General Information

The Agricultural and Mechanical College of Texas

BULLETIN

OF THE

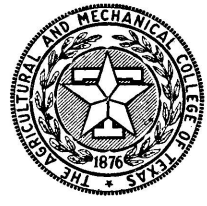
AGRICULTURAL AND MECHANICAL

COLLEGE OF TEXAS

Fifth Series, Vol. 7 May 1, 1951 No. 5

GENERAL INFORMATION

1951-52



COLLEGE STATION, TEXAS

Published monthly by the Agricultural and Mechanical College of Texas.

Entered as second class matter August 7, 1913, at the Post Office at College Station, Texas, under the Act of August 24, 1912.

COLLEGE CALENDAR

SUMMER SESSION OF 1951

June 4	Monday, 8 a.m. to 12 noon, registration for the first term.
June 5	Tuesday, 7 a.m., beginning of classes.
June 8	Friday, last day for enrolling in the College for the first term.
July 4	Wednesday, a holiday.
July 13-14	Friday, Saturday, first term final examinations.
July 16	Monday, 8 a.m. to 12 noon, registration for the second term.
July 17	Tuesday, 7 a.m., beginning of classes.
July 20	Friday, last day for enrolling in the College for the second term.
August 23-24	Thursday, Friday, second term final examinations.
August 25	Saturday, pre-registration for fall semester.

REGULAR SESSION OF 1951-52

First Semester 1951

September 7	Friday, opening day of New Student Week.
September 14	Friday, 8 a.m. to 5 p.m., registration for new students.
September 15	Saturday, 8 a.m. to 5 p.m., registration for old returning students.
September 17	Monday, 8 a.m., beginning of classes.
September 22	Saturday, last day for making changes in registration.
September 29	Saturday, last day for enrolling in the College for the fall semester.
November 12	Monday, mid-semester grade reports.
November 29-December 2	Inclusive, Thanksgiving recess.
December 19	Wednesday, 5 p.m., beginning of Christmas recess.
January 3, 1952	Thursday, 8 a.m., end of Christmas recess.
January 21-26	Inclusive, semester examinations.

Second Semester 1952

February 2	Saturday, registration for spring semester.
February 4	Monday, 8 a.m., beginning of classes.
February 9	Saturday, last day for making changes in registration.
February 16	Saturday, last day for enrolling in the College for the spring semester.
February 18-22	Religious Emphasis Week.
March 31	Monday, mid-semester grade reports.
April 10-14	Inclusive, spring recess.
May 22	Thursday, 5 p.m., end of classes for spring semester.
May 24-30	Inclusive, semester examinations.
May 30	Friday, Commencement.
May 31	Saturday, Final Review.

The Agricultural and Mechanical College of Texas

Administrative Officers

M. T. HARRINGTON, PH.D. ---------- *President*

C. CLEMENT FRENCH, 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 PAUL ABBOTT, PH.D. -- *Dean, School of Arts and Sciences*

JOHN R. BERTRAND, PH.D. ---------- *Dean, Basic Division*

WALTER L. PENBERTHY, B.S. ---------- *Dean of Men*

HAYDON L. BOATNER, M.S., Colonel, Inf., U.S.A. ---------- *Commandant of Cadets*

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*

THE COLLEGE

LOCATION

The Agricultural and Mechanical College of Texas 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.

HISTORICAL SKETCH

The Agricultural and Mechanical College of Texas, like the land grant institutions in other states of the Union, owes its origin to the Morrill Act, which was approved by Congress July 2, 1862. This act provided for the donation of a specified amount of public lands to the several states and territories. Proceeds from the sale of these lands were to constitute a perpetual fund, the principal of which should remain forever undiminished. The interest from this fund was to be used for the support of at least one technological college whose objective must be, without excluding other scientific and classical studies and including military tactics, to teach branches of learning pertaining to agriculture and mechanic arts in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life. The Legislature of Texas accepted the provisions of the congressional legislation in 1866, and $174,000 was realized from the sale of lands set aside under the Act. Before the College opened, this fund had grown to $209,000 through the addition of accrued interest.

In April, 1871, the Legislature provided for the establishment of the Agricultural and Mechanical College. A commission created for the purpose of locating the College accepted the offer made by the citizens of Brazos County and located the institution on a tract of 2,416 acres of land in that county. The purchase from time to time of additional land adjacent to the original tract has increased the land owned by the College in Brazos County to approximately 5,500 acres, and in 1944 the College acquired a plantation of 3,192 acres in Burleson County for experimental purposes. In 1950, 411 acres were acquired in Kimble County for the Junction Adjunct of the Agricultural and Mechanical College of Texas.

The College was formally opened, and instruction began on October 4, 1876. Its educational activities have been enlarged through the last half century when the need for such expansion became evident. At the present time both undergraduate and graduate instruction are offered not only in the fields of agriculture and engineering but also in liberal arts, science, education, business administration, and veterinary medicine.

The value of the physical plant has grown to approximately $23,200,000, and a good foundation has been laid at the College for instruction, for investigation, and for extension by means of financial aid secured from both the Congress and the State Legislature.

Extensive programs of expansion through the years have resulted in the erection of many new buildings and the improvement of existing structures on the campus. In 1942 four new dormitories were completed at a total estimated cost of $765,000. As a part of the new $6,000,000 building program, the Memorial Student Center and the Biological Sciences Building were completed in 1950 at a cost of $1,635,000 and $600,000 respectively. A new College-owned water supply system is expected to be in operation by May, 1951. An addition to Francis Hall has been constructed at a cost of $132,000, while the Beef Cattle Center was completed at a cost of $89,000. Under construction at present are the College Administration Building, the Poultry Center, the Dairy Cattle Center, the Horse Center, the Swine Center, the Horticulture Greenhouse, and an addition to the Physics Building. Besides this construction on the main campus, the Junction Adjunct to the Agricultural and Mechanical College of Texas has been constructed at a cost of $200,000 and will be ready for operation by the summer of 1951. It consists of an administration and classroom building; a mess hall; a bath house; 20 floored, walled, and screened tents to accomodate 240 students; and its own water supply.

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 Agriculture (M.Agr.)
9. Master of Architecture (M.Arch.)
10. Master of Business Administration (M.B.A.)
11. Master of Education (M.Ed.)
12. Master of Engineering (M.Eng.)
13. Master of Science (M.S.)
14. 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. Industrial Engineer (Ind.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, a student must have credit for History 306 or its equivalent and at least three semester hours of credit in military training. For a student who does not take military training, six hours in government must be completed. Such a student must complete History 306 and History 307 or their equivalents in meeting the legal requirement for a degree.

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

REQUIREMENT IN MILITARY TRAINING AND PHYSICAL EDUCATION

All first and second year students under the age of 21 are required to take the basic course of military training and Physical Education 101, 102, 201, 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 training 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 training 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 before that date are exempt from basic military training and physical education and may be given academic credit for both.

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

(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 training and required physical education, and may be given academic credit for basic military training.

(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 training 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 training 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 training 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 tthe 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 thte 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 a formal application blank. The applicant should complete the form according to the directions printed thereon and return it to the Registrar's Office. If the applicant has attended any other institution, he must submit with his application a complete and official transcript from each institution previously attended in lieu of the high school transcript required of those with only high school attendance.

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 of registration. If this cannot be done, the applicant 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.

A high school student who is eligible for admission to college and who wishes to enter during the summer may well consider the opportunities of combining study and recreation at the Junction Adjunct of the Agricultural and Mechanical College of Texas. Excellent studying, living, and recreational facilities are available at this beautiful Kimble County campsite in the heart of the Texas hill country. Application blanks for admission to the Adjunct may be obtained from the Registrar, Agricultural and Mechanical College of Texas, College Station, Texas.

BASIC DIVISION

The Basic Division was established September 1, 1950, 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 are 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 trans-

ferring from other colleges and universities who are not admitted directly to one of the schools of the College; (3) All other students who do not meet the requirements for admission to the degree granting school of their choice. These requirements are stated on page 16 of this catalogue.

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. A maximum of four units in vocational subjects may be used in satisfying admission requirements. No credit is granted for work done in an accredited high school unless the applicant is a graduate of the school. The units of social science, natural science, and elective subjects are to be chosen from the following list:

Elective Units

English (4th unit) 1
Mathematics:
- Advanced Algebra ... ½ or 1
- Advanced Arithmetic ..... ½
- Solid Geometry ..... ½
- Trigonometry ..... ½

Social Sciences:
- American History .... ½ or 1
- Ancient History 1
- Civics ..... ½ or 1
- Economics ..... ½
- English History ..... ½ or 1
- Modern History 1
- Texas History ..... ½
- World History 1

Foreign Languages:
- French ..... 2 to 4
- German ..... 2 to 4
- Latin ..... 2 to 4
- Spanish ..... 2 to 4

Natural Sciences:
- Biology 1
- Botany 1
- Chemistry 1
- General Science 1
- Physics 1
- Physiography ..... ½
- Physiology ..... ½ or 1
- Vocational Agriculture ... 1½
- Zoology 1

Vocational Subjects:
(See Note 2)
- Agriculture ..... 1 to 4
- Bookkeeping 1
- Com. Arithmetic ..... ½
- Com. Geography ..... ½
- Commercial Law ..... ½
- Drawing ..... 1 to 4
- Journalism 1
- Public Speaking ..... ½ or 1
- Shop Work ..... 1 to 4
- Stenography and Typing 1

A student whose ultimate objective is pursuance of a course of study in one of the fields of engineering, including agricultural engineering, is strongly advised to present two units of algebra and one-half unit of solid geometry. If such a student does not

present two units of algebra, he will be required to complete Mathematics 101, Algebra, and, if he does not present one-half unit of solid geometry, he will be required to complete Mathematics 118, Solid Geometry, before being admitted to the School of Engineering or the agricultural engineering curriculum. These courses will be added to the graduation requirements of this student. In addition, a student whose ultimate objective is pursuance of a course of study in one of the fields of engineering is advised to present for admission one unit of credit in physics.

An applicant for admission who is able to present a certificate of high school graduation with 15 units which do not fit the pattern as outlined above will be considered and may be admitted with conditions. Such a student may be required to do additional work in college for the subject matter shortage.

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.

4. An applicant for admission who is not a resident of Texas and 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 (C-average) or better on all courses undertaken whether passed or failed.

5. A Texas resident who has attended another college or university must be eligible to return to that institution. In addition, a student who has attended a previous institution for:

(a) one semester must have passed at least nine hours and made at least nine grade points.

(b) two semesters must have passed a total of at least 18 hours and made at least 18 grade points, of which at least 12 hours and 12 grade points must have been earned in the last semester.

(c) three semesters must have passed a total of at least 33 hours and made at least 33 grade points, of which at least 12 hours and 12 grade points must have been earned in the last semester.

(d) four or more semesters must have for the last two semesters of attendance a grade point ratio of 1.00 (C-average) or better in all courses undertaken whether passed or failed, of which 15 hours and 15 grade points must have been completed in his last semester.

6. Those students who transfer from another institution will be enrolled in the Basic Division unless they meet the require-

ments for admission to one of the degree granting schools. These requirements are stated on page 16 of this bulletin.

7. 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.

8. 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 transfer from the Basic Division or from another college or university to one of the degree granting schools of the College, or into the pre-veterinary medicine curriculum, when before the beginning of his third semester he has completed 30 semester hours and earned 36 grade points, or when before the beginning of his fourth semester he has completed a minimum of 42 semester hours and earned 51 grade points, or when before the beginning of his fifth semester he has completed 54 semester hours and earned 66 grade points. Work completed in residence in a summer session may apply toward satisfying these requirements. However, in any case a student with more than two semesters of college work will be eligible to transfer to one of the degree granting schools of the College if he makes an average grade point ratio of 1.25 for the total hours scheduled during two consecutive semesters in the Basic Division, provided a total of at least 30 semester hours was taken during these two semesters.

Of Nonresident Students: 1. An applicant for admission who is not a resident of Texas and 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 (C-average) or better on all courses undertaken whether passed or failed.

2. A limited number of high school graduates with satisfactory records will be accepted from nearby states so long as facilities may be available.

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. & 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 the total cost should range between $700.00 and $900.00. In general these amounts include

four types of expenses as follows: fees payable to the College Fiscal Department (matriculation fee, medical fee, student activities fee, board, room rent, laundry, and room key deposit); textbooks and supplies; clothing, including a two-year supply of physical education uniform, and military uniform to supplement that furnished by the government; and personal incidental expenses, estimated to range between $100.00 and $200.00 depending upon the individual concerned.

The fees for board, room, and laundry listed herein may be changed during the year if economic conditions make it absolutely necessary.

Fees payable to the Fiscal Department:

	First Semester to Begin Sept. 14, 1951	Second Semester to Begin Feb. 2, 1951
Matriculation Fee (See Note 4.) (required)	$ 25.00	$ 25.00
Medical Service Fee (required)	5.50	5.00
Student Activities Fee (required)	9.20	10.00
Board	155.80	151.75
Room Rent	45.00	40.00
Laundry	12.95	12.85
Room Key Deposit, returnable	1.00	
Total payable to Fiscal Dept.	$254.45	$244.60
Textbooks and supplies are variable with classes and courses—about	30.00	20.00
Total general expenses—about	$284.45	$264.60

All fees except room rent, board, and laundry are payable in full at the beginning of the semester; these fees may be paid in installments as indicated. 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.

All members of the cadet corps living in the dormitories are required to pay the fees for board and laundry in addition to the fees for room rent. Students living in the dormitories who are not members of the cadet corps are required to pay the fees for room rent and laundry in addition to the other required fees. Changes from dormitory student to day student will be made only on the last day of installment payments for room, board, and laundry.

Meals for other than members of the cadet corps will be served only at the cafeteria in Sbisa Hall.

INSTALLMENT PAYING: The general expenses listed above may be paid in installments as follows:

First Semester

1. First installment, payable on entrance, September 14-15

To Fiscal Department:

Matriculation Fee (See Note 4.) (required)	$ 25.00
Medical Service Fee (required)	5.50
Student Activities Fee (required)	9.20
Board to October 18	46.20
Room Rent to October 18	11.65
Laundry to October 18	3.75
Room Key Deposit, returnable	1.00
Total payable to Fiscal Department	$102.30
Textbooks and supplies, variable with classes and courses—about	30.00
General expenses, first installment—about	$132.30

2. Second installment, payable October 1-18

To Fiscal Department:

Board to November 21	$ 44.90
Room Rent to November 21	11.35
Laundry to November 21	3.65
Total payable to Fiscal Department	$ 59.90

3. Third installment, payable November 1-21

To Fiscal Department:

Board to December 18 (Thinksgiving recess excluded)	$ 31.70
Room Rent to December 18	9.00
Laundry to December 18	2.90
Total payable to Fiscal Department	$ 43.60

4. Fourth installment, payable December 1-18

To Fiscal Department:

Board to January 26 (Christmas recess excluded)	$ 33.00
Room Rent to January 26	13.00
Laundry to January 26 (Christmas recess excluded)	2.65
Total payable to Fiscal Department	$ 48.65
Total general expenses, first semester	$284.45

Second Semester

1. First installment, payable on entrance, February 2, 1952
   To Fiscal Department:

Matriculation Fee (See Note 4.) (required)	$ 25.00
Medical Service Fee (required)	5.00
Student Activities Fee (required)	10.00
Board to February 20	26.40
Room Rent to February 20	6.65
Laundry to February 20	2.15
Total payable to Fiscal Department	$ 75.20
Textbooks and supplies, variable with classes and courses — about	20.00
General expenses, first installment—about	$ 95.20

2. Second installment, payable February 1-20
   To Fiscal Department:

Board to March 20	$ 36.95
Room Rent to March 20	9.35
Laundry to March 20	3.00
Total payable to Fiscal Department	$ 49.30

3. Third installment, payable March 1-20
   To Fiscal Department:

Board to April 20 (Spring recess excluded)	$ 34.30
Room Rent to April 20	10.35
Laundry to April 20	3.30
Total payable to Fiscal Department	$ 47.95

4. Fourth installment, payable April 1-20
   To Fiscal Department:

Board to May 31	$ 54.10
Room Rent to May 31	13.65
Laundry to May 31	4.40
Total payable to Fiscal Department	$ 72.15
Total general expenses, second semester	$264.60

Additional Expenses for New Students

In addition to the general expenses shown above, new students will have the following expenses when registering for the first time:

Uniform (See Note 1.)—about	$ 50.00
Physical education uniform (See Note 2.)—about	18.00
Slide rule and drawing instruments for engineering students (See Note 3.)	$38.00 to 53.00
Room key deposit, returnable	1.00
For new students registering the second semester, February 2, 1952, extra for books and supplies—about	10.00
For new students who report for the first semester on September 7 for New Student Week, add:	
Board	9.25
Room Rent	2.35
Laundry	.75

NOTES: 1. Members of the ROTC will be furnished complete uniform equipment. However, new students may find it desirable to supplement the uniform issued by purchasing the following articles, the approximate cost of which at the College Exchange Store is as follows: one extra pair of uniform trousers, $21.50; one pair of khaki slacks, $6.50; collar ornaments, $2.00; two cotton O. D. shirts, $8.50. The student is required to pay a handling charge of $5.00 to cover the cost of issuing, receiving, and record keeping of the government uniforms issued. Since only approved articles of uniform may be worn, new students should purchase uniforms after arrival at the College.

The College operates a store for the purpose of supplying necessary articles to students. The store carries in stock textbooks, stationery, drawing instruments, toilet articles, and other supplies. All merchandise is sold at the usual retail prices prevailing in the area. Upon recommendation of the Exchange Store Advisory Board, any profit created from the operation of the Exchange Store may be used for student welfare and other purposes of benefit to the entire student body. The Exchange Store supplies all books and supplies to veteran students under the terms of the contract between the College and the Veterans Administration.

2. All students taking required physical education will be required to have the following items: 2 pairs boxer type gym trunks with Aggie emblem, 2 T shirts with flocked emblem, 3 pairs gym socks, 1 pair canvas shoes—rubber sole, 1 sweat shirt with flocked emblem, 1 pair sweat pants, and 1 athletic supporter. These items may be secured at the College Exchange Store for an approximate cost of $18.00.

3. The slide rule is one of the most important time saving instruments of engineers. For use throughout the college course the LL Decitrig Duplex is suggested. Such a rule costs about $22.50. The cost of the drawing instruments needed by engineering students will range from $15.00 to $30.00 depending on quality.

4. For matriculation fee of nonresident students, see paragraph below. Old students who in either semester do not register on the days set apart for that purpose pay an additional matriculation fee of $2.00.

5. New students, or old students not in school during the preceding semester, may file room reservation applications beginning June 16, 1951, for the first semester; October 16, 1951, for the second semester. A deposit of $6.00 must accompany all dormitory reservations, which will apply on the room rent payable on entrance and for the key deposit. Deposits on room rent for the first semester are not refundable after August 15, 1951; for the second semester, after January 15, 1951. Application blanks for room reservations will be furnished by the Registrar.

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 parents 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 open-

ing 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 Texas Education Agency, through the Division of Vocational Rehabilitation, 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 Division of Vocational Rehabilitation, Room 412, Varisco Building, Bryan, Texas, or to Mr. J. J. Brown, Director, Division 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 resonsibility 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.

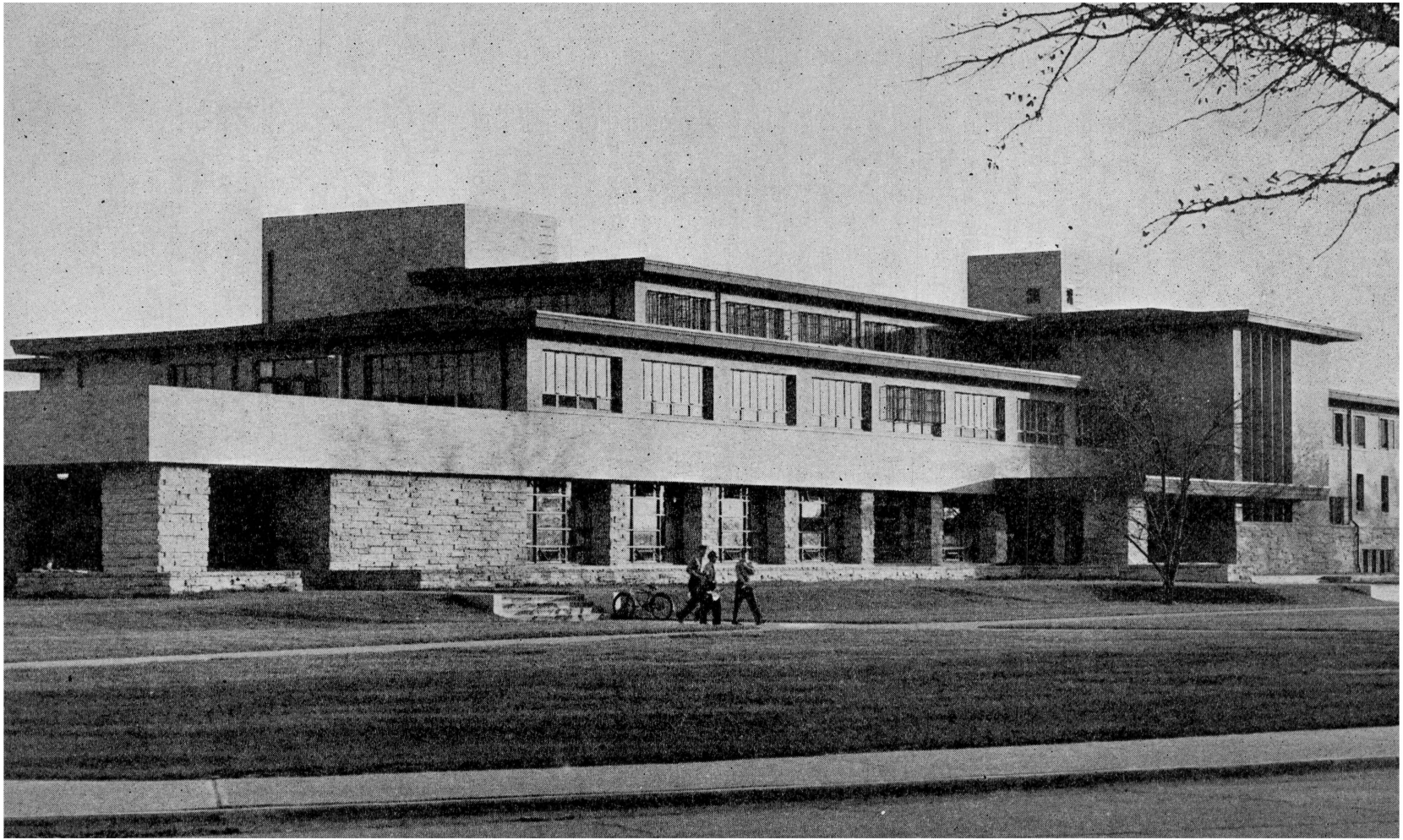
The Memorial Student Center Council is charged with the organization and operation of the activities and events within the Center.

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.



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 Rooms 103-104 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 Housing Office, 100 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 non-military 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 appear 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 ultraviolet, diathermy, and infra-red lamps. One doctor, ten nurses, two technicians, one bookkeeper, two 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, a golf course, 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 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 recognized groups and organizations for approved projects, such as judging teams, conventions, speakers, and others considered to be in the interest of the student body. 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 209, 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. The editor is elected by the Senior Class. Many opportunities for participation are available because of the amount of work necessary to produce a complete record of the school year. The annual is produced under supervision of the Manager of Student Publications.

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.

The Memorial Student Center: The Memorial Student Center, completed in 1950, has been designed to serve the College community, i.e., students, faculty and staff, former students, and friends of the College. It is A. and M.'s "living room." It has a browsing library, a record playing room, a crafts shop, dark rooms for photography, a piano room, game room, art gallery room, table tennis area and eight bowling alleys, senate chamber, planning room, offices for the Former Students' Association, offices for the student government of the Memorial Student Center, dance facilities, lounges and terraces, general information desk, a lost and found department, approximately fifteen meeting rooms, the Carl Metzger Gun Room, and other similar facilities. Among its services for the students are guest rooms for visitors, a dining room, coffee shop, fountain room, gift shop, barber shop, banquet rooms, telephone room, and United States Post Office.

The governing body of the Memorial Student Center, the Memorial Student Center Council, is composed of eight students, five staff and faculty members, and two former student members. This council has a student as its president.

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 on the campus was completed during the summer of 1950.

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 prac-

tice 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. 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.

Memorial Student Center Music Committee: This committee consists of students interested in working with the music program for the Memorial Student Center. This recommends the policies for the use of the record playing room, selects the music for the music library, the nickelodeons, and the public address system. Special musical events and programs within the Center are handled by this committee.

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.

Memorial Student Center: The activities program of the Center includes dances, banquets, recreational facilities, and several types of special events. These activities are facilitated by staff members of the Social and Educational Department of the Memorial Student Center.

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 seven leading major colleges and universities—the University of Texas, the Agricultural and Mechanical College of Texas, Baylor University, the Rice Institute, Texas Christian University, Southern Methodist University, and the University of Arkansas. 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 the 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 held the Southwest Conference championship for three consecutive 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.

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. An 18-hole golf course has just been completed on the campus, and the 6,800-yard course is the third longest in the South.

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 scholarship program is administered by a permanent committee known as the Faculty Committee on Scholarships. As authorized by the Board of Directors, 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, appointed by the President, from each school of the College.

In general there are three types of scholarships available: (1) the Opportunity Awards, representing those limited to entering freshmen; (2) scholarships designed for the more advanced undergraduate students, and (3) fellowships and grants-in-aid for graduate students.

The over-all program is designed to encourage and reward scholastic effort on the part of all students; to enable outstanding students to do the best work of which they are capable by removing financial handicaps; and to enable capable and ambitious young men who might be denied a college education for financial reasons only to secure that education at the Agricultural and Mechanical College of Texas.

The Opportunity Award Program

This program annually provides fifty or more four-year scholarships to high school graduates of Texas who are capable of outstanding scholastic achievement and who need finincial as-

sistance to attend college. The awards are made possible through the A. and M. College Development Fund, a joint enterprise of the College and its Association of Former Students. Financial benefits range in value from $800 to $1600 with recipients receiving from $200 to $400 each year for four years, plus an opportunity for additional earnings from student employment if necessary.

Graduates of accredited high schools of Texas who have not attended another college or university, who are legal residents of this state, and who need financial assistance to attend college are eligible to make application for an Opportunity Award Scholarship. To be considered for such a scholarship, an applicant must satisfy the admission requirements of the College; must make formal application for an award on forms provided by the College; and must enter the State-wide competition which is held each spring. Selections are made by the Faculty Committee on Scholarships on the basis of the applicant's academic record in high school; his scores on competitive examinations; evidence of initiative, leadership, and other traits of good character; and his need for financial assistance. In order for the award to be continued from semester to semester, the recipient must maintain a standard of scholastic achievement and personal conduct satisfactory to the scholarships committee.

This program is usually announced officially between February 20 and March 10 each year. Official announcements and application blanks are distributed over the State between these dates and are also made available to those interested upon request. Requests for additional information and application forms should be addressed to the Secretary, Faculty Committee on Scholarships, Office of the Registrar, A. and M. College of Texas, College Station, Texas.

Scholarships for Advanced Undergraduate Students

One-year scholarships ranging in value from $125 to $500 are available to outstanding students already enrolled in the College. Some of these are limited to certain fields of study and to individuals who have attained a necessary academic classification, while others are unrestricted in this regard. Recipients are usually chosen by the Faculty Committee on Scholarships with the basis of selection determined by the nature and intent of the award.

Some of these scholarships are given as "rewards for a job well done" and are intended to recognize outstanding scholastic achievement or other meritorious accomplishments. As such, they not only benefit financially the student concerned but also encourage and promote scholastic attainment and leadership on the part of other individuals. In addition to the reward type of

scholarship, others are made available to outstanding students who must have financial assistance in order to remain in school or to do a high quality of work while enrolled. It is the general objective of this type of award to encourage every scholar to go as far as his abilities and ambition will carry him.

Information regarding scholarships for advanced undergraduate students may be obtained from the Secretary, Faculty Committee on Scholarships, Office of the Registrar.

Fellowships, Grants-in-Aid, and Graduate Assistantships

Students who have shown exceptional ability in their chosen fields may be awarded graduate fellowships or grants-in-aid for advanced study at the College and are assisted in securing similar awards for graduate study at other institutions. Numerous graduate assistantships are available each year with appointments being made by the Dean of the Graduate School. Additional information regarding awards for graduate students may be obtained from the official bulletin of the Graduate School.

CURRICULA

There is one two-year curriculum, pre-veterinary medicine. Its satisfactory completion is prerequisite to application for entrance to the School of Veterinary Medicine. There are 25 curricula extending through four years. Of these the curriculum in veterinary medicine leads to the degree of Doctor of Veterinary Medicine; the curriculum in liberal arts leads to the degree of Bachelor of Arts; the curriculum in business administration leads to the degree of Bachelor of Business Administration; the others lead to the degree of Bachelor of Science. The curriculum in architecture covers a period of five years and leads to the degree of Bachlor of Architecture. The five-year curriculum in food technology leads to the degree of Bachelor of Food Technology. The five-year curriculum in petroleum engineering leads to the degree of Bachelor of Petroleum Engineering. Five-year combined courses are also offered in chemical engineering—business administration, petroleum engineering—business administration, petroleum engineering—chemical engineering, petroleum engineering—geological engineering, and petroleum engineering—mechanical engineering leading to the degrees of Bachelor of Science in each field of engineering and to the degree of Bachelor of Business Administration. The five-year curriculum in industrial engineering follows one of the four-year curricula in aeronautical, chemical, civil, electrical, mechanical, or petroleum engineering and leads to the degree of Bachelor of Science in Industrial Engineering.

TWO-YEAR CURRICULUM

Pre-Veterinary Medicine

FOUR YEAR CURRICULA

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

FIVE-YEAR CURRICULA

Architecture
Chemical Engineering—Business Administration
Food Technology
*Industrial Engineering
Petroleum Engineering
Petroleum Engineering—Business Administration
Petroleum Engineering—Chemical Engineering
Petroleum Engineering—Geological Engineering
Petroleum Engineering—Mechanical Engineering

*NOTE: A degree of Bachelor of Science in Industrial 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 on subsequent pages and those additional required courses indicated.

THE BASIC DIVISION

The Basic Division was established to aid entering students in their adjustment to college. The Dean of the Basic Division administers the work of all entering students until they are admitted into one of the degree granting schools.

SPECIFIC AIMS

The aims of the Basic Division may be summarized as follows:

1. To give the first year college student sufficient supervision to aid him in the transition from high school to college study and to help him adjust to college life.

2. To afford every student assigned to the Basic Division the benefits of a planned program of educational and vocational guidance administered by professionally trained personnel so that he may make an intelligent choice of a course of study and related school activities.

3. To furnish the student who has not decided upon a course of study an opportunity to gain some insight into the educational requirements of the various curricula.

4. To furnish the necessary aid to the student who is in need of assistance in the development of general study skills or in specific subject areas.

5. To supply the various schools of the College with a selected group of students qualified to pursue the training necessary for professional competency and mature citizenship.

GUIDANCE FUNCTIONS

The student enrolled in the Basic Division is offered many opportunities for both individual and group guidance. Opportunity for individual guidance and counseling by professionally trained personnel is provided throughout the school year. Members of the Basic Division Staff administer a battery of aptitude and achievement tests before the beginning of the school year. These tests are supplemented by other psychological measures, such as interest and personality inventories, and are utilized for individual counseling purposes.

The Basic Division coordinates and administers the annual New Student Week program. This program is held during the week prior to the beginning of the fall semester. Each new student admitted to the Basic Division is required to participate in this program. Early in the week a series of tests is given, the results of which are used for counseling and guidance purposes.

Any student whose high school entrance units and grades, or whose scores on these tests indicate that he may have difficulty in pursuing the course he has chosen, may be advised to register in special sections designed to fit his particular needs. The main objectives of New Student Week are to provide the beginning student the opportunity for group and individual consultation with counselors, to give him the opportunity to get acquainted with various school officials, and to acquaint him with College rules and regulations. Certain phases of the program include orientation by the Dean of Men with regard to student life regulations and military organizations.

The Basic Division administers a program of group guidance to aid the beginning college student to develop those study skills necessary for academic success, to develop realistic educational and vocational goals, and to achieve a healthy personal and social adjustment to the college environment. This program is maintained during the first year of the student's enrollment at the Agricultural and Mechanical College of Texas.

REMEDIAL AID

Many opportunities for assistance are available to the student enrolled in the Basic Division. A Remedial Reading Laboratory and a Study Habits Program have been established to assist students needing special help in these areas. In addition, special assistance in specific subject matter areas has been provided with the cooperation of the various academic departments of the degree granting schools.

GROUP GUIDANCE

As a part of the group guidance program, the following course is required during the first semester after a student has been admitted to the Basic Division:

Basic 101. Orientation. (0-2). Credit 1. Designed to assist the student in (1) the process of making adequate personal and social adjustment to college life, (2) the recognition and development of his aptitudes, interests, and abilities, and the selection of attainable life goals, and (3) becoming acquainted with the scope of the curricula and vocational opportunities in the fields of specialization offered by the College.

BASIC DIVISION DISCUSSIONS

During his second semester in the Basic Division, a student will be required to participate in one of the following courses:

Basic 102. Remedial Reading. (0-2). Credit 1. A laboratory course designed to remedy a student's reading disability and

to increase his reading rate and comprehension. In addition to the regular two one-hour meetings per week, two thirty-minute practice periods are required.

Basic 103. College Study. (0-2). Credit 1. A laboratory course designed to familiarize the student with the principles of learning and to relate them to the study of specific school subjects.

Basic 104. Individual Adjustment. (0-2). Credit 1. A course designed to help the student to understand himself and the nature of the society of which he is a member.

Basic 105. The World of Work. (0-2). Credit 1. A course designed to familiarize the student who has not decided upon a vocational goal with the demands, required skills, and rewards of various occupational areas. Most of the major occupational areas will be studied intensively, and each student will be given an opportunity for studying his aptitudes and interests and relating them to various vocational requirements.

Basic 106. Survey of Man's Knowledge. (0-2). Credit 1. A survey course designed to acquaint the student with the various schools of thought and the many areas of knowledge which comprise our culture. Such disciplines as philosophy, social and physical sciences, religion, law, and literature will be investigated.

CURRICULA FOR FRESHMAN STUDY

In general the Basic Division provides two types of curricula from which the entering student may select the one which best fits his own particular needs. These may be summarized as follows:

1. **General Basic Curriculum.** This curriculum is for the student who has not decided upon his degree objective. It is designed to furnish the entering student with an experience which will assist him in evaluating and deciding upon his degree objective. Courses offered in the first semester of this curriculum, when satisfactorily completed, will apply toward meeting graduation requirements in any degree curriculum. A student who decides upon his degree objective by the beginning of the second semester may take courses required in his degree curriculum. If a student has not decided upon his degree objective by this time, he is advised to continue with the General Basic Curriculum for the second semester.

GENERAL BASIC CURRICULUM

First Semester		Credit
Basic 101	(0-2)	1
Biology 107 Vertebrate Zoology	(2-4)	3
Chemistry 101 General Chemistry	(3-3)	4
English 103 Composition and Rhetoric	(3-0)	3
Geography 201 Principles of Geography	(3-0)	3
Mathematics 101 or 102 Algebra (See Note 2)	(3-0)	3
Military or Air Science	(0-2)	1
Physical Education 101	(0-3)	R
		18

Second Semester		Credit
Basic (See page 40)	(0-2)	1
Biology 101 General Botany of Seed Plants	(3-4)	4
Chemistry 102 General Chemistry	(3-3)	4
English 104 Composition and Rhetoric	(3-0)	3
Military or Air Science	(0-2)	1
Elective (See Note 3)		6
Physical Education 102	(0-3)	R
		19

NOTES: 1. A student whose high school record and entrance tests indicate inadequate preparation will normally omit Biology 107 in the first semester of his freshman year. This in no way reduces the total graduation requirements for such a student.

2. See Basic Division requirements in mathematics for all students.

3. Electives will be chosen by the student and approved by the Dean of the Basic Division prior to registration for the second semester.

2. **Degree Curriculum.** This curriculum is designed for the student who has decided to major in one of the courses of study provided by one of the degree granting schools of the College. The specific courses required in this curriculum may be determined by consulting the page of this catalogue where the desired curriculum is listed. However, a student whose high school record and entrance tests indicate inadequate preparation may be required to register for either a reduced load or special courses designed to meet his need.

REQUIREMENTS IN MATHEMATICS

A student whose high school record and entrance tests indicate adequate preparation for Mathematics 102, Algebra, will be so assigned regardless of his degree objective. The completion of this requirement will permit the student to transfer into any curriculum of the College without taking an additional course in algebra. Mathematics 102 will substitute automatically for Mathematics 101 when the latter is required in the curriculum. A student whose high school record and entrance tests indicate inadequate preparation for Mathematics 102 will be assigned to Mathematics 101 regardless of his degree objective.

SCHOLASTIC PROBATION

A first year student whose preliminary or semester grade report shows less than 10 hours or 10 grade points will automatically be placed on probation of such terms as may be specified by the Dean of the Basic Division. A student placed on probation because of the first semester's record is urged to select Basic 103,

College Study, as the course in which to participate for the Basic Division Discussions. However, after personal consultation with the Dean of the Basic Division, such a student may be permitted to select another discussion area.

CURRICULUM FOR SECOND YEAR IN BASIC DIVISION

A student who is permitted to remain in the Basic Division a second year will first schedule courses to make up any deficiencies in his first year's work. He will complete his schedule with courses required in the curriculum of his degree objective.

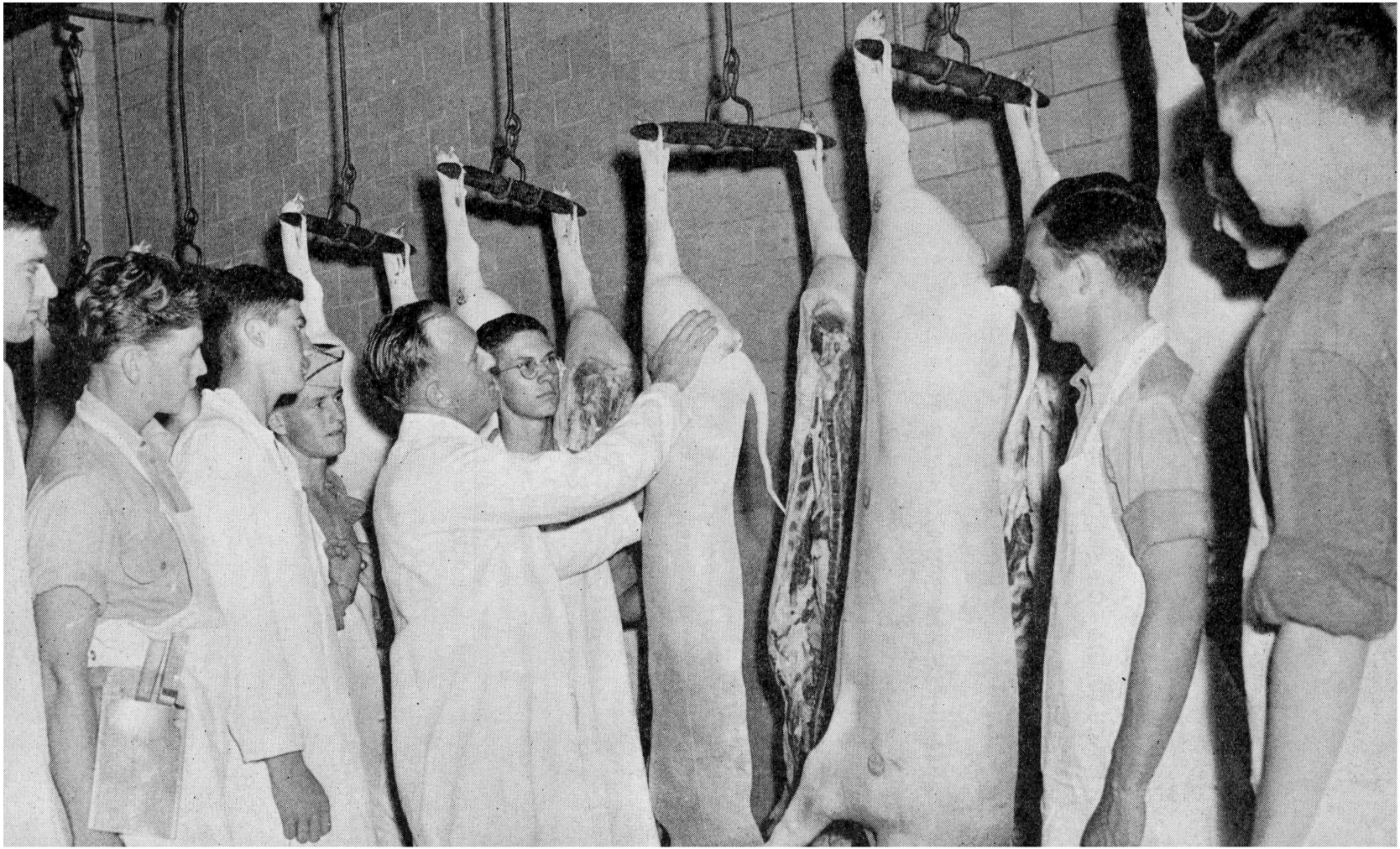
REQUIREMENTS FOR TRANSFER TO A DEGREE GRANTING SCHOOL

The requirements for transfer from the Basic Division to one of the degree granting schools of the College are stated on page 16 of this catalogue.

JUNCTION ADJUNCT

Many of the counseling and guidance functions of the Basic Division are carried on during the summer at the Junction Adjunct. During a six-weeks term here a student is able to discover more fully his aptitudes and interests and is helped in relating these to the demands and opportunities of various college curricula. Results of aptitude, achievement, interest and personality tests are used to help the student know much more about himself than is otherwise possible. By knowing himself better, a student is able more intelligently to decide upon his course of study in college. Further, he is able to know the areas of his strength and his weakness, thus being able to capitalize upon the one and improve upon the other. Among the students who are especially urged to attend the Junction Adjunct are those whose high school average grade is under 80, and those who have not fully decided upon a course of study in college.

Students who are found to be prepared for regular college courses are able to enroll in two of them. Students found to be not fully prepared to progress with regular college courses are offered special help in the area of their weakness. Students having a weakness in reading may participate in a program of remedial reading. Regular faculty members of the Agricultural and Mechanical College of Texas comprise the instructional staff.



THE SCHOOL OF
AGRICULTURE

CURRICULA

FOUR-YEAR CURRICULA

Agriculture
Agricultural Administration
Agricultural Education
Agricultural Engineering
Agricultural Journalism
Animal Science
Landscape Architecture
Plant and Soil Science
Range and Forestry
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 products, 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

— MEATS PROCESSING LABORATORY

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 EXTENSION

Agricultural extension work requires a broad training in agriculture together with some training in public relations and extension methods. Students planning to enter this work should choose their program from one of the majors in general agriculture, agricultural education, or farm management and include courses in psychology and extension methods in their degree plan. After September 1, 1951, candidates for appointment in the Texas Agricultural Extension Service will be required to have credit for work in methods and psychology or to take such work during the training period of their employment.

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, etcetera. 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 Service, and other federal agencies. Graduates in this field are needed as teachers and instructors in educational institutions of Texas and elsewhere.

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 mammals. Also, opportunities are provided, in cooperation with the Department of Journalism, for training in the field of wildlife journalism, and, in cooperation with the Department of Education and Psychology, for preparation in the field of conservation education.

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 State 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) Fundamentals of Crop Production	3	**Animal Husbandry 107** ....(2-2) General Animal Husbandry	3
Basic 101 ....(0-2)	1	**Basic (See page 40)** ....(0-2)	1
Biology 107 ....(2-4) Vertebrate Zoology	3	**Biology 101** ....(3-4) General Botany of Seed Plants	4
Chemistry 101 ....(3-3) General Chemistry	4	**Chemistry 102** ....(3-3) General Chemistry	4
English 103 ....(3-0) Composition and Rhetoric	3	**English 104** ....(3-0) Composition and Rhetoric	3
Mathematics 101 ....(3-0) Algebra	3	**Military or Air Science** ....(1-2)	1
Military or Air Science ....(1-2)	1	**Poultry Husbandry 201** ....(2-2) Poultry Production	3
Physical Education 101 ....(0-3)	R	**Physical Education 102** ....(0-3)	R
	18		19

(FOR A MAJOR IN FLORICULTURE)

Agronomy 105 ....(2-2) Fundamentals of Crop Production	3	**Basic (See page 40)** ....(0-2)	1
Basic 101 ....(0-2)	1	**Biology 102** ....(2-3) Taxonomy of Flowering Plants	3
Biology 101 ....(3-4) General Botany of Seed Plants	4	**Biology 205** ....(2-4) Fundamental Plant Morphology	3
Chemistry 101 ....(3-3) General Chemistry	4	**Chemistry 102** ....(3-3) General Chemistry	4
English 103 ....(3-0) Composition and Rhetoric	3	**English 104** ....(3-0) Composition and Rhetoric	3
Mathematics 101 ....(3-0) Algebra	3	**Floriculture 120** ....(2-2) Ornamental Plant Production	3
Military or Air Science ....(1-2)	1	**Military or Air Science** ....(1-2)	1
Physical Education 101 ....(0-3)	R	**Physical Education 102** ....(0-3)	R
	19		18

Curriculum in AGRICULTURAL ADMINISTRATION

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

Agricultural Economics 105 ....(3-0) Introduction to Rural Economy	3	**Agronomy 105** ....(2-2) Fundamentals of Crop Production	3
Basic 101 ....(0-2)	1	**Animal Husbandry 107** ....(2-2) General Animal Husbandry	3
Biology 107 ....(2-4) Vertebrate Zoology	3	**Basic (See page 40)** ....(0-2)	1
Chemistry 101 ....(3-3) General Chemistry	4	**Biology 101** ....(3-4) General Botany of Seed Plants	4
English 103 ....(3-0) Composition and Rhetoric	3	**Chemistry 102** ....(3-3) General Chemistry	4
Mathematics 101 ....(3-0) Algebra	3	**English 104** ....(3-0) Composition and Rhetoric	3
Military or Air Science ....(1-2)	1	**Military or Air Science** ....(1-2)	1
Physical Education 101 ....(0-3)	R	**Physical Education 102** ....(0-3)	R
	18		19

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

First Semester	Credit	Second Semester	Credit
Agricultural Economics 105 ....(3-0) Introduction to Rural Economy	3	**Agronomy 105** .....(2-2) Fundamentals of Crop Production	3
Basic 101 .....(0-2)	1	**Animal Husbandry 107** .....(2-2) General Animal Husbandry	3
Biology 107 .....(2-4) Vertebrate Zoology	3	**Basic (See page 40)** .....(0-2)	1
Chemistry 101 .....(3-3) General Chemistry	4	**Biology 101** .....(3-4) General Botany of Seed Plants	4
English 103 .....(3-0) Composition and Rhetoric	3	**Chemistry 102** .....(3-3) General Chemistry	4
Mathematics 101 .....(3-0) Algebra	3	**English 104** .....(3-0) Composition and Rhetoric	3
Military or Air Science .....(1-2)	1	**Military or Air Science** .....(1-2)	1
Physical Education 101 .....(0-3)	R	**Physical Education 102** .....(0-3)	R
	18		19

Curriculum in

AGRICULTURAL EDUCATION

Agronomy 105 .....(2-2) Fundamentals of Crop Production	3	**Animal Husbandry 107** .....(2-2) General Animal Husbandry	3
Basic 101 .....(0-2)	1	**Basic (See page 40)** .....(0-2)	1
Biology 107 .....(2-4) Vertebrate Zoology	3	**Biology 101** .....(3-4) General Botany of Seed Plants	4
Chemistry 101 .....(3-3) General Chemistry	4	**Chemistry 102** .....(3-3) General Chemistry	4
English 103 .....(3-0) Composition and Rhetoric	3	**English 104** .....(3-0) Composition and Rhetoric	3
Mathematics 101 .....(3-0) Algebra	3	**Military or Air Science** .....(1-2)	1
Military or Air Science .....(1-2)	1	**Poultry Husbandry 201** .....(2-2) Poultry Production	3
Physical Education 101 .....(0-3)	R	**Physical Education 102** .....(0-3)	R
	18		19

Curriculum in

AGRICULTURAL ENGINEERING

Basic 101 .....(0-2)	1	**Basic (See page 40)** .....(0-2)	1
Chemistry 101 .....(3-3) General Chemistry	4	**Chemistry 102** .....(3-3) General Chemistry	4
Engineering Drawing 111 .....(0-6) Engineering Drawing	2	**Engineering Drawing 124** .....(2-2) Descriptive Geometry	3
English 103 .....(3-0) Composition and Rhetoric	3	**English 104** .....(3-0) Composition and Rhetoric	3
Mathematics 102 .....(3-0) Algebra	3	**Mathematics 104** .....(4-0) Analytics	4
Mathematics 103 .....(3-0) Plane Trigonometry	3	**Mechanical Engineering 102** ....(1-2) Engineering Problems	2
Mechanical Engineering 101 ...(1-2) Engineering Problems	2	**Military or Air Science** .....(1-2)	1
Military or Air Science .....(1-2)	1	**Physical Education 102** .....(0-3)	R
Physical Education 101 .....(0-3)	R		18
	19		

Curriculum in

AGRICULTURAL JOURNALISM

First Semester	Credit	Second Semester	Credit
Agronomy 105 ..... (2-2)	3	**Animal Husbandry 107** ..... (2-2)	3
Fundamentals of Crop Production		General Animal Husbandry	
Basic 101 ..... (0-2)	1	**Basic** (See page 40) ..... (0-2)	1
Biology 107 ..... (2-4)	3	**Biology 101** ..... (3-4)	4
Vertebrate Zoology		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	
Mathematics 101 ..... (3-0)	3	**Military or Air Science** ..... (1-2)	1
Algebra		**Poultry Husbandry 201** ..... (2-2)	3
Military or Air Science ..... (1-2)	1	Poultry Production	
Physical Education 101 ..... (0-3)	R	**Physical Education 102** ..... (0-3)	R
	18		19

Curriculum in

ANIMAL SCIENCE

Animal Husbandry 107 ..... (2-2)	3	**Basic** (See page 40) ..... (0-2)	1
General Animal Husbandry		**Biology 101** ..... (3-4)	4
Basic 101 ..... (0-2)	1	General Botany of Seed Plants	
Biology 105 ..... (2-4)	3	**Biology 107** ..... (2-4)	3
Invertebrate Zoology		Vertebrate 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	
Mathematics 101 ..... (3-0)	3	**Mathematics 103** ..... (3-0)	3
Algebra		Plane Trigonometry	
Military or Air Science ..... (1-2)	1	**Military or Air Science** ..... (1-2)	1
Physical Education 101 ..... (0-3)	R	**Physical Education 102** ..... (0-3)	R
	18		19

Curriculum in

LANDSCAPE ARCHITECTURE

Architecture 101 ..... (1-9)	4	**Architecture 102** ..... (1-9)	4
Architecture I		Architecture I	
Basic 101 ..... (0-2)	1	**Basic** (See page 40) ..... (0-2)	1
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	
Military or Air Science ..... (1-2)	1	**Mathematics 101** ..... (3-0)	3
Physical Education 101 ..... (0-3)	R	Algebra	
		Military or Air Science ..... (1-2)	1
		Physical Education 102 ..... (0-3)	R
	17		19

Curriculum in

PLANT AND SOIL SCIENCE

First Semester	Credit
Agronomy 105 .....(2-2) Fundamentals of Crop Production	3
Basic 101 .....(0-2)	1
Biology 101 .....(3-4) General Botany of Seed Plants	4
Chemistry 101 .....(3-3) General Chemistry	4
English 103 .....(3-0) Composition and Rhetoric	3
Mathematics 101 .....(3-0) Algebra	3
Military or Air Science .....(1-2)	1
Physical Education 101 .....(0-3)	R
	19

Second Semester	Credit
Basic (See page 40) .....(0-2)	1
Biology 205 .....(2-4) Fundamental Plant Morphology	3
Chemistry 102 .....(3-3) General Chemistry	4
English 104 .....(3-0) Composition and Rhetoric	3
Mathematics 103 .....(3-0) Plane Trigonometry	3
Military or Air Science .....(1-2)	1
Elective	3
Physical Education 102 .....(0-3)	R
	18

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 AND WILDLIFE MANAGEMENT

Animal Husbandry 107 .....(2-2) General Animal Husbandry	3
Basic 101 .....(0-2)	1
Biology 101 .....(3-4) General Botany of Seed Plants	4
Chemistry 101 .....(3-3) General Chemistry	4
English 103 .....(3-0) Composition and Rhetoric	3
Mathematics 101 .....(3-0) Algebra	3
Military or Air Science .....(1-2)	1
Physical Education 101 .....(0-3)	R
	19

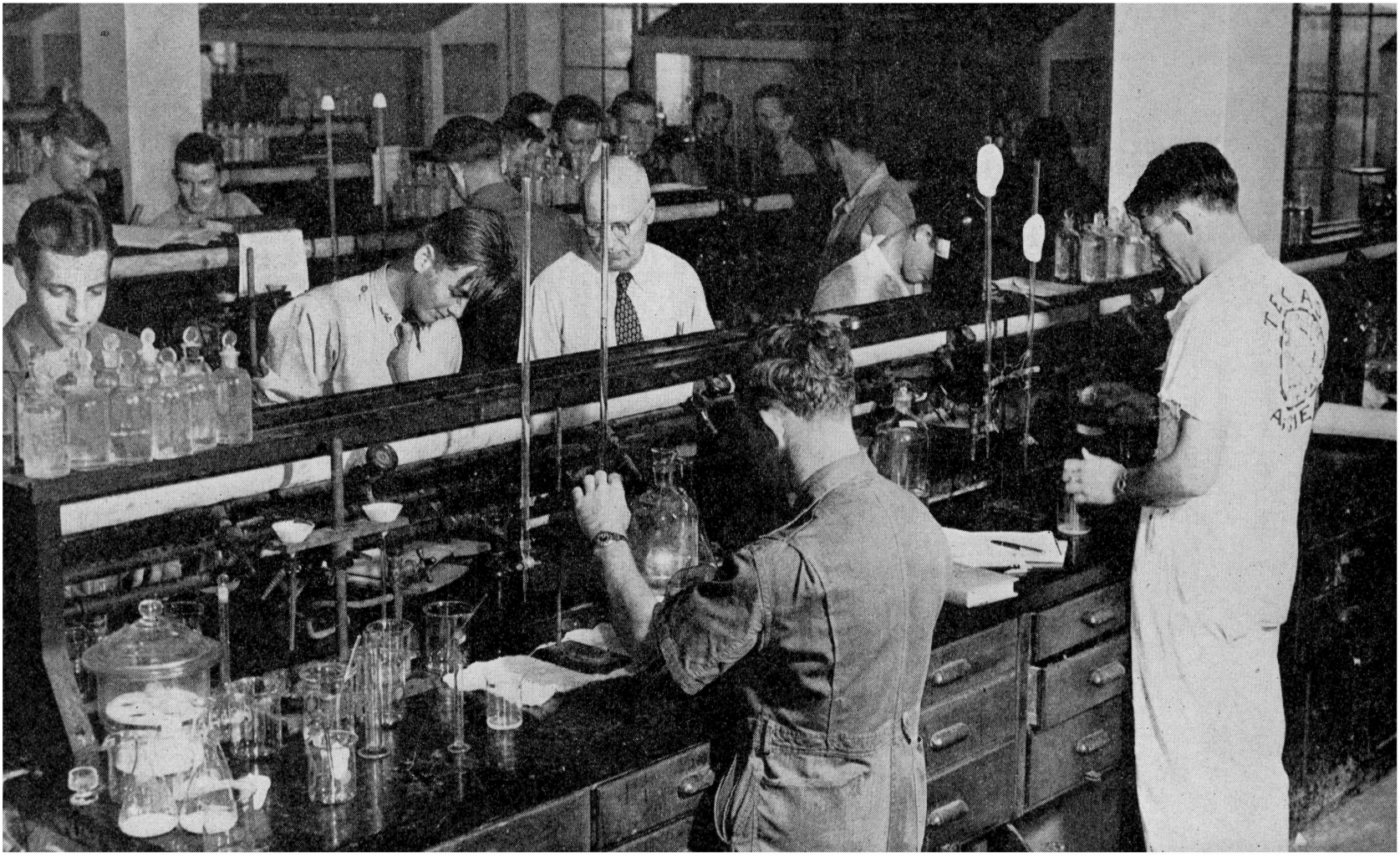
Agronomy 105 .....(2-2) Fundamentals of Crop Production	3
Basic (See page 40) .....(0-2)	1
Biology 102 .....(2-3) Taxonomy of Flowering Plants	3
Chemistry 102 .....(3-3) General Chemistry	4
English 104 .....(3-0) Composition and Rhetoric	3
Mathematics 103 .....(3-0) Plane Trigonometry	3
Military or Air Science .....(1-2)	1
Physical Education 102 .....(0-3)	R
	18

Curriculum in

FOOD TECHNOLOGY

Basic 101 .....(0-2)	1
Chemistry 101 .....(3-3) General Chemistry	4
English 103 .....(3-0) Composition and Rhetoric	3
Mathematics 102 .....(3-0) Algebra	3
Mathematics 103 .....(3-0) Plane Trigonometry	3
Mechanical Engineering 101 ....(1-2) Engineering Problems	2
Military or Air Science .....(1-2)	1
Physical Education 101 .....(0-3)	R
	17

Basic (See page 40) .....(0-2)	1
Biology 101 .....(3-4) General Botany of Seed Plants	4
Biology 107 .....(2-4) Vertebrate Zoology	3
Chemistry 102 .....(3-3) General Chemistry	4
English 104 .....(3-0) Composition and Rhetoric	3
Mathematics 104 .....(4-0) Analytics	4
Military or Air Science .....(1-2)	1
Physical Education 102 .....(0-3)	R
	20



THE SCHOOL OF
ARTS AND SCIENCES

CURRICULA

LIBERAL ARTS

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

BUSINESS ADMINISTRATION

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

PREPARATION FOR TEACHING

- Education
- Physical Education

SCIENCE

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

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 graduate 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.

— ADVANCED ORGANIC CHEMISTRY LABORATORY

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 in 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.

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.

FOREIGN LANGUAGE REQUIREMENT

A student whose curriculum includes a foreign language requirement will plan his program of courses according to the circumstances which fit his particular case. If he began the study of a language in high school, he will ordinarily find it advisable to continue the study of that language in college as the best means of developing a command of the language. But no student is required to schedule a language presented for admission, and students majoring in science are normally limited to a choice of French or German even though some other language was presented for admission.

The student will satisfy the language requirement in accordance with the following options:

1. If he presented less than two units of a language for admission to college, he will satisfy the requirement in that language by completing the beginning and intermediate courses (a total of four semesters).

2. If he presented two units of a language for admission, he will satisfy the requirement in that language by completing the intermediate course and six additional semester hours in courses to which the intermediate course is prerequisite. If he is not qualified to enter the intermediate course directly, he may start with the beginning course before undertaking the four semesters of intermediate and advanced courses. This will add six hours to the total number required for graduation in his curriculum. But the beginning course will be permitted to apply toward classification requirements.

3. If he presented three units in one language, or two units in each of two languages, he will satisfy the requirement by completing six semester hours of advanced work in one language presented for admission.

4. If he presented four years of a modern foreign language for admission and can demonstrate an adequate reading knowledge of that language, he will be granted exemption from the language requirement.

In no case does exemption from any part of the language requirement reduce the total number of hours required for graduation in a given curriculum.

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 study of fundamental business theory and procedure with limited specialization in one of the major fields. Upon completion of his chosen curriculum, the student receives the degree of Bachelor of Business Administration.

PREPARATION FOR TEACHING

Two departments in the School of Arts and Sciences provide programs of study which prepare students for certification as teachers in secondary schools. In the Department of Education and Psychology a student may prepare himself for teaching one of the usual secondary school subject matter fields. In the Department of Physical Education a student may prepare himself for coaching athletics and teaching physical education in the secondary school. Normally the student will follow a program leading to the Bachelor of Science degree, but an alternative program is available to the student who desires to obtain a Bachelor of Arts degree. The Department of Education and Psychology also offers teachers, principals, supervisors, and administrators an opportunity to add to their professional preparation in advanced undergraduate and graduate courses.

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 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.

EDUCATION

The Bachelor's degree is granted students majoring in the Department of Education and Psychology who complete (1) the course requirements in professional education, (2) at least 24 semester hours in a teaching major, and (3) 12 to 18 semester hours in a teaching minor.

TEACHING MAJORS AND MINORS

An essential part of this teacher education program is a teaching major of not less than 24 hours, and a teaching minor of 12 to 18 hours related to the teaching major. The combinations and course requirements listed below are defined with considerable exactness and are based upon a careful study of teaching requirements in Texas. Certain teaching majors require specific teaching minors, while others permit selection within limits. Students who wish to depart from the recommended combination or program of courses may do so only with the consent of the Head of the Department of Education and Psychology and the approval of the Dean of Arts and Sciences.

Recommended Teaching Combinations

Teaching Majors (24 hours minimum)	Related Teaching Minors (12 to 18 hours in one)
Biology	Chemistry, physics, mathematics, economics, history, geography, sociology
Chemistry	Physics, biology, mathematics
Business Administration	Economics, English, mathematics
Economics	Business administration, history geography, sociology
English	History, economics, geography, journalism, sociology, French, German, Spanish
Geography	History, economics, sociology, English, biology, physics, chemistry, mathematics
History	English, economics, geography, sociology, mathematics, biology, French, German, Spanish
Journalism	English, history, sociology, geography
Mathematics	Physics, chemistry, history, economics, geography, sociology, biology, French, German, Spanish

PHYSICAL EDUCATION

The Bachelor's degree is granted students majoring in the Department of Physical Education who complete the prescribed program of studies in professional education, physical education, and general education, and establish a teaching minor in one of the usual secondary school subject matter fields. The choice of a teaching minor may be made only with the approval of the Head of the Department of Physical Education.

SCIENCE

Science programs in the School of Arts and Sciences are administered by the following departments: Biology, Chemistry, and Physics. A program in oceanography is offered at the senior and graduate level only.

The several curricula in science are planned for those students whose interests and abilities lie in the direction of seeking scientific truths and relations previously unknown or not understood in the world about us and of bringing these truths to bear on problems affecting the well-being of mankind. Because many students do not discover the nature of their interests or abilities until they have followed a curriculum in agriculture or engineering for a year or more, the curricula in science are so arranged that a student may change to science with a minimum of loss in semester hour credit.

The curricula are designed to serve the following purposes:

1. To prepare students for research in pure science, usually after further study at the graduate level.
2. To prepare teachers of science in secondary schools and other institutions of learning.
3. To provide the necessary undergraduate foundation for students planning to study medicine or kindred fields.
4. To afford a broad scientific training for students who desire it before entering some field of applied science in industry or government service.

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
Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
Biology 101[1] ..... (3-4)	4	**Biology 107**[1] ..... (2-4)	3
General Botany of Seed Plants		Vertebrate Zoology	
English 103 ..... (3-0)	3	**English 104** ..... (3-0)	3
Composition and Rhetoric		Composition and Rhetoric	
History 105 ..... (3-0)	3	**History 106** ..... (3-0)	3
History of the United States		History of the United States	
Mathematics 101 or 102 ..... (3-0)	3	**Mathematics 103** ..... (3-0)	3
Algebra		Plane Trigonometry	
Military or Air Science ..... (1-2)	1	**Military or Air Science** ..... (1-2)	1
Modern Language[2] ..... (3-0)	3	**Modern Language**[2] ..... (3-0)	3
French, German, or Spanish		French, German, or Spanish	
Physical Education 101 ..... (0-3)	R	**Physical Education 102** ..... (0-3)	R
	18		17

NOTES: 1. Transfers who have credit for any 6 hours of college biology may substitute such credit for Biology 101, 107.

2. See "The Foreign Language Requirement," page 59.

(FOR A MAJOR IN JOURNALISM)

Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
Biology 115 ..... (3-3)	4	**English 104** ..... (3-0)	3
Survey of Biology		Composition and Rhetoric	
English 103 ..... (3-0)	3	**History 106** ..... (3-0)	3
Composition and Rhetoric		History of the United States	
History 105 ..... (3-0)	3	**Mathematics 110** ..... (3-0)	3
History of the United States		Survey Course in Mathematics	
Mathematics 101 ..... (3-0)	3	**Military or Air Science** ..... (1-2)	1
Algebra		**Modern Language**[1] ..... (3-0)	3
Military or Air Science ..... (1-2)	1	Spanish Recommended	
Modern Language[1] ..... (3-0)	3	**Science**[2] ..... (3-3)	4
Spanish Recommended		**Physical Education 202** ..... (0-3)	R
Physical Education 101 ..... (0-3)	R		18
	18		

NOTES: 1. See "The Foreign Language Requirement," page 59.

2. The student may select any one of the following: Chemistry 106, Geography 203, Geology 205, Physics 211.

(PROGRAM PREPARATORY TO LAW)

Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
Biology 101 ..... (3-4)	4	**Biology 107** ..... (2-4)	3
General Botany of Seed Plants		Vertebrate Zoology	
English 103 ..... (3-0)	3	**English 104** ..... (3-0)	3
Composition and Rhetoric		Composition and Rhetoric	
History 105 ..... (3-0)	3	**History 106** ..... (3-0)	3
History of the United States		History of the United States	
Mathematics 102 ..... (3-0)	3	**Mathematics 103** ..... (3-0)	3
Algebra		Plane Trigonometry	
Military or Air Science ..... (1-2)	1	**Military or Air Science** ..... (1-2)	1
***Modern Language** ..... (3-0)	3	***Modern Language** ..... (3-0)	3
French, German, or Spanish		French, German, or Spanish	
Physical Education 101 ..... (0-3)	R	**Physical Education 102** ..... (0-3)	R
	18		17

* See "The Foreign Language Requirement," page 59.

Curriculum in

BUSINESS ADMINISTRATION

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

First Semester		Credit	Second Semester		Credit
Basic 101	(0-2)	1	**Basic (See page 40)**	(0-2)	1
Biology 115 Survey of Biology	(3-3)	4	**Business Administration 102** Principles of Accounting	(3-3)	4
Business Administration 101 Principles of Accounting	(3-3)	4	**English 104** Composition and Rhetoric	(3-0)	3
English 103 Composition and Rhetoric	(3-0)	3	**History 106**[1] History of the United States	(3-0)	3
History 105[1] History of the United States	(3-0)	3	**Mathematics 110** Survey Course in Mathematics	(3-0)	3
Mathematics 101 Algebra	(3-0)	3	**Military or Air Science**	(1-2)	1
Military or Air Science	(1-2)	1	**Science**[2]	(3-3)	4
Physical Education 101	(0-3)	R	**Physical Education 102**	(0-3)	R
		19			19

NOTES: 1. Students who desire to take Spanish or another modern foreign language may substitute six credit hours of the language for History 105, 106 and continue the language for the six elective credit hours in the sophomore year.

2. Students may select any one of the following: Chemistry 106, Geography 203, Geology 205, Physics 211.

(FOR A MAJOR IN BUILDING PRODUCTS MARKETING)

Basic 101	(0-2)	1	**Basic (See page 40)**	(0-2)	1
Business Administration 101 Principles of Accounting	(3-3)	4	**Agricultural Engineering 222** Farm Shop	(1-3)	2
Engineering Drawing 111 Engineering Drawing	(0-6)	2	**Business Administration 102** Principles of Accounting	(3-3)	4
English 103 Composition and Rhetoric	(3-0)	3	**Chemistry 106** General Chemistry	(3-3)	4
Mathematics 101 Algebra	(3-0)	3	**Engineering Drawing 112** Engineering Drawing	(0-4)	1
Mechanical Engineering 105 Bench Work in Wood	(1-6)	3	**English 104** Composition and Rhetoric	(3-0)	3
Military or Air Science	(1-2)	1	**Mathematics 103** Plane Trigonometry	(3-0)	3
Physical Education 101	(0-3)	R	**Military or Air Science**	(1-2)	1
		17	**Physical Education 102**	(0-3)	R
					19

Curriculum in

EDUCATION

Basic 101	(0-2)	1	**Basic (See page 40)**	(0-2)	1
Biology 101 General Botany of Seed Plants	(3-4)	4	**Biology 107** Vertebrate Zoology	(2-4)	3
***Chemistry 101** General Chemistry	(3-3)		***Chemistry 102** General Chemistry	(3-3)	
Or		4 or 3	**Or**		4 or 3
***Modern Language** French, German, or Spanish	(3-0)		***Modern Language** French, German, or Spanish	(3-0)	
English 103 Composition and Rhetoric	(3-0)	3	**English 104** Composition and Rhetoric	(3-0)	3
History 105 History of the United States	(3-0)	3	**History 106** History of the United States	(3-0)	3
Mathematics 102 Algebra	(3-0)	3	**Mathematics 103** Plane Trigonometry	(3-0)	3
Military or Air Science	(1-2)	1	**Military or Air Science**	(1-2)	1
Physical Education 101	(0-3)	R	**Physical Education 102**	(0-3)	R
		19 or 18			18 or 17

*A student who desires a Bachelor of Arts degree in education will schedule 12 hours of modern language in the freshman and sophomore years, omitting Chemistry 101, 102 in the freshman year.

Curriculum in

PHYSICAL EDUCATION

First Semester	Credit	Second Semester	Credit
Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
Biology 101 ..... (3-4)	4	**Biology 107** ..... (2-4)	3
General Botany of Seed Plants		Vertebrate Zoology	
English 103 ..... (3-0)	3	**Chemistry 106** ..... (3-3)	4
Composition and Rhetoric		General Chemistry	
History 105 ..... (3-0)	3	**Education 121** ..... (3-0)	3
History of the United States		An Introduction to Education	
Mathematics 101 ..... (3-0)	3	**English 104** ..... (3-0)	3
Algebra		Composition and Rhetoric	
Military or Air Science ..... (1-2)	1	**History 106** ..... (3-0)	3
Rural Sociology 205 ..... (3-0)	3	History of the United States	
Principles of Sociology		**Military or Air Science** ..... (1-2)	1
Physical Education 101 ..... (0-3)	R	**Physical Education 216** ..... (0-3)	1
	—	First Aid	
	18	**Physical Education 102** ..... (0-3)	R
			—
			19

CURRICULA IN SCIENCE

(FOR A MAJOR IN BACTERIOLOGY)

Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
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 107[2] ..... (2-4)		**Biology 105**[2] ..... (2-4)	
Vertebrate Zoology		Invertebrate 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 107**[1] ..... (2-4)	
Composition and Rhetoric		Vertebrate Zoology	
Mathematics 102 ..... (3-0)	3	**Chemistry 102** ..... (3-3)	4
Algebra		General Chemistry	
Military or Air Science ..... (1-2)	1	**English 104** ..... (3-0)	3
Physical Education 101 ..... (0-3)	R	Composition and Rhetoric	
	—	**Mathematics 103** ..... (3-0)	3
	18 or 17	Plane Trigonometry	
		Military or Air Science ..... (1-2)	1
		Physical Education 102 ..... (0-3)	R
			—
			19 or 18

(FOR A MAJOR IN BOTANY)

Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
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 107** ..... (2-4)	3
General Chemistry		Vertebrate Zoology	
English 103 ..... (3-0)	3	**Chemistry 102** ..... (3-3)	4
Composition and Rhetoric		General Chemistry	
Mathematics 102 ..... (3-0)	3	**English 104** ..... (3-0)	3
Algebra		Composition and Rhetoric	
Military or Air Science ..... (1-2)	1	**Mathematics 103** ..... (3-0)	3
Physical Education 101 ..... (0-3)	R	Plane Trigonometry	
	—	**Military or Air Science** ..... (1-2)	1
	16	**Physical Education 102** ..... (0-3)	R
			—
			18

---

[1]For those emphasizing plant bacteriology.

[2]For those emphasizing animal bacteriology.

(FOR MAJORS IN ENTOMOLOGY AND ZOOLOGY)

First Semester	Credit	Second Semester	Credit
Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
Biology 107 ..... (2-4)	3	**Biology 105** ..... (2-4)	3
Vertebrate Zoology		Invertebrate 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	
Mathematics 101 ..... (3-0)	3	**Mathematics 103** ..... (3-0)	3
Algebra		Plane Trigonometry	
Military or Air Science ..... (1-2)	1	**Military or Air Science** ..... (1-2)	1
***Modern Language** ..... (3-0)	3	***Modern Language** ..... (3-0)	3
French or German		French or German	
Physical Education 101 ..... (0-3)	R	**Physical Education 102** ..... (0-3)	R
	18		18

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

Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
Biology 107 ..... (2-4)	3	**Biology 105** ..... (2-4)	3
Vertebrate Zoology		Invertebrate 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	
Mathematics 101 ..... (3-0)	3	**Mathematics 103** ..... (3-0)	3
Algebra		Plane Trigonometry	
Military or Air Science ..... (1-2)	1	**Military or Air Science** ..... (1-2)	1
Modern Language ..... (3-0)	3	**Modern Language** ..... (3-0)	3
French or German		French or German	
Physical Education 101 ..... (0-3)	R	**Physical Education 102** ..... (0-3)	R
	18		18

(PROGRAM PREPARATORY TO CERTIFICATE AS MEDICAL TECHNOLOGIST)

Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
Biology 107 ..... (2-4)	3	**Biology 105** ..... (2-4)	3
Vertebrate Zoology		Invertebrate 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	
Mathematics 101 ..... (3-0)	3	**Mathematics 103** ..... (3-0)	3
Algebra		Plane Trigonometry	
Military or Air Science ..... (1-2)	1	**Military or Air Science** ..... (1-2)	1
Modern Language ..... (3-0)	3	**Modern Language** ..... (3-0)	3
French, German, or Spanish		French, German, or Spanish	
Physical Education 101 ..... (0-3)	R	**Physical Education 102** ..... (0-3)	R
	18		18

(FOR MAJORS IN CHEMISTRY AND PHYSICS)

Basic 101 ..... (0-2)	1	**Basic (See page 40)** ..... (0-2)	1
Biology 101 ..... (3-4)	4	**Biology 107** ..... (2-4)	3
General Botany of Seed Plants		Vertebrate 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	
Mathematics 102 ..... (3-0)	3	**Mathematics 104** ..... (4-0)	4
Algebra		Analytics	
Mathematics 103 ..... (3-0)	3	**Mechanical Engineering 101** ... (1-2)	2
Plane Trigonometry		Engineering Problems	
Military or Air Science ..... (1-2)	1	**Military or Air Science** ..... (1-2)	1
Physical Education 101 ..... (0-3)	R	**Physical Education 102** ..... (0-3)	R
	19		18

*See "The Foreign Language Requirement," page 59.

THE SCHOOL OF
ENGINEERING

CURRICULA

FOUR-YEAR CURRICULA

Aeronautical Engineering
*Agricultural Engineering
Chemical Engineering
Civil Engineering
Electrical Engineering
Geological Engineering
Geology
Industrial Education
Industrial Engineering
Mechanical Engineering
Petroleum Engineering

FIVE-YEAR CURRICULA

Architecture
Chemical Engineering—
General Business
**Industrial Engineering
Petroleum Engineering
Petroleum Engineering—
General Business
Petroleum Engineering—
Chemical Engineering
Petroleum Engineering—
Geological Engineering
Petroleum Engineering—
Mechanical Engineering

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

*Administered jointly by Schools of Agriculture and Engineering.

**NOTE: A degree of Bachelor of Science in Industrial 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.

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.

AGRICULTURAL ENGINEERING

See page 46 for a discussion of this curriculum.

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 conditions 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 Chemical 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.

Student branches of the American Institute of Electrical Engineers and of the Institute of Radio Engineers have been organized at 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.

MAJOR 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, BUSINESS OPTION

The curriculum in geology, business option, combines the regular geology courses with twenty-two hours of business courses. It differs from the major in geology in that it does not require calculus, physical chemistry, modern languages, and has general physics substituted for engineering physics. Students who expect to do graduate work which has modern language requirements should take additional work in modern languages if they choose this curriculum.

GEOLOGY, GEOPHYSICS OPTION

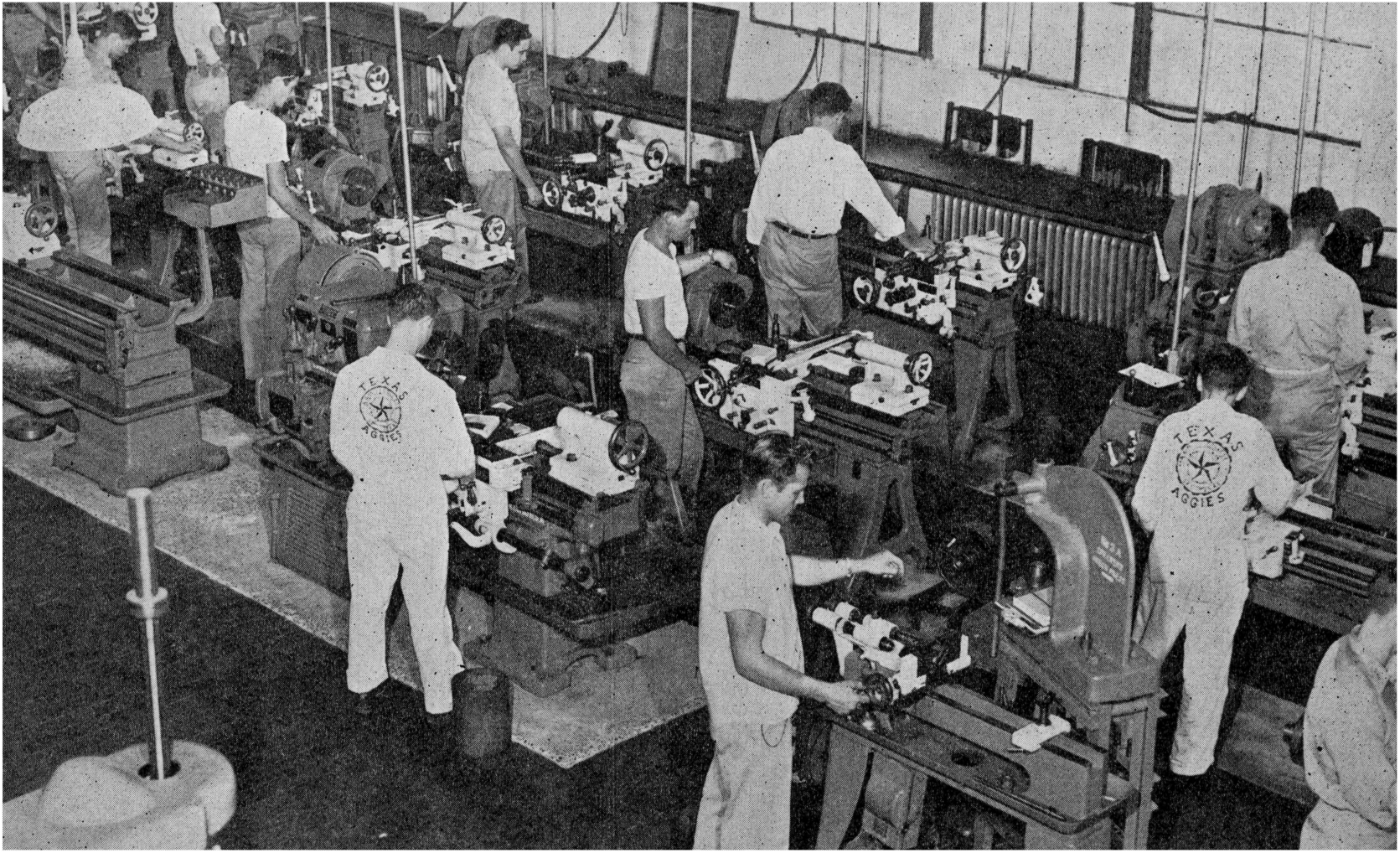
This curriculum is designed for the student who plans to apply geology to the physical measurement of earth structures, especially to exploration geophysics. The training prepares a man to use geology with an organization that uses seismic, gravimetric, magnetic, electric, or other techniques of geophysical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

GEOLOGY, PALEONTOLOGY OPTION

This curriculum is designed to give additional training in biology and paleontology. Emphasis is given to micropaleontology in order to prepare the student for work in micropaleontology in the petroleum industry.

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.


TEXAS
AGGIES
TEXAS
AGGIES

INDUSTRIAL EDUCATION

The industrial education curriculum under Group 1 aims to prepare young men in the following professional fields:

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, woodwork, technical drawing, plastics, ceramics, leather 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.

In general the industrial technology option prepares young men in the following types of occupations:

Employees in industrial relations departments of industries which include such work as employee training, employment, personnel, production, and accident prevention.

Students interested in this option will pursue courses during the freshman and sophomore years as outlined for the curriculum in industrial education.

INDUSTRIAL ENGINEERING

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 industrial engineering.

— MECHANICAL ENGINEERING MACHINE SHOP

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 industrial engineering are designed with these needs in mind.

Four-Year Curriculum

The four-year curriculum leading to the degree of Bachelor of Science in Industrial Engineering covers the basic engineering subjects founded on the physical sciences which are common to most engineering curricula. Specialized fields of study in 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 industrial 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 industrial engineering. 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.

INDUSTRIAL MANAGEMENT

Recognizing that there is a growing demand for men who are skilled in the profession of management, this curriculum is designed for the student who shows an aptitude for managerial work. Admission to the curriculum will be made by selection of outstanding students just before the end of their sophomore year. It is expected that most of the students entering this curriculum will continue with a fifth year of study leading to the Master's degree.

Students taking this curriculum will be expected to gain practical experience by summer employment in industry, and will be aided in obtaining the type of employment related to their course of study. This experience will be supplemented with plant visits to representative industries. It will be noted that this curriculum provides the student with more study in economics, marketing, psychology and safety than does the curriculum in industrial engineering. In the fifth year of study, emphasis will be placed on the study of human relations, manufacturing costs, administrative methods, labor problems, and fiscal policies.

The art of managing a business enterprise cannot be mastered by academic study alone, but the curriculum in industrial management is so constructed that the graduates will be unusually well prepared to understand the problems of management. This understanding will enable them to keep the goal of a position in management as their objective as they progress through advancement in industry.

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 combustion 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, woodworking 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 degree 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 applica-

tion 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, 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 Petroleum 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 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 ENGINEERING

Curriculum in ARCHITECTURE

First Semester	Credit	Second Semester	Credit
Architecture 101 (1-9) Architecture I	4	**Architecture 102** (1-9) Architecture I	4
Basic 101 (0-2)	1	**Basic (See page 40)** (0-2)	1
English 103 (3-0) Composition and Rhetoric	3	**English 104** (3-0) Composition and Rhetoric	3
Mathematics 102 (3-0) Algebra	3	**Mathematics 116** (4-0) Plane Trigonometry and Analytics	4
Mechanical Engineering 101 (1-2) Engineering Problems	2	**Mechanical Engineering 102** (1-2) Engineering Problems	2
Mechanical Engineering 105 (1-6) Bench Work in Wood	3	**Mechanical Engineering 106** (1-6) Cabinet Making	3
Military or Air Science (1-2)	1	**Military or Air Science** (1-2)	1
Physical Education 101 (0-3)	R	**Physical Education 102** (0-3)	R
	17		18

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.)

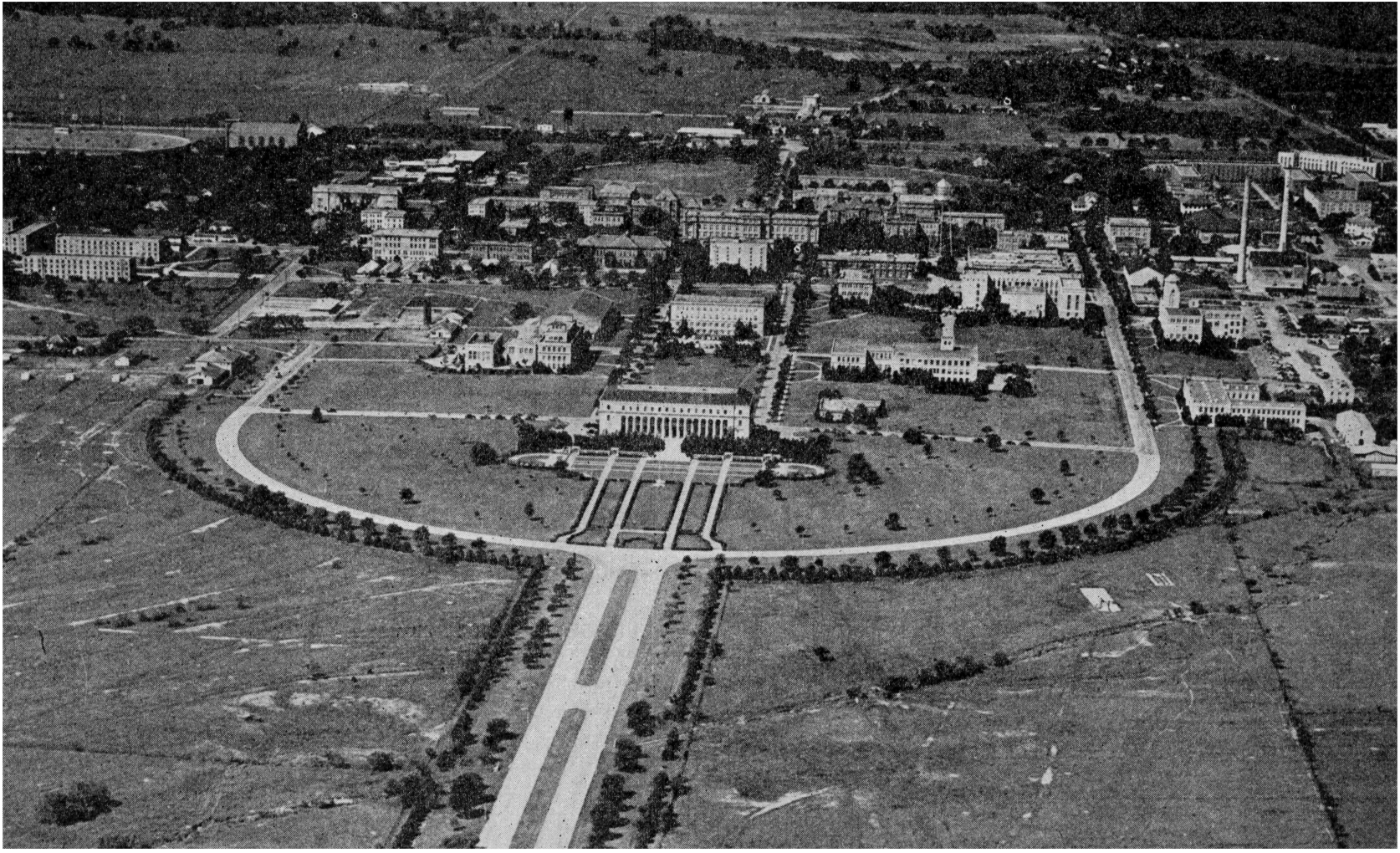
Basic 101 (0-2)	1	**Basic (See page 40)** (0-2)	1
Chemistry 101 (3-3) General Chemistry	4	**Chemistry 102** (3-3) General Chemistry	4
Engineering Drawing 111 (0-6) Engineering Drawing	2	**Engineering Drawing 112** (0-4) Engineering Drawing	1
English 103 (3-0) Composition and Rhetoric	3	**Engineering Drawing 124** (2-2) Descriptive Geometry	3
Mathematics 102 (3-0) Algebra	3	**English 104** (3-0) Composition and Rhetoric	3
Mathematics 103 (3-0) Plane Trigonometry	3	**Mathematics 104** (4-0) Analytics	4
Mechanical Engineering 101 (1-2) Engineering Problems	2	**Mechanical Engineering 102** (1-2) Engineering Problems	2
Military or Air Science (1-2)	1	**Military or Air Science** (1-2)	1
Physical Education 101 (0-3)	R	**Physical Education 102** (0-3)	R
	19		19

Curriculum in AGRICULTURAL ENGINEERING

(See page 53)

Curriculum in INDUSTRIAL EDUCATION

Basic 101 (0-2)	1	**Basic (See page 40)** (0-2)	1
Engineering Drawing 111 (0-6) Engineering Drawing	2	**Chemistry 106** (3-3) General Chemistry	4
Engineering Drawing 127 (1-3) Industrial Freehand Sketching	2	**Engineering Drawing 112** (0-4) Engineering Drawing	1
English 103 (3-0) Composition and Rhetoric	3	**Engineering Drawing 124** (2-2) Descriptive Geometry	3
Industrial Education 105 (1-5) Wood Craft	3	**Engineering Drawing 128** (0-2) Methods of Industrial Reproductions	1
Mathematics 101 (3-0) Algebra	3	**English 104** (3-0) Composition and Rhetoric	3
Mathematics 103 (3-0) Plane Trigonometry	3	**Industrial Education 106** (1-5) Sheet Metal	3
Mechanical Engineering 201 (0-3) Welding and Foundry	1	**Mechanical Engineering 202** (0-3) Welding and Foundry	1
Military or Air Science (1-2)	1	**Military or Air Science** (1-2)	1
Physical Education 101 (0-3)	R	**Physical Education 102** (0-3)	R
	19		18



THE SCHOOL OF
MILITARY SCIENCE

The participation of our government in foreign affairs makes it apparent that every American young man must recognize the necessity of coordinating his military and civilian career in view of the probability of his career being interrupted at some time by military service. The Army and Air Force ROTC courses supplement the student's civilian curriculum and offer him the opportunity of planning his civilian and military careers on a mutually supporting basis.

In the words of General Eisenhower, "ROTC is a ready-made course, designed and perfected to develop the qualities of leadership required in both military and civil enterprise."

The Agricultural and Mechanical College of Texas offers eleven Army and five Air Force ROTC courses, the most diversified military curriculum of any American college or university.

While the four-year ROTC course normally leads to a reserve commission, the Army and the Air Force rely upon this source for large numbers of their regular officers through the Distinguished Military Graduate program. Under this program, interested cadets who are outstanding in military aptitude and academic proficiency may apply during their junior year for a regular commission to be tendered upon graduation.

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 infantry, armor, and artillery. These are the raison d'etre of the Army—highly trained in specialties 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 have risen through one of the combat arms.

INFANTRY

Post-World War II hostilities have illustrated again that the infantry officer is the key to success in battle. He is the bulwark of Americanism whose steadfastness is the true measure of our national security.

— AERIAL VIEW OF A&M CAMPUS

As the lives of our fighting men are more highly valued than the equipment of war, competent leadership is imperative. To meet this need, the U. S. Infantry officer has developed throughout our history to his present status of personnel management specialist. Toward that end he undergoes a career-long balanced program of training that includes fine service schools and the best civilian colleges, as well as service in both command and staff capacities.

Important to all officers, the qualities of intelligence, manly fortitude, and physical endurance are imperative in an infantry officer. These qualities, rather than a particular academic course, are the qualifications of an infantry enrollee; he must prepare himself to be the Army's "jack-of-all-missions" without whom no mission of major importance can succeed.

FIELD ARTILLERY

The Field Artillery is the branch of the combat arms which provides concentrated, accurate fire power to crush the enemy on the battlefield. Artillerymen man the guns of the 105mm artillery battalions which form combat teams with infantry and armored units, and other types of larger artillery weapons to include the giant 240mm howitzers. Modern artillery sets up heavy concentrations of fire on enemy positions, supply lines and airfields, ranging from a few yards in front of the infantry to miles ahead of our attacking force. Their new tools include powerful guns and howitzers, rocket launchers, proximity fuses, range finding instruments, radar to locate enemy mortars, and many other marvels of scientific achievement.

No special academic course is necessary for enrollment in Field Artillery.

ARMOR

Armor 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. Armor personnel make up armored units from the infantry regimental tank company to the medium and heavy tank battalions in infantry and armored divisions. Armor 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 Armor.

ANTIAIRCRAFT ARTILLERY

The Antiaircraft Artillery is that part of the United States Army which provides land defenses against the attacks of hostile aircraft and guided missiles.

The activities of antiaircraft artillerymen range from the mobile, hard-hitting automatic weapons units with the Infantry and Armored Divisions to the heavy gun units of rear area antiaircraft defenses.

The weapons of the antiaircraft artilleryman include 50 caliber machine guns, 40mm automatic cannon, 90mm and 120mm guns. Some of the latest scientific advancements are used along with these weapons. These include electronically operated fuses which cause projectiles to explode at or near targets, radar and other electronic equipment for automatically locating and tracking targets, computing firing data, and instantaneously positioning guns by remote control, thereby permitting effective fire to be delivered at either seen or unseen aerial targets.

With the advent of rockets and guided missiles, an even wider field is being opened for the Antiaircraft Artillery. Varieties of rockets and guided missiles are being developed for the use of the Antiaircraft Artillery in coping with the higher speeds and altitudes of modern aircraft. Here the field is open for employment of electronic equipment which will cause rockets to locate and automatically direct themselves to targets at extremely high altitudes, speeds, and ranges.

The weapons and equipment of the Antiaircraft Artillery offer a wide appeal to the individual interested in the fields of science and engineering. 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 is both a combat arm and a service branch. Engineer combat troops in war have the primary mission of increasing the combat power of our forces by construction, which facilitates the movement of friendly troops, or destruction, which impedes the movement of the enemy. Engineer troops perform technical and permanent engineer work such as the construction of army-wide training facilities, cantonments, and airfields. They also supply engineer equipment and material to all branches of the army.

The Corps of Engineers is responsible for river and harbor development, flood control, canals, dams, and relief work in stricken areas in the United States and its possessions. These

responsibilities of the Corps cause the engineer officer to work closely with civil, electrical, hydraulic, and mechanical engineers in civilian life, many of whom hold reserve commissions in the Corps of Engineers or other branches of the Armed Forces.

The peace time record of the Corps is as distinguished and varied as its war record. Some of the monuments to the abilities of the Corps are evidenced in the Panama Canal, the Ledo Road, the Library of Congress, the Washington Monument, and the Alcan Highway.

Students pursuing any course of instruction leading to an engineering, technical, or scientific degree are eligible to enroll in the advanced engineer ROTC provided they meet the college academic requirements.

THE CHEMICAL CORPS

The Chemical Corps is charged with the investigation, research, design, and development of chemical warfare items. It is concerned with smoke and incendiary materials, toxic gases, all war gas defense appliances, and all biological warfare and radiological defense activities. It furnishes advice to all elements of the Department of Defense on chemical and biological warfare and radiological defense. It is responsible for the supervision of training of the army in chemical and biological warfare and radiological defense.

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 of outstanding executive caliber and sound business sense 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 expediters.

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 CORPS

The Ordnance Corps provides the Armed Forces of our country with materiel for firepower and mobility—rifles, machine guns, artillery, ammunition, tanks, and trucks. Ordnance materiel

ranges from time pieces to radar controlled automatic antiaircraft guns; from jeeps to ponderous tank transporters; from pistol cartridges to twenty-ton bombs, pyrotechnics, and guided missiles.

A large part of this type of materiel used by friendly foreign armies is supplied by the Ordnance Corps.

The Ordnance procurement program involves more expenditure of funds than all other Army services put together. Ordnance research projects require millions of dollars annually. The handling of its materiel requires the Army's largest depot system.

Ordnance officers perform work closely related with business and industry. They must be businessmen but the technical nature of Ordnance Corps activities calls for an engineering or scientific background. Mechanical and industrial engineers particularly will find a large amount of related work in the Ordnance Corps; and all engineers, physicists, and chemists will find Ordnance a fertile field in which to utilize their regular college courses both before and after graduation.

THE TRANSPORTATION CORPS

One of the youngest of all services, the Transportation Corps performs transportation functions for the Army and provides such transportation service to the Air Force or Navy as may be agreed to jointly. Transportation officers are the Army's traffic managers as well as highway and railroad executives. Constant improvement in the movement of men and supplies throughout the world challenges the initiative, leadership, and ingenuity of transportation officers in command or staff capacities, many of which are closely allied with civilian occupations.

The academic courses which more nearly parallel this type of work are industrial 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 signal intelligence, which comprises the production of intelligence from enemy communications, and 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 crypto-systems employed by the Army; the development and maintenance

of cipher machines, the promulgation of community security doctrine; the monitoring of friendly radio traffic in order to detect and correct violations of communications 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.

UNITED STATES AIR FORCE

The United States Air Force has become generally recognized as this country's first line of defense. Air defense of the United States, strategic bombardment of the enemy's source of supply, and air support of friendly ground forces are its chief missions.

The Air Force desires college trained men, with appropriate background, for further training in such technical fields as research and development, electronics, the various engineering fields, as well as in administration and logistics. Flying training is also made available, in grade, to those Reserve Officer graduates who qualify. There is no distinction, however, in the opportunities offered for promotion between the rated and nonrated officers.

There are five AF ROTC specialized options offered at this college: Administration and Logistics, Aircraft Maintenance Engineering, Air Installations, Armament, and Communications.

Consideration of the student's baccalaureate background is required in the selection of one of these options during the final two years of advanced air science. Reserve officers who elect to follow a military career after graduation may change their specialized career field in the event they demonstrate aptitude in other specialties.

ADMINISTRATION AND LOGISTICS

The need for air power as a modern combat arm has brought about a rapid growth of the Air Force into a huge organization, comparable to that of our leading civilian industries. In civilian industries are found personnel managers, business executives, statisticians, advertising agents, transportation and procurement executives, all of whom should be experienced administrators. Such duties in the Air Force are performed by those officers having Military Occupation Specialties in Administration and Logistics. The success of any mission assigned an Air Force unit is directly dependent upon the amount of supplies made available. It is the Logistics Officer on whom that unit relies for all necessary supplies and transportation incident thereto.

A non-technical specialty, any student pursuing such academic courses as business administration, business law, economics, general agriculture, and journalism will find this course closely related to his major study.

AIR INSTALLATIONS

Modern airpower, like modern industry, has expanded to such an extent that large, completely equipped air bases are constructed and maintained to contain this airpower similar to modern cities surrounding our industry. The modern city has its city engineer and city manager to maintain the necessities of present-day living. On the Air Force base this job is charged to the air installations officer. In accordance with these needs, students are selected from those taking academic courses allied to the same field of air installations such as industrial engineering, geology, geological engineering, and petroleum engineering.

Students pursuing this course have an opportunity to broaden their education in such subjects as building and structures, management, leadership, utilities, and planning of modern cities.

ARMAMENT

Armament is a specialized course designed to familiarize the officer candidate with the intricate mechanism of the lethal charges carried by combat craft, thereby playing one of the major roles of the Air Force in the accomplishment of its mission.

From the B-29 Superfortress with the first remote controlled turret to the present day massive B-36 with its radar controlled firing, the work of the Armament officer has been gradually approaching that of an electrical or radar engineer. In addition he is charged with the responsibility of such vital agencies as chemical warfare and radiological defense.

To the student this specialty affords an opportunity to further his education, knowledge, and training in the field of his major subject. To a reservist, training in armament will be of great assistance in the care and operation of various types of engineering equipment.

Any student pursuing courses leading to a degree in mechanical engineering, general engineering, chemistry, biology, bacteriology, or physics is eligible to enroll in the Armament course.

COMMUNICATIONS

In the modern "push-button" era, no one field plays a more important role in the success of the Air Force than that of communications. From visual and aural communication to that of radar, the Air Force is vitally dependent upon all phases of communication to accomplish its mission. As with the communication system of the nation, it forms the nerve center about which the Air Force operates as a massive body. In the flying and operation of modern aircraft the use of the radio, radar, and other electronic devices has become so reliable that the tasks of crew members have been greatly reduced. The responsible person for the maintenance and proper functioning of all these intricate mechanisms is the communications officer. To the officer graduate returning to civilian life, the close parallel of this course to the fields of engineering should be of great assistance in furthering his knowledge in his chosen field.

Any student pursuing a course towards a degree in engineering, physics, or electronics is eligible for this course.

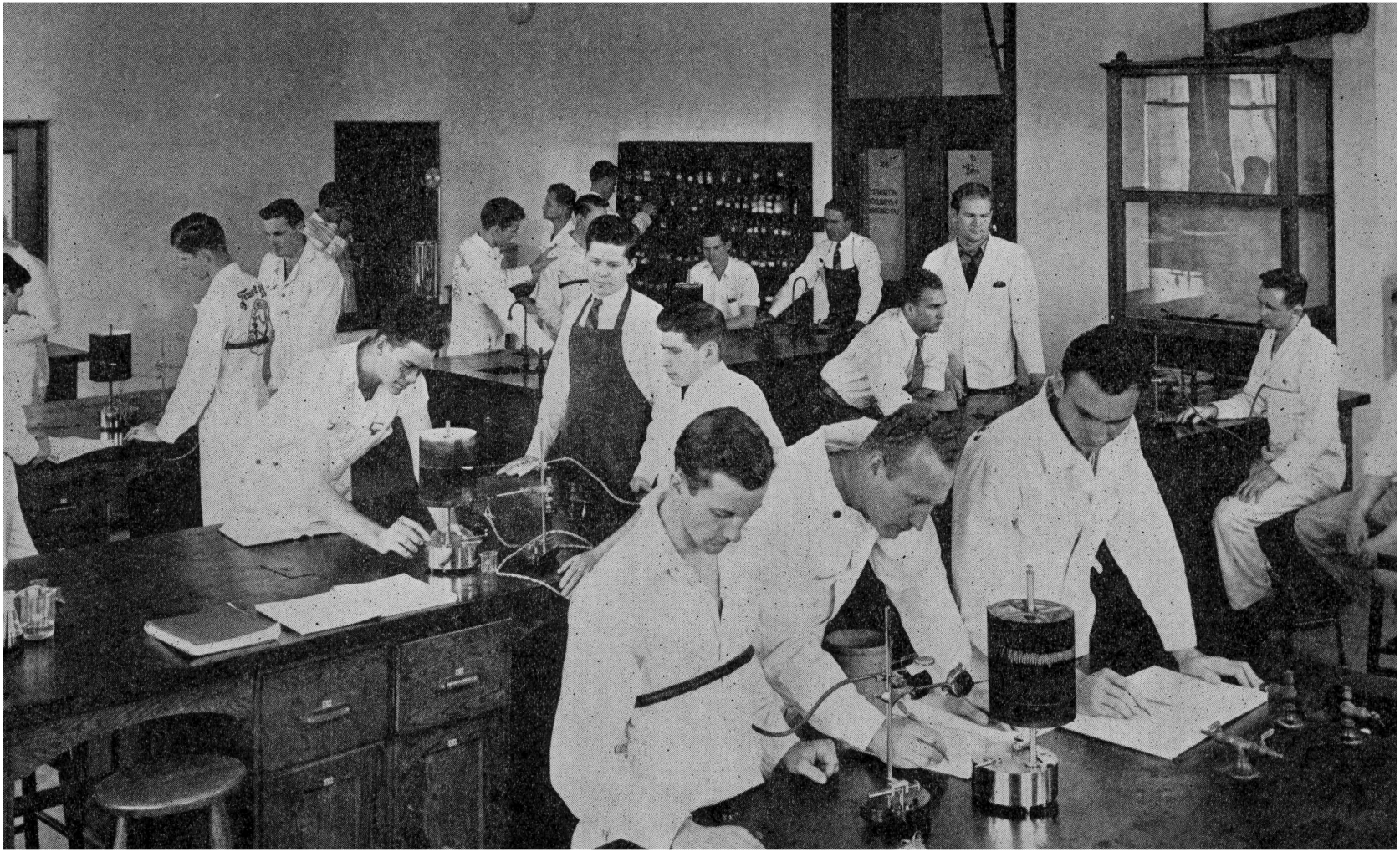
MAINTENANCE ENGINEERING

With each advent of new and more complex aircraft and relative equipment capable of more and more miraculous performance, the challenge to and importance of the aircraft maintenance officer increases.

Just as the air force commander is the brains of an air operation, the specialist in aircraft maintenance engineering is the backbone of that operation. The success or failure of any air mission in war or peace is commensurate with the efficiency of the maintenance activities. The aircraft maintenance officer has

the responsibility of keeping as many aircraft in operable condition at all times as is possible. In order to do this he must be thoroughly familiar with the maintenance methods and repair procedures for the equipment for which he is currently responsible, maintain the closest coordination with supply activities, and be capable of supervising an organization in accordance with the principles of good management. Of special significance to the reserve officer whose military activities are on a part-time basis is the close relationship to most of the engineering professions such as aeronautical, mechanical, and electrical. Since there are command or staff maintenance activities at every level of command, the opportunities for a career in this field of specialization are obvious.

Academic courses necessary for enrollment in Maintenance Engineering are: aeronautical, mechanical, chemical, electrical, or agricultural engineering; physics; or chemistry.



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. 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 Council 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 in public health problems particularly as regards the inter-transmission of the diseases of animals and man. Authoritative training is given in milk and meat hygiene (inspection).

Veterinarians find many opportunities for the private practice of their profession in Texas. Texas has some 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 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.

— VETERINARY PHYSIOLOGY AND PHARMACHOLOGY LABORATORY

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, and United States Air Force.

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.

ENTRANCE REQUIREMENTS

Admission to the School of Veterinary Medicine is granted only for the beginning of the fall semester. Those who apply for admission in September must file complete academic records, including courses in progress, and formal applications for admission by May 1 of that year. The academic records shall include the preparatory record, the college record, and a statement showing the applicant to be in good standing. The records must show the completion of at least 60 semester hours of credit in an approved college or university exclusive of military science.

These 60 semester hours must include a minimum of: 6 to 8 hours of inorganic chemistry, 6 to 8 hours of organic chemistry, 6 hours of zoology, 3 to 4 hours of botany, 6 hours of mathematics (algebra and trigonometry), 8 hours of English (6 hours must be in rhetoric and composition), 6 to 8 hours of physics, 3 hours of history (American government) and must be satisfactorily completed and the record on file in the Registrar's Office by May 1 of the year in which the student is asking for admission to the Veterinary School. Variations and/or substitutions in these required hours may be allowed with the advice and consent of the Dean of the School of Veterinary Medicine.

PRE-VETERINARY MEDICINE

The following two-year curriculum designed as preparation for admission to the School of Veterinary Medicine is offered. 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

FRESHMAN YEAR

First Semester	Credit	Second Semester	Credit
Animal Husbandry 107 .....(2-2)	3	**Basic (See page 40)** .....(0-2)	1
General Animal Husbandry		***Biology 101** .....(3-4)	4
Basic 101 .....(0-2)	1	General Botany of Seed Plants	
***Biology 105** .....(2-4)	3	***Biology 107** .....(2-4)	3
Invertebrate Zoology		Vertebrate 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	
***Mathematics 101** .....(3-0)	3	***Mathematics 103** .....(3-0)	3
Algebra		Plane Trigonometry	
Military or Air Science .....(1-2)	1	**Military or Air Science** .....(1-2)	1
Physical Education 101 .....(0-3)	R	**Physical Education 102** .....(0-3)	R
	18		19

NOTES: 1. Courses marked with an asterisk (*) must be satisfactorily completed by May 1 of the year in which admission is sought. The remaining courses, in animal production, must be completed by the beginning of the sophomore year in veterinary medicine.

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

LIMITED ENROLLMENT

Enrollment in the freshman year in the School of Veterinary Medicine is limited by facilities of the College to a definite number each year. Selection within the quota is based on scholastic record and professional aptitude, and admission to the preveterinary 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.

READMISSION

A veterinary student who voluntarily withdraws from College, or who is dropped from the rolls of the College for cause, forfeits his standing and must apply for readmission at any future time. A student who fails any of his veterinary courses may be required to withdraw from the veterinary school.

DIRECTORY

Individual	Position	Office
M. T. Harrington	President of the College	204 Academic Building
C. C. French	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
J. R. Bertrand	Dean of the Basic Division	Aggieland Inn
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. Heaton	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

DIRECTORY — (Continued)

Individual	Position	Office
W. M. Turner	Director of Singing Cadets and Aggieland Orchestra	Music Hall
Ray George	Football Coach	West Side of Stadium
J. L. Floyd	Basketball Coach	West Side of Stadium
R. C. Bell	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	107 Agricultural Engineering Building
F. R. Jones	Agricultural Engineering Department	215 Agricultural Engineering Building
J. E. Adams	Agronomy Department	310 New Agricultural Experiment Station Building
E. W. Napier	Air Science and Tactics Department	26 Ross Hall
J. C. Miller	Animal Husbandry Department	211 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	110 Biological Sciences Building
T. W. Leland	Business Administration Department	256 Business Administration Building
J. D. Lindsay	Chemical Engineering Department	308 Petroleum Engineering Building
F. W. Jensen	Chemistry Department	116 Chemistry Building

DIRECTORY — (Continued)

Individual	Position	Office
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	100 Old Agricultural Experiment Station Building
A. F. DeWerth	Floriculture and Landscape Architecture Department	201 Agricultural Engineering Building
C. B. Godbey	Genetics Department	303 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
A. R. Burgess	Industrial Engineering Department	3 Austin Hall
D. D. Burchard	Journalism Department	Kelly House
W. L. Porter	Mathematics Department	221 Academic Building
C. W. Crawford	Mechanical Engineering Department	103 Fermier Hall

DIRECTORY — (Continued)

Individual	Position	Office
H. L. Boatner	Military Science and Tactics Department	2-3 Ross Hall
J. J. Woolket	Modern Languages Department	119 Academic Building
D. F. Leipper	Oceanography Department	26 Science Hall
Harold Vance	Petroleum Engineering Department	106 Petroleum Engineering Building
C. E. Tishler	Physical Education Department	Gymnasium
J. G. Potter	Physics Department	22 Physics Building
G. M. Watkins	Plant Physiology and Pathology Department	105 Old Agricultural Experiment Station Building
J. H. Quisenberry	Poultry Husbandry Department	300 Agricultural Building
V. A. Young	Range and Forestry Department	2nd Floor Agricultural Engineering Building
A. A. Price	Veterinary Anatomy Department	103 Veterinary Anatomy Building
J. P. Delaplane	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