.

The Field Artillery

The field artillery is the branch of the combat arms which supports the actions of the infantry and armored cavalry with artillery fire. Artillerymen man the guns of the 105-mm artillery battalions that form the combat teams with infantry and armored cavalry regiments, and all types of larger artillery weapons to include the giant 240-mm howitzers. Modern artillery sets up heavy concentrations of fire on enemy positions, supply lines, and airfields, ranging from a few yards in front of our fighting infantry to miles ahead of our attacking forces. Their new tools include powerful guns and howitzers, rocket launchers, proximity fuzes, range-finding instruments, and many other marvels of scientific achievement.

No special academic course is necessary for enrollment in field artillery; however, enrollees should acquire a mathematical background to include trigonometry prior to their junior year in college.

The Armored Cavalry

The armored cavalry is the branch of the combat arms which leads and supports the actions of the other ground arms through the use of armored and mechanized equipment. Armored cavalry personnel make up armored units from the infantry regimental tank company to the medium and heavy tank battalions in infantry and armored divisions. Armored cavalry personnel also form the reconnaissance companies of infantry divisions and the reconnaissance battalions of armored regiments and divisions.

No special academic course is necessary for enrollment in armored cavalry.

The Coast Artillery Corps

The Coast Artillery Corps is that part of the United States Army which provides land defenses against the attacks of naval vessels and hostile aircraft.

Seacoast defense guns range from 3-inchers to giant rifles that are the equal of the heaviest battleship guns. Much of the seacoast armor is permanently emplaced around vital seaports, while other seacoast units are mobile and capable of quick movement to any threatened coastal area.

Increasingly important as the air age develops are the Coast Artillery Corps' air defense units—the antiaircraft artillery. The 40-mm automatic weapons and the 90-mm gun form the basis of the present antiaircraft units. With the advent of rockets and

guided missiles an even wider field is being opened for the anti-aircraft artillery.

The weapons of the Coast Artillery Corps and the wide variety of radar and electrical computing devices required to control and direct these weapons offer a wide interest to the individual interested in the fields of science and engineering. However, no special academic course is necessary for admission to this branch.

THE ARMY SERVICES

Behind the man with the gun there has always been and always must be a group of highly specialized administrators, technicians, and scientists. It is their responsibility to see that the cutting edge of the sword is ready, strong, and keen. These are the men of the services.

The Corps of Engineers

The Corps of Engineers has a war time mission "to facilitate the movement of our own troops and to hinder the movement of the enemy." Within this simply stated mission operates one of the most important and complicated branches of the Army. The Engineers also contribute greatly to the combat effectiveness of troops by constructing and maintaining such facilities as hospitals, field shower units, and rest centers.

Officers in the Corps of Engineers have a never-ending parade of projects before them, come war or peace. They help to pick sites for new buildings, prepare plans and estimates, direct construction and repair of fortifications and airfields, install and maintain utilities, make maps and surveys, and lay land mines. These are only a few of the many Engineer projects.

In peacetime, the Corps of Engineers also has many continuing jobs such as maintaining and improving our navigable rivers and harbors, protecting various communities from floods, and increasing the use of water power. These civil responsibilities, added to those which are purely military in nature, make the Corps of Engineers unique among the branches of the Army.

Students pursuing any course in engineering are permitted to enroll in the Engineer branch advanced ROTC at A. and M. College, provided the course is approved by the Engineer Society for Professional Development. Civil engineering or mechanical engineering courses are recommended for students who plan to enter advanced ROTC in the Corps of Engineers.

The Chemical Corps

The Chemical Corps is that branch of the Army concerned with the development and employment of chemical warfare. It

has as its responsibility the research, experimentation, manufacture, or procurement and supply of all smoke and incendiary materials, toxic gases, and all gas defense appliances. It is active in the development of bacteriological warfare and has contributed to commerce many new ideas through its research.

For admission to the advanced course of the Chemical Corps, the student must be enrolled in the academic field of mechanical engineering, chemical engineering, electrical engineering, civil engineering, chemistry, biology, food technology, geology, meteorology, business administration, law, metallurgy, physics, or engineering administration.

The Quartermaster Corps

One of the world's largest business organizations, the Quartermaster Corps supplies over 70,000 items to a million men all over the globe; and in time of war this may be expanded to 85,000 items to ten million men.

Quartermaster officers should be of outstanding executive caliber and should show evidence of potentially sound business sense. They design, produce, test, and supply clothing for every climate, food for every mealtime situation, and petroleum products for all purposes. These officers are at once merchants, importers, exporters, warehouse managers, purchasing agents, and expeditors.

The activities of the Quartermaster are diversified to such an extent that students majoring in any of the courses given at this college can fit well into the regular or reserve establishment upon graduation.

The Ordnance Department

The duties and functions of the Ordnance Department are to design, procure, test, store, transport, supply, and maintain all the materiel of war. Materiel of war includes all arms and ammunition; artillery; tanks; vehicles; fording and landing equipment; fire control instruments such as sights, telescopes, directors and automatic firing devices; antiaircraft weapons; bombs and pyrotechnics; explosives and demolitions; rockets, guided missiles, and the atomic bomb. The ordnance procurement program involves more expenditure than all the other services put together. The storage and supply of materiel of war require the Army's largest depot installations. The maintenance of all materiel of war—to keep the materiel in the hands of the using troops in serviceable condition—is one of the main services performed by Ordnance troops.

The technical nature of the functions of the Ordnance Department call for an engineering or scientific background. Mechanical

engineers particularly will find a large amount of related work in the ordnance course, and all engineers, physicists, and chemists will find a fertile field to utilize their regular college courses while pursuing the course in ordnance military science.

The Transportation Corps

One of the youngest of all services, this corps answers the call for high-speed movement of men and supplies to every corner of the earth. Transportation officers are the Army's steamship, trucking, and railroad executives. Their responsibilities are enormous, their influence far reaching. Many have the opportunity to travel to every foreign country where troops are stationed. Their jobs call for keen minds and a liking for great activity.

The academic courses which more nearly parallel this type of work are management engineering and business administration. However, no special academic course is necessary for admission to this branch.

The Army Security Agency

The Army Security Agency, a field agency of the Intelligence Division, has two broad interlocking functions. These two functions are (1) signal intelligence, which comprises the production of intelligence from enemy communications, and (2) communication security, which comprises the protection of information which might be derived by others from our own communications.

To accomplish the mission of communication security, the Army Security Agency is responsible for the preparation, publication, storage, distribution, and accounting of all cryptosystems employed by the Army; the development and maintenance of cipher machines; the promulgation of communication security doctrine; the monitoring of friendly radio traffic in order to detect and correct violations of communication security; the inspection of cryptocenters; and the surveillance of programs of cryptographic instruction.

Any major academic course is acceptable, subject to the demonstration of necessary aptitudes for Army Security Agency work prior to enrollment as an advanced Army Security Agency ROTC cadet.

The Signal Corps

The mission of the Signal Corps is to operate the Army's communications network; to do photographic work; to develop, procure, and repair communications equipment and weather forecasting equipment; and to furnish trained signal troops to

elements of the Army that require them. Technically, it is that part of the Army that maintains communications, that is, message carrying activities, down to and including division headquarters. In short, signal communications in the Army are like the nerves of the body, nerves that enable the entire Army or any portion of it to act as an integrated unit.

Any student pursuing courses leading to a degree in engineering, electronics, or physics may be admitted to a senior division Signal Corps ROTC unit by selecting and completing one or more courses in electrical engineering as requirements or electives prior to graduation. However, as a second priority, the PMS&T may admit students pursuing courses other than those mentioned above at his discretion.

AIR SCIENCE AND TACTICS

The USAF desires college-trained men in the fields of research and development of aircraft, guided missiles, aircraft and guided missile propulsion, electronics, meteorology, aviation medicine, armament, winterization, atomic energy, and biology. These fields assume a high degree of importance because of their common indispensability to air power as it obviously would have to be employed in the future. However, the requirements of the USAF are not limited to the above scientific fields of research and development. Equally important and desirable are college-trained men in the fields of management, administration, accounting and budgeting, logistics, procurement, airdrome and building construction, sanitation, sod sanitation, sod specialists, public relations, economics, photography, law and justice, education, physical development, journalism, languages, sociology, or any field of study related to those above.

Completion of a specialized course will not limit or restrict the young officer to that field of duty, as it is the policy of the USAF to progressively vary the duties of its officers. Future assignments in the USAF will, of course, take ROTC training into consideration. However, equally or more important consideration for future assignments are college training, civilian experience, and previous military training.

Air Administration and Supply

After an introductory orientation, beginning with a survey of air force publications, consideration is given to military correspondence, pay and allowances, and organizational records. A detailed examination of individual records, air base administration, and non-appropriated funds, and a series of special administrative responsibilities is made early in the course. After a brief

consideration of transportation, the work lays emphasis on a study of the supply function, dealing with the forms, procedures, processing, regulations, distribution, accountability, expendability, and methods of disposal of government property. The senior year is concerned exclusively with administration and supply in reference to air force staff work. It studies at length the nature of the staff organization and expands with a thorough investigation of each of the administrative staff functions.

Aircraft Maintenance Engineering

This course introduces the study of aircraft maintenance engineering, covering the maintenance mission and the maintenance principles and procedures for reciprocating, jet, and compound engines. After an initial study of technical publications and maintenance and inspection procedures, attention is given to various component systems: fuel, oil, electrical, hydraulic, propeller, and instrument. Organizational phases of maintenance, equipment, organizational maintenance, field maintenance, and the work of the air inspector are studied in the senior year. Special maintenance procedures of engine operation and conditioning, cruise control, and test flying are also examined.

Air Installations

The course begins with the functions of the air installations officer and the organization of the installation directorate. It pursues the study of cost accounting, encompassing its definition, scope and purpose; material and equipment contracts, depreciation cost recording forms, procedures and reports. Further study opens to the student's view budgetary requirements, property accounting, real estate, its prerequisites and acquirement, and custodial services. The course broadens to take in all forms of care of buildings and facilities. Grounds maintenance, runways, roads and paved areas, fire prevention, aircraft crash control techniques, and systems of insect and rodent control are all studied. The student further learns the methods of refuse collection and disposal, the handling of solid and liquid fuels, and the principles and operation of ventilating and heating systems. A consideration of refrigeration and air-conditioning is also included. The final year of this course concerns itself with the large elements of the air installation. Water supply and treatment, operation of water systems and the treatment of sewage and its disposal are studied on a basis of applied scientific principles. A description of electrical facilities and their operation and a general study of preventive maintenance of all kinds follows. The preparation and processing of new construction projects and the purpose and functions of master planning complete the course.



Cadet Corps

The School of

VETERINARY MEDICINE

The School of Veterinary Medicine is organized into seven departments: Veterinary Anatomy, Veterinary Bacteriology and Hygiene, Veterinary Medicine and Surgery (includes Veterinary Clinics), Veterinary Parasitology, Veterinary Pathology, Veterinary Physiology and Pharmacology, and Veterinary Research. In addition to the 60 semester hours required in preliminary training, the course of study involves credits on 148 credit hours with suitable grades obtained in standard colleges. All credit for veterinary subjects must be obtained in a veterinary school, college, or university accredited and recognized by the American Veterinary Medical Association and the Bureau of Animal Industry, United States Department of Agriculture. It is understood that in registration for subjects they be sequential and meet with the approval of the Faculty of the School of Veterinary Medicine.

The objective of the School of Veterinary Medicine is that training in all departments will be adequate in every phase and will meet with the approval of the Committee on Education of the American Veterinary Medical Association. The basic, business, and professional training is of such a nature that graduates from the School of Veterinary Medicine are qualified to administer and advise in matters of diseases of farm and ranch animals, including poultry, pet animals, zoo animals, wild life fur-bearing animals, and public health, particularly the inter-transmission of diseases of animals and people. Authoritative training is given in milk hygiene (inspection) and meat hygiene (inspection).

Veterinarians find many opportunities for private practice of their profession in Texas. Texas has 500,000 farms with livestock, hundreds of ranches for livestock production including poultry, and millions of owners of pet animals. All of these activities require veterinary service, and they have certain public health aspects that require correlation with the health of the people.

The Bureau of Animal Industry, United States Department of Agriculture, employs many veterinarians in its divisions of Administration, Animal Diseases, Animal Husbandry, Animal Nutrition, Bio-Chemistry, Tick Eradication, Virus Serum Control, Field Inspection, Meat Inspection, Packers and Stock Yards, Pathological, Tuberculosis, and Zoology.

Federal, state, county, and municipal boards and commissions employ veterinarians in public health work and for meat

and milk inspection. State livestock commissions employ veterinarians for administrative, technical, and field work.

Veterinarians are commissioned in the Veterinary Corps, United States Army.

Veterinarians find opportunities for employment in agricultural experiment stations, research institutions, the United States Public Health Service, medical foundations, with producers of biologics and pharmaceutical preparations, and with manufacturers of feed stuffs. Finally opportunities for veterinarians with investment and/or insurance companies and trusts are many, and teaching and research positions in veterinary and agricultural colleges are found.

Enrollment in the freshman year in the School of Veterinary Medicine is limited by the facilities of the College to a definite number of Texas residents each year. Selection within the quota is based on scholastic record, professional aptitude, and such tests and examinations as it may seem necessary to require. Admission to the preliminary training course does not carry any assurance that a student will be admitted to the freshman year in Veterinary Medicine unless his qualifications place him within the quota to be admitted. Full completion of the preliminary training requirements with satisfactory grades is a prerequisite for admission to the freshman year of the School of Veterinary Medicine or to the veterinary courses of that year.

PRE-VETERINARY MEDICINE

This is a two-year curriculum designed as preparation for admission to the School of Veterinary Medicine. Students who fail to gain admission to the School of Veterinary Medicine at the end of four semesters will be dropped from this curriculum. They may transfer to one of the other established degree programs providing that their scholastic record warrants their continuance in the College.

Curriculum in PRE-VETERINARY MEDICINE

First Semester	Credit	Second Semester	Credit
Animal Husbandry 107	(2-2) 3	Biology 101	(3-4) 4
General Animal Husbandry		General Botany of Seed Plants	
Biology 105	(2-4) 3	Biology 106	(2-4) 3
General Zoology		General Zoology	
Chemistry 101	(3-3) 4	Chemistry 102	(3-3) 4
General Chemistry		General Chemistry	
English 103	(3-0) 3	English 104	(3-0) 3
Composition and Rhetoric		Composition and Rhetoric	
Freshman Orientation 101	(1-0) 1	Mathematics 103	(3-0) 3
Mathematics 101	(3-0) 3	Plane Trigonometry	
Algebra		Military Science	(1-2) 1
Military Science	(1-2) 1	Physical Education 102	(0-3) R
Physical Education 101	(0-3) R		
	18		18

SOPHOMORE YEAR

First Semester	Credit	Second Semester	Credit
Chemistry 301	(3-4) 4	Chemistry 302	(3-4) 4
Organic Chemistry		Organic Chemistry	
Dairy Husbandry 202	(2-2) 3	History 306	(3-0) 3
Dairying		American National	
English 207	(2-0) 2	Government	
Report Writing and		Military Science	(1-2) 1
Correspondence		Physics 202	(3-3) 4
Entomology 201	(2-2) 3	College Physics	
General Entomology		Poultry Husbandry 201	(2-2) 3
Military Science	(1-2) 1	Poultry Production	
Physics 201	(3-3) 4	Elective	3
College Physics		Physical Education 202	(0-3) R
Elective	1		
Physical Education 201	(0-3) R		
	18		18

NOTE: Students should choose their sophomore electives from the following fields: economics, foreign language, and psychology.



Animal Industries

D I R E C T O R Y

Individual	Position	Office
*F. C. Bolton	President of the College	204 Academic Building
**M. T. Harrington	Dean of the College	204 Academic Building
C. N. Shepardson	Dean of the School of Agriculture	200 Agricultural Building
J. P. Abbott	Dean of the School of Arts and Sciences	107 Academic Building
H. W. Barlow	Dean of the School of Engineering	210 Petroleum Engineering Building
I. B. Boughton	Dean of the School of Veterinary Medicine	100 Veterinary Hospital
I. P. Trotter	Dean of the Graduate School	126 Administration Building
W. L. Penberthy	Dean of Students	102 Goodwin Hall
Col. H. L. Boatner	Commandant	1 Ross Hall
C. A. Roeber	Auditor	101 Administration Building
H. L. Hecton	Registrar	115 Administration Building
Harry Boyer	Chief of Housing	100 Goodwin Hall
Taylor Wilkins	Veterans Advisor	104 Goodwin Hall
J. E. Marsh	College Physician	College Hospital
M. L. Cashion	Secretary of Young Men's Christian Association	Y.M.C.A. Building
George Long	Director of Student Labor	106 Goodwin Hall
R. G. Perryman	Secretary to Scholarships Committee	Registrar's Office Administration Bldg.
E. V. Adams	Band Director	Dormitory 11
W. M. Turner	Director of Singing Cadets and Aggieband Orchestra	Music Hall
R. H. Stiteler	Football Coach	West Side of Stadium

*President emeritus effective June 5, 1950

**President of the College effective June 5, 1950

DIRECTORY — (Continued)

Individual	Position	Office
Marty Karow	Basketball Coach; Baseball Coach	West Side of Stadium
F. G. Anderson	Track Coach	West Side of Stadium
E. E. Brush	Aeronautical Engineering Department	Aeronautical Engineering Building
L. P. Gabbard	Agricultural Economics and Sociology Department	401 Agricultural Building
E. R. Alexander	Agricultural Education Department	106 Agricultural Engineering Building
F. R. Jones	Agricultural Engineering Department	215 Agricultural Engineering Building
J. E. Adams	Agronomy Department	310 New Agricultural Experiment Station Building
J. C. Miller	Animal Husbandry Department	225 Animal Industries Building
Ernest Langford	Architecture Department	401 Academic Building
C. M. Lyman	Biochemistry and Nutrition Department	213 Animal Industries Building
C. C. Doak	Biology Department	25 Science Hall
T. W. Leland	Business Administration Department	22 Building A
J. D. Lindsay	Chemical Engineering Department	307 Petroleum Engineering Building
F. W. Jensen	Chemistry Department	116 Chemistry Building
S. R. Wright	Civil Engineering Department	14 Nagle Hall
I. W. Rupel	Dairy Husbandry Department	213 Agricultural Building
W. H. Delaplane	Economics Department	309 Academic Building
G. B. Wilcox	Education and Psychology Department	102 Academic Building
M. C. Hughes	Electrical Engineering Department	114 Bolton Hall
W. E. Street	Engineering Drawing Department	E Anchor Hall
T. F. Mayo	English Department	317 Academic Building
H. G. Johnston	Entomology Department	111 Old Agricultural Experiment Station Building

D I R E C T O R Y — (C o n t i n u e d)

Individual	Position	Office
A. F. DeWerth	Floriculture and Landscape Architecture Department	201 Agricultural Engineering Building
C. B. Godbey	Genetics Department	304 Animal Industries Building
G. W. Schlesselman	Geography Department	112 Chemistry Building
S. A. Lynch	Geology Department	121 Geology Building
S. R. Gammon	History Department	211 Academic Building
G. W. Adriance	Horticulture Department	307 Agricultural Building
C. H. Groneman	Industrial Education Department	105 M. E. Shops Building
D. D. Burchard	Journalism Department	105 Bizzell Hall
V. M. Faires	Management Engineering Department	3 Austin Hall
W. L. Porter	Mathematics Department	221 Academic Building
C. W. Crawford	Mechanical Engineering Department	101 Fermier Hall
H. L. Boatner	Military Science and Tactics Department	1 Ross Hall
J. J. Woolket	Modern Languages Department	119 Academic Building
D. F. Leipper	Oceanography Department	357 Bizzell Hall
Harold Vance	Petroleum Engineering Department	105 Petroleum Engineering Building
C. E. Tishler	Physical Education Department	Gymnasium
J. G. Potter	Physics Department	22 Physics Building
A. A. Dunlap	Plant Physiology and Pathology Department	105 Old Agricultural Experiment Station Building
J. H. Quisenberry	Poultry Husbandry Department	301 Agricultural Building
V. A. Young	Range and Forestry Department	2nd Floor Agricultural Engineering Building
J. H. Milliff	Veterinary Anatomy Department	103 Veterinary Anatomy Building

D I R E C T O R Y — (C o n t i n u e d)

Individual	Position	Office
R. C. Dunn	Veterinary Bacteriology and Hygiene Department	226 Veterinary Hospital
A. A. Lenert	Veterinary Medicine and Surgery Department	102 Veterinary Hospital
R. D. Turk	Veterinary Parasitology Department	102 Francis Hall
H. A. Smith	Veterinary Pathology Department	234 Veterinary Hospital
P. W. Burns	Veterinary Physiology and Pharmacology Department	203 Francis Hall
W. B. Davis	Wildlife Management Department	3rd Floor Agricultural Engineering Building

