BULLETIN

OF THE

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

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FIFTY-FIRST

ANNUAL CATALOGUE

SESSION 1926-27

WITH ANNOUNCEMENTS FOR 1927-28



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I call therefore a complete and generous education that which fits a man to perform justly, skillfully and magnanimously all the offices, both private and public, of peace and war.—*Milton*.

CONTENTS

PART I

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. . . .

OFFICERS OF ADMINISTRATION AND OF INSTRUCTION

| GE |
|----|
| 12 |
| 13 |
| 14 |
| 21 |
| 25 |
| 26 |
| 28 |
| 29 |
| 29 |
| |

PART II

GENERAL INFORMATION

| Location | |
|-----------------------------------|--|
| Historical Sketch | |
| Organization | |
| Discipline | |
| Reserve Officers' Training Corps | |
| Military Organization | |
| Method and Scope of Instruction | |
| Health | |
| Athletics | |
| Religious and Moral Culture | |
| Young Men's Christian Association | |
| Library | |
| Buildings | |
| Equipment | |

PART III

ADMISSION, EXPENSES

| General Requirements | 62 |
|--------------------------|----|
| Scholarship Requirements | 62 |
| Advanced Standing | 64 |
| regionation | 66 |
| Session | 66 |
| Expenses | 67 |
| Uniform | 69 |

PART IV

COURSES OF STUDY

| | PAGE |
|--|------|
| Complete List of Courses | |
| Courses in the School of Agriculture | |
| Courses in the School of Arts and Sciences | |
| Courses in the School of Engineering | |
| Courses in the School of Veterinary Medicine | |
| Courses in the School of Vocational Teaching | |
| The Graduate School | |
| Curricula | |
| Description of Courses of Instruction by Departments | |
| | |

PART V

RESEARCH, EXTENSION, SUMMER SESSION, AND OTHER ACTIVITIES

٠.

| Agricultural Experiment Station | 243 |
|---------------------------------|------|
| Engineering Experiment Station | .249 |
| Extension Service | 250 |
| Forest Service | 252 |
| Summer Session | 254 |
| Fertilizer Control Service | 255 |
| Office of State Entomologist | .256 |

PART VI

REGISTER

| Register of Students | |
|-----------------------|-----|
| Summary of Enrollment | |
| Degrees and Honors | |
| Alumni Organization | |
| Index | 326 |

| 1927 | 19 | 928 | 1929 | | | |
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COLLEGE CALENDAR

1927

Entrance examinations, September 15, 16, 17. First term begins Wednesday, September 21. Registration of new students, September 21. Registration of old students, September 22. Registration of graduate students, September 23. Recitations begin September 23, 8 a. m. Opening exercises, September 23, 10 a. m. November 11, 11 a. m., observance of Armistice Day. Thanksgiving Recess, November 24, 25, 26. Christmas holidays begin Saturday, December 17, at noon.

1928

Christmas holidays end Monday, January 2, at reveille. Recitations resumed, Monday, January 2, 8 a. m. First term ends Friday, February 3. Second term begins Saturday, February 4. Registration for second term, February 2, 3, 4. Spring Recess, April 19, 20, 21. Commencement sermon, Sunday, June 3. Exhibition of departments and of work of students, Monday, June 4 Commencement Day, Tuesday. June 5

PART 1

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(12)

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| | |
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| | Instructor in Agronomy |
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*On leave, 1926-27

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|----|----------------------------|---|
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| | J. B. Baccus, B.S. | |
| | | |
| | H. H. Johnson, A.B. | Assistant in Mathematics |
| | | |
| | *On leave, 1926-27 | |
| | | |

Summary of Teaching Staff as of March 15, 1927

| Heads of Departments | |
|-----------------------|-----|
| Other Full Professors | |
| Associate Professors | 35 |
| Assistant Professors | 33 |
| Instructors | 62 |
| Assistants | 1 |
| | |
| | 197 |
| On leave | |
| | |
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THE AGRICULTURAL EXPERIMENT STATION

T. O. Walton, LL.D. _____President

STAFF (As of January 1, 1927)

Administration:

| Administration: | | |
|------------------------------|---------------------|--|
| *B. Youngblood, M.S., Ph. D. | Director | |
| A. B. Conner, M.S. | | |
| R. E. Karper, B.S. | | |
| J. M. Schaedel | Secretary | |
| M. P. Holleman, Jr. | | |
| J. K. Francklow | | |
| Chester Higgs | Executive Assistant | |
| C. B. Neblette | | |

Veterinary Science:

| Veterinary Science: | |
|---------------------|--------------|
| **M. Francis, D.V.M | Chief |
| H. Schmidt, D.V.M. | |
| J. D. Jones, D.V.M. | Veterinarian |

Chemistry:

| Chemistry: | |
|-------------------------------|---------|
| G. S. Fraps, Ph.DChief; State | Chemist |
| S. E. Asbury, M.SAssistant | Chemist |
| Waldo H. WalkerAssistant | Chemist |
| Velma GrahamAssistant | Chemist |
| Adah E. Sturgis, B.SAssistant | Chemist |
| E. C. Carlyle, B.SAssistant | Chemist |
| R. O. Brooke, M.SAssistant | |
| | |

Horticulture:

| Hornculture: | | | | | |
|--------------------|---------------|--|--|--|--|
| W. B. Lanham, M.A. | Chief | | | | |
| H. Ness, M.S | Berry Breedcr | | | | |

Range Animal Husbandry:

| J. | M.] | Jones, A.M. | | Chief; Sheep | and Goat | Investigations |
|----|------|-------------|--------|--------------|----------|----------------|
| Ĵ. | L, L | Lush, Ph.D. | Animal | Husbandman; | Breeding | Investigations |
| W | . н. | Dameron, | B.S | | | Wool Grader |

Entomology:

| Entomology: | | | | | |
|----------------------|----------------------------------|--|--|--|--|
| F. L. Thomas, Ph.D. | Chief; State Entomologist | | | | |
| H. J. Reinhard, B.S | Entomologist | | | | |
| W. L. Owen, Jr., M.S | Entomologist | | | | |
| | Acting Chief Foulbrood Inspector | | | | |
| Otto Mackensen | Foulbrood Inspector | | | | |
| Gillis Graham | Foulbrood Inspector | | | | |
| | | | | | |

Agronomy:

| | Agronomy. | |
|-------|----------------|-------|
| E. B. | Reynolds, M.S. | Chief |
| | Conner, M.S | |

| R. E. Karper, B.S. | Agronomist; Small Grain Research |
|----------------------------------|--|
| P. C. Mangelsdorf, Sc.D., Agrond | omist; Corn and Small Grain Investigations |
| | Agronomist; Cotton Breeding |
| | Assistant in Crops |
| | |
| Pla | nt Pathology: |
| J. J. Taubenhaus, Ph.D. | Chief |
| Farm and | Ranch Economics: |
| | Chief |
| *B Younghlood MS Ph D | |
| G L Crawford MS | |
| | Grazing Research Botanist |
| | Assistant, Farm Records and Accounts |
| ***I N Tate BS | Assistant, Ranch Records and Accounts |
| J. N. Tate, D.S | Assistant, Kaneb Keloras and Kelorats |
| | Home Research: |
| Jessie Whitacre, Ph.D. | |
| g | |
| | oil Survey: |
| | |
| | Soil Surveyor |
| | |
| 1. C. Reitch, D.S | |
| | Botany: |
| H. Ness, M.S | Botany: |
| D | ublications: |
| A D Jackson | Chief |
| | |
| | e Husbandry: |
| Fred Hale, M.S. | Chief |
| Deim | - IIah |
| Dair | y Husbandry: Chief |
| | |
| Poult | ry Husbandry: |
| | |
| R. M. Sherwood, M.S. | Chief |
| Agricult | ural Engineering: |
| Main | Station Farm: |
| | |
| | aboratory: (Near San Antonio) |
| | Apiculturist in Charge |
| | Queen Breeder |
| | ~ |
| | Control Service: |
| F. D. Fuller, M.S. | Chief |
| | Secretary |
| J. H. Rogers | Feed Inspector |
| | |
| | |

| W. H. WoodFeed | Inspector |
|-------------------------------|-----------|
| W. D. Northcutt, Jr., B.SFeed | |
| V. C. Glass, B.SFeed | |
| E. H. GarrettFeed | |

SUBSTATIONS

| No. 1, Beeville, Bee County: | |
|--|------------------|
| R. A. Hall, B.S | Superintendent |
| No. 2, Troup, Smith County: W. S. Hotchkiss | Superintendent |
| No. 3, Angleton, Brazoria County: R. H. Stansel, M.S. | Superintendent |
| No. 4, Beaumont, Jefferson County: R. H. Wyche, B.S. | Superintendent |
| No. 5, Temple, Bell County: H. E. Rea, B.S. | Superintendent |
| No. 6, Denton, Denton County | C 1 1 |
| P. B. Dunkle, B.S. | Superintendent |
| No. 7, Spur, Dickens County: R. E. Dickson, B.S | Superintendent |
| No. 8, Lubbock, Lubbock County: | |
| D. L. Jones Frank GainesIrrigationist and Fo | |
| | rest ivurserymun |
| No. 9, Balmorhea, Reeves County: J. J. Bayles, B.S. | Superintendent |
| No. 10, Feeding and Breeding Station, near Colle Brazos County: | ge Station, |
| R. M. Sherwood, M.SAnimal Husbandman in | |
| L. J. McCallFarm No. 11, Nacogdoches, Nacogdoches Count | |
| H. F. Morris, M.S. | |
| ***No. 12, Chillicothe, Hardeman County | : |
| J. R. Quinby, B.S | |
| No. 14, Sonora, Sutton-Edwards Countie | s: |
| E. W. Thomas, B.S. | |
| W. L. Black, D.V.MGrazing R V. L. Cory, M.SGrazing R | esearch Rotanist |
| ***O. G. Babcock, B.SCollaborati | |
| O. L. Carpenter | |

No. 15, Weslaco, Hidalgo County:

| W. | H. Friend | , B.S. | Superintendent |
|----|-----------|--------|----------------|
| М. | McPhail, | B.S. | Entomologist |
| | - | | |

No. 16, Iowa Park, Wichita County:

E. J. Wilson, B.S.Superintendent

Teachers in the School of Agriculture Carrying Cooperative Projects on the Station:

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*On leave of absence

**Dean, School of Veterinary Medicine

In cooperation with United States Department of Agriculture *In cooperation with the School of Agriculture

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THE ENGINEERING EXPERIMENT STATION

| T. | 0. | Walton, | LL. | D | | | | l | Presiden t |
|----|----|-----------|------|---|-----------|--------|----|--------------|-------------------|
| F. | C. | Bolton, I | B.S. | | Dean; | School | of | Engineering, | Director |

Advisory Council

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| J. B. Bagley, B.A. | Professor of Textile Engineering |
|--------------------------------------|---------------------------------------|
| E. J. Fermier, B.S., M.E. | Professor of Mechanical Engineering |
| C. C. Hedges, A.B., Ph.D., Professor | of Chemistry and Chemical Engineering |
| J. H. Hance, Ph.D. | Professor of Geology |
| Henry Norton June, B.S. in Arch. | Professor of Architecture |
| J. J. Richey, C.E. | Professor of Civil Engineering |
| D. Scoates, A.E. | Professor of Agricultural Engineering |
| O. W. Silvey, A.M., Ph.D. | |
| E. W. Steel, C.EProfessor | of Municipal and Sanitary Engineering |
| | ; |
| | , |

THE EXTENSION SERVICE

T. O. Walton, LL.D.President

STAFF (As of January 1, 1927)

Administration:

| Automsti | ation. |
|----------------------------|----------------------------------|
| Charles H. Alvord | Director |
| D. L. Weddington | |
| H. H. Williamson | State Agent |
| Miss Mildred Horton | State Home Demonstration Agent |
| Miss Bess EdwardsAssistant | State Home Demonstration Agent |
| W. H. Darrow | Editor of Extension Publications |
| S. C. Hoyle | Editor of College Publications |
| H. E. Randolph | Bookkeeper |
| Mrs. L. G. Bryan | Librarian |
| | |

Farm Demonstration Work:

| Farm Demonstration Work: | | | |
|--------------------------|-----------------------|--|--|
| George E. Adams | District Agent | | |
| George W. Barnes | | | |
| M. R. Bentley | Agricultural Engineer | | |
| A. W. Buchanan | | | |
| John R. Edmonds | District Agent | | |
| John T. Egan | District Agent | | |
| E. R. Eudaly | Swine Husbandman | | |
| S. C. Evans | State Club Leader | | |
| V. R. Glazener | Poultry Husbandman | | |
| George W. Johnson | | | |
| R. R. Lancaster | | | |
| E. A. Miller | | | |
| G. W. Orms | District Agent | | |
| R. W. Persons | District Agent | | |
| R. R. Reppert | | | |
| J. F. Rosborough | | | |
| A. L. Smith | District Agent | | |
| J. L. Thomas | | | |
| C. B. Webster | | | |
| T. B. Wood | District Agent | | |

Home Demonstration Work:

| Home | Demonstration Work: |
|------------------------|-----------------------------------|
| Mrs. Dora R. Barnes | |
| Mrs. Maggie W. Barry | Special Agent |
| Miss Lola Blair | |
| Miss Gertrude Blodgett | District Home Demonstration Agent |
| Miss Jennie Camp | District Home Demonstration Agent |
| Miss Bennie Campbell | District Home Demonstration Agent |
| Mrs. Bernice Claytor | |
| Miss Mamie Lee Hayden | District Home Demonstration Agent |
| Miss Sallie F. Hill | District Home Demonstration Agent |
| Miss Myrtle Murray | District Home Demonstration Agent |

| Miss | Altee S | Smit | th | District Home Demonstration | Agent |
|------|---------|------|-------|-----------------------------|-------|
| Miss | Juanita | a Sp | orott | District Home Demonstration | Agent |
| Miss | Helen | H. | Swift | District Home Demonstration | Agent |

Negro Extension Work:

| C. | H. | Walle | er | | State | Leader |
|----|-----|--------|----|--------|----------|---------|
| H. | S. | Estell | е. | | District | Agent |
| M | ſS. | M. E. | V. | Hunter | District | t Agent |

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THE FOREST SERVICE

| T. O. Walton, LL.D. | President |
|--------------------------|-----------|
| E. O. Siecke, B.A., B.S. | |
| Kathryn V. Daly | |

Division of Forest Protection:

| H. J. Eberly, B.S. | Chief |
|--|-----------------|
| H. F. Munson, B.S. | Assistant Chief |
| J. M. Cravey | |
| J. M. Turner | |
| E. B. Long | Inspector |
| J. W. Getsinger | |
| Forty patrolmen on duty seven months annually. | |

Division of Forest Management:

| W | . E. | Bond, M | M.S.F | bief |
|----|------|---------|-------|------|
| V. | V. | Bean | | rest |
| H. | А. | Budde | | rest |

Division of Farm Forestry:

*C. B. Webster, M.S.F.Farm Forester

*In cooperation with the Extension Service

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ADMINISTRATION OF STATE LAWS

Fertilizer Law

| G. S. Fraps, Ph.DState | Chemist |
|----------------------------------|---------|
| S. E. Asbury, M.SAssistant State | Chemist |
| W. H. Walker | |
| E. C. Carlyle, B.SAssistant | Chemist |
| T. L. Ogier, B.SAssistant | |

Foul Brood Law

| Foul brood La | W |
|----------------------------|------------------------------|
| F. L. Thomas, Ph.DChief of | Division; State Entomologist |
| H. J. Reinhard, B.S. | |
| W. L. Owen, Jr., M.S. | |
| S. E. McGregor | |
| Otto Mackensen | |
| H. G. Graham | |

Forestry Law

Administered by the Director of the Texas Forest Service.

Feed Control Law

Administered by the Director of the Agricultural Experiment Station.

OTHER MEMBERS OF THE STAFF

| S. G. Bailey |
|--|
| Board of Directors |
| Walter Wipprecht, B.S.ABusiness Manager |
| Rev. M. L. Cashion, A.BGeneral Secretary, Y. M. C. A. |
| Curtis VinsonPublicity Secretary |
| James SullivanBusiness Manager of Athletics |
| R. K. Chatham |
| G. A. Long, B.SAuditor and Supervising Accountant, Branch Colleges |
| J. E. WaggonerResearch Agricultural Engineer |
| Iva WhittakerAssistant Librarian |
| Bess AlexanderAssistant Librarian |
| Miriam RoeCataloguer |
| Ernestine ShowalterAssistant Cataloguer |
| V. B. EdgeAccountant |
| C. C. EdgeCashier |
| Louise Hillyer, B.AAssistant Registrar |
| Julian R. WrightAssistant Commandant |
| C. Luker, B.AAssistant Professor of Agricultural Education (Itin.) |

PART II

GENERAL INFORMATION

LOCATION

The College is situated at College Station, in the county of Brazos, and is 350 feet above sea level. The Houston & Texas Central and the International-Great Northern railroads run through the grounds, daily trains stopping at the stations, about 650 yards from the Academic Building. Students and visitors are advised to take trains arriving in day time.

College Station is a money order postoffice. Letters intended for persons at the College should not be directed to Bryan. At College Station there are telegraph and express offices.

HISTORICAL SKETCH

The Agricultural and Mechanical College of Texas, like the land grant institutions in other states of the Union. owes it origin to an act of Congress approved July 2, 1862. This act donated public lands to the several States and Territories which might provide colleges for the benefit of agriculture and the mechanic arts, and directed the Secretary of the Interior to issue land scrip to the States in which there was not the requisite quantity of public land. The act further directed that the money derived from this source should constitute a perpetual fund, the principal of which should remain forever undiminished, and the interest of which should be inviolably appropriated by each State to the endowment, support and maintenance of at least one technological college, whose leading object should be, without excluding other scientific and classical studies, and including military tactics, to teach branches of learning pertaining to agriculture and the mechanic arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life. It was further provided that the provisions of the act should be formally accepted by the State Legislature. By joint resolution approved November 1, 1866, the Legislature of Texas accepted the provisions of the congressional legislation, and accordingly there was issued to Texas scrip for 180,000 acres of public land, which was sold for \$174,000. This amount was invested in Texas 7 per cent gold frontier bonds. At the time of the opening of the College there was an addition to the fund of accrued interest amounting to \$35,000, which was invested in 6 per cent. State bonds.

In an act approved April 17, 1871, the Legislature provided for the establishment of the Agricultural and Mechanical College. A commission to locate the College was created by the Legislature. After careful investigation, the Commission accepted the proposition of the citizens of Brazos county, and located the institution on a tract of 2416 acres of land in that county. Finally, the constitutional convention of 1876 constituted the College a branch of the University of Texas, and in accordance with the terms of the Federal legislation, designated it as an institution for instruction in agriculture and the mechanic arts and the natural sciences connected therewith. The convention further provided that the Legislature

should have the right to levy taxes for the maintenance and support of the Agricultural and Mechanical College.

The College was formally opened for the reception of students October 4, 1876. By means of financial aid voted by Congress and of appropriations made by the State Legislature, there has been developed a considerable foundation at the College for instruction, for investigation, and for extension.

GOVERNMENT

The government of the College is vested in a Board of nine directors, appointed by the Governor for terms of six years.

ADMINISTRATION

The immediate regulation and direction of the affairs of the College are delegated by the Board of Directors to the President and the Faculty.

ORGANIZATION

The College comprises the following divisions:

- (1) Resident Teaching.
 - The School of Agriculture.
 - The School of Arts and Sciences.
 - The School of Engineering.
 - The School of Veterinary Medicine.
 - The School of Vocational Teaching.
 - The Graduate School.
 - The Summer Session.
- (2) Research. The Agricultural Experiment Station.
 - The Engineering Experiment Station.
- (3) Extension. The Extension Service.
- (4) Forestry. The Forest Service.

DEPARTMENTS

The College has now in operation forty departments of instruction, which are listed in Part IV under the heading "Courses of Instruction by Departments."

DISCIPLINE

Discipline is administered by the Commandant. The regulations are designed with the view of securing consistent conformity to the following

General Requirement.—Every student is expected at all times to conform to the ordinary rules of gentlemanly conduct; to be truthful; to respect the rights of others; to be punctual and regular in attendance upon all

GENERAL INFORMATION

required exercises; to apply himself diligently to his studies; and to have due regard for the preservation of College property.

Students are not allowed to leave the College grounds, either to visit neighboring towns or their homes, without first securing a furlough from the Commandant. Students who are deficient in two or more subjects and those who have accumulated an excess of demerits, temporarily lose all furlough privileges. When a student overstays a furlough his name may be dropped from the rolls.

Students are not permitted to keep motor vehicles or to make frequent use of motor vehicles kept by others.

For improper conduct, or failure to keep up with his studies, a student may at any time be required to withdraw from the College.

HAZING

Hazing is forbidden by the law of the State and by the College regulations. Every student, upon re-entering College after his first year, is required to sign a pledge that he will not engage in hazing while he is a student of the College. These pledges are to be witnessed by the parent or guardian of the student.

RESERVE OFFICERS' TRAINING CORPS

The act of Congress of June 3, 1916, known as the National Defence Act, provides for the establishment in civil educational institutions of units of the Reserve Officers' Training Corps (R. O. T. C.). The object of the Reserve Officers' Training Corps is best stated by the War Department in its Army Regulations No. 145-10 which govern the R. O. T. C. and is as follows:

Object.—The primary object of the Reserve Officers' Training Corps is to provide systematic military training at civil educational institutions for the purpose of qualifying selected students of such institutions for appointment as reserve officers in the military forces of the United States; the Reserve Officers Training Corps, is therefore, an important agency in making effective the plan for national defense.

Although the primary object of the Reserve Officers' Training Corps is, as stated above, to produce trained officers for the Reserve Officers' Corps, it is recognized that the basic military training received by the students who for various reasons fail to complete their qualification course for the Officer's Reserve Corps, is of considerable military value to the Government.

Educational Aim.—The Reserve Officers' Training Corps will add to the educational resources of schools and colleges and will give to the student a training which will be as valuable to him in his industrial or professional career as it would be should the Nation call upon him to act as a leader in its defensive forces.

MILITARY ORGANIZATION

All military instruction is under the immediate charge of the Professor of Military Science and Tactics. The officers of the Cadet Corps are selected from the Senior class, non-commissioned officers from the Junior and Sophomore classes.

The cadet corps consist of units of the Infantry, Field Artillery, Aviation, Signal Corps and Cavalry branches of the service. The instruction is divided into Basic and Advanced Courses. When entered upon, these courses become prerequisite to graduation, and carry credits corresponding to other college work.

BASIC COURSE

All students of this institution who are citizens of the United States and who are physically fit, are required to take this course unless excused by the Faculty for one of the following reasons:

(a) A minimum of six months' service in the Army, Navy, or Marine Corps during the World War.

(b) Completion of the Basic Course in an advanced unit elsewhere.

(c) Mature men entering College with advanced standing in a considerable number of subjects may, for reasons satisfactory to the Faculty, be exempted.

With the exception of those who enter with junior or senior standing, students who are exempted from the basic course in Military Science must substitute for it other work amounting to six term hours.

Obligations.—Members of the Basic Course are not obligated further than to pursue the course diligently and properly care for the equipment and apparatus used in the instruction.

Benefits.—Each student will be furnished commutation of uniform, which at the present time amounts to \$30 the first year and \$6 the second year, provided that amount has been expended for uniform, at the College Exchange Store.

ADVANCED COURSE

In order to continue in the R. O. T. C. for the advanced course, i. e., during the Junior and Senior years, a student must be selected by the President of the institution and the Professor of Military Science and Tactics and he must obligate himself to attend the advanced course camp as prescribed by the Secretary of War. This course, including the prescribed camp training, when entered upon, becomes a prerequisite to graduation.

Obligations.-The student obligates himself:

a. To pursue the course while at the College.

b. To attend the advanced course camp.

c. To take proper care of the equipment furnished him.

d. He is expected, though not bound, to accept a commission in the Officers' Reserve Corps, if offered one, unless prevented by unusual conditions.

Benefits.—a. He will receive commutation of uniforms at the rate of 30.00 for the first year and 6 for the second year.

b. He will be furnished subsistence now allowed at 30 cents per day from the beginning of his Junior year to the end of his Senior year. excepting during camp when he is given rations in kind. Commutations of rations will not be paid for more than two years.

c. While at camp he will receive 70 cents per day, and will also receive transportation to and from the camp.

d. After graduation he may be eligible for appointment as officer in the Reserve Corps.

e. Honor graduates are eligible for appointment as second lieutenants, U. S. Army, with only the physical examination necessary.

f. Graduates may be given opportunities to take competitive examinations for Regular Army commission.

Eligibility for Different Branches of the Service.—All students entering the College as Freshmen are eligible to enroll in the Infantry, Field Artillery, or Cavalry. All Freshmen enrolling for the four-year electrical engineering course or who have had the equivalent training prior to entering College are eligible to enroll in the Signal Corps unit. All Freshmen enrolling for a four-year course in civil engineering, mechanical engineering, chemical engineering, or electrical engineering are eligible for enrollment in the Air Service provided they submit at date of registration a letter signed by parent or guardian authorizing their enrollment in the Air Service unit.

WITHDRAWAL FROM THE R. O. T. C.

For satisfactory reasons, upon recommendation of the Professor of Military Science and Tactics, the authorities of the institution may discharge members of the R. O. T. C. from such corps and from the necessity of completing the course in military training as a prerequisite to graduation, except in cases involving withdrawal from the advanced course contract.

METHOD AND SCOPE OF INSTRUCTION

In all courses the fundamental idea is education in the applications of science to the affairs of life. With this idea in view, instruction is given in English, history, economics, mathematics. physics, chemistry and in other studies which lie at the foundation of a sound education and furnish the best preparation for the more technical studies of the several courses. Instruction is given by the use of text-books, by lectures and recitations, and by practice in the shop, field, laboratory and drawing room.

These practical exercises have a high educational value, and serve a useful purpose in fixing and rendering clear the ideas presented in the class room; they have also a practical value; for they are, in great measure, examples of just such problems as the graduate will encounter in the pursuit of his calling. For convenience of instruction, the classes are subdivided into sections of suitable size. Unannounced written exercises and tests are given at the discretion of instructors. Written examinations are held at the end of each term.

NON-RESIDENT LECTURES

At intervals throughout the session, men who have attained prominence in some branch of agriculture or engineering or in other fields are invited to address the students with the view of enabling them to see more closely the relation between their college instruction and the work they will be called upon to do after they enter upon their professional careers.

TRIPS OF INSPECTION

At suitable times, during the session trips of inspection, under the direction of some member of the teaching staff, are made to points of special interest. These trips have a high instructional value. and students of the upper classes are encouraged, though not required, to take them.

ELECTIVE STUDIES

Elective studies are to be chosen by the student under the advice and direction of a member of the Faculty designated for the purpose, and subject to schedule. The choice of elective for any year must be made by April 15 of the preceding year. In case of failure to comply with this requirement, the student will be subject to an assessment of one dollar, and his advisor will be authorized to assign subjects for his electives. The Faculty may withdraw any elective course unless it is elected by at least five students.

ABSENCES

When a student is absent from recitation a considerable number of times, his absences are taken into account in making up his term grade, unless the work missed is satisfactorily made up before the time set for the examination.

PETITIONS FOR CHANGES IN STUDIES

Petitions for substitutions, for change of course, or for other changes affecting the student's list of studies, must be submitted at least one week before the first day of the term. For making changes asked for at a later date there will be a charge of one dollar.

REPORTS

In order to keep parents systematically informed concerning the progress of their sons, reports showing class standing are sent out at the end of each term. A preliminary report is sent out soon after December 1.

HEALTH

The College buildings are situated on the crest of a wide divide, with sufficient slope in every direction to insure proper drainage. The health of the student body, as shown by the daily records of the institution, is all that could be expected. The hospital is a modern brick building, with steam heat. hot and cold shower baths, a capacity of sixty-five beds, and is equipped with operating room, x-ray and laboratory facilities. There is a staff of one full time physician, a technician, and four nurses.

Sanitary work is carried on throughout the entire year by a full time man, with especial reference to the eradication of mosquitoes, flies and other diseases bearing agencies.

Drinking water is supplied by wells varying in depth from 300 to 1300 feet. The milk supply for the College is obtained mainly from two College dairies which use tested cows, and the most modern methods of handling their dairy products. Bacterial examinations of both milk and water are made twice monthly, in order to detect any contamination or disease producing organisms which might be present.

The barracks are inspected daily and are kept neat and clean throughout. The rooms are well lighted and comfortable.

Drill, shops, field practice work, and outdoor athletic sports, furnish sufficient and varied exercise, and contribute very much to the maintenance of health and proper development.

ATHLETICS

The usual forms of athletic sports are encouraged. The College is a member of the Southwest Athletic Conference. The general rules of eligibility of this organization have been adopted by the Faculty. The Faculty Committee on Athletics is entrusted with the general oversight of athletics.

ATHLETIC TRIPS

For the purpose of attendance upon intercollegiate athletic contests, one trip by the student body will be authorized each year. Individual furloughs for that purpose are not granted to students in their first year of College attendance. Other students may be granted one such furlough each term provided they have in their last term of attendance passed in twothirds of a normal term's work and have earned at least eight grade points, and provided further that they have the written consent of parent or guardian addressed to the Commandant.

BAND

An attractive feature is a regularly organized cadet band of about one hundred pieces. Under the direction of a leader employed by the College, it furnishes music for occasions of social and military importance, gives open-air concerts in season, leads the corps in marching to dinner, and plays at dress parade. Prospective students who play any band instrument should communicate with Mr. R. J. Dunn, Leader, with reference to membership in this organization.

RELIGIOUS AND MORAL CULTURE

There is religous service in the chapel every Sunday for the Corps of Cadets and the residents of the campus. A Sunday School for Bible study, attendance at which is voluntary, affords additional help in the way of ethical training. Every effort is made through lecture and personal example to develop and protect good morals in the young men attending the institution.

YOUNG MEN'S CHRISTIAN ASSOCIATION

The Young Men's Christian Association occupies a handsome building in which ample provision is made for the meetings of the Association, for Bible study, for social gatherings, and for games. In the basement there is a well appointed swimming pool.

THE LIBRARY

The Library contains approximately 20,000 volumes, including over 5,000 bound public documents, exclusive of the files of the Federal and State Agricultural Bulletins. While the Library has hitherto been modeled chiefly along reference lines a very good reading Library has now been accumulated, and the careful selection of new books keeps the collection abreast of contemporary thought. With the exception of books of general reference, current periodicals, and books temporarily reserved by certain departments for required reading, all books are loaned for home use for a period of two weeks, with the privilege of renewal for the same length of time.

The Library receives about two hundred standard magazines, reviews and technical journals besides the leading newspapers of the State, and some journals of national importance. Files are kept of some of the most important of these periodicals.

The Library is a United States designated depository and receives copies of all Federal publications. A card index is maintained of all publications of the United States Department of Agriculture and of the State Experiment Stations.

The Library is open on week days and holidays from 8 a. m. to 12 m., from 1 p. m. to 5 p. m., and from 7 p. m. to 10:00 p. m. The Sunday hours are from 1:30 p. m. to 4:30 p. m.

PUBLICATIONS

The following publications are issued by the College:

The Bulletin of the Agricultural and Mechanical College of Texas.— This is a monthly publication which includes the bulletins of the Texas Engineering Experiment Station, the Catalogue of the College, and the announcement of the Summer Session.

The Daily Bulletin.—This is a small sheet issued daily during the regular session, which carries official notices and other announcements.

Bulletins of the Agricultural Experiment Station.—These bulletins are issued from time to time and contain reports of the results of the investigations of the Station.

The Texas Aggie.—The object of this publication is to keep the alumni informed as to the progress and activities of the College.

Extension Service Bulletins.—The Extension Service publishes from time to time bulletins on subjects of popular interest in the fields of Agriculture and home economics.

In addition there are issued twice a month an *Extension Service News* Letter of seasonal advice, and numerous circulars from time to time covering both matters of general agricultural interest and matters of unexpected development.

Student Publications.—The students of the College publish The Battalion, a weekly devoted to student activities and interests. The Senior Class publishes an annual, The Longborn.

EXPULSIONS

At a joint session of the Board of the Regents of the University of Texas and the Board of Directors of the Agricultural and Mechanical College held at College Station, Texas, from June 30 to July 1, 1896, the following order was made:

"It is ordered that hereafter, when any student shall be dismissed or expelled from either of the branches of the University of Texas on account of any immoral or other conduct which shall render him an unfit character to be matriculated in any of such branches, it shall thereupon be the duty of the branch so expelling or dismissing such student to immediately notify the other branches of their action, whereupon such other branches shall refuse to receive such student for matriculation, or even for examination, should he apply therefor, until the branch which has so expelled or dismissed him has rescinded or reconsidered its former action, and recommended such student for admission into such other branch at which he may apply."

DEGREES OFFERED

On the basis of resident study the College offers the degrees of Bachelor of Arts, Bachelor of Science, Doctor of Veterinary Medicine, and Master of Science. In addition, the professional degrees in engineering, Chemical Engineer, Civil Engineer, Electrical Engineer, Mechanical Engineer, are offered on the basis of acceptable professional experience.

The requirements for each of these degrees are stated on subsequent pages.

GRADUATION

A diploma of the College, with the degree corresponding to the course of study pursued, will be granted students who satisfactorily complete the requirements for graduation in one of the regular courses.

One of the requirements for graduation is that the student must earn each year a specified minimum number of grade points. To do this it will be necessary for him to get a grade above C in approximately one-half of his studies.

No degree will be conferred without a residence of at least one year at the College. The diploma fee is 7.50.

The fee for certificates in two-year courses is \$1.00.

HONORS

At the end of each session, students who have failed in no subject and who have accumulated a total of at least sixty grade points during the session are designated as "Distinguished."

CADET EXCHANGE-BOOKS AND OTHER SUPPLIES

The College runs an exchange store for the purpose of supplying necessary articles to students at the lowest possible cost. The store carries in stock textbooks, stationery, drawing instruments, regulation articles of the uniform, toilet articles. etc. These goods are sold at prices just sufficient to cover the cost and operating expenses.

STUDENT LABOR

The Legislature provides a fund by which a limited number of industrious young men may defray a part of their expenses by working for the College at such times as their regular duties will permit.

The rate of pay is made to depend upon the character of the work, and the manner in which it is performed. A student should not count upon earning more than \$40 a session.

TEACHER'S APPOINTMENT SERVICE

The Teachers' Appointment Service, under the direction of the School of Vocational Teaching, endeavors to assist graduates and students of the College who desire to teach in securing suitable positions, and to assist boards of education and other school officials in securing teachers. While no one is assured of a position, every reasonable effort will be made to place all worthy candidates registered for this service. Information obtained from professors and others is kept confidential. No charge is made for this service. Applicants should address the Dean of the School of Vocational Teaching.

CHANGES IN ANNOUNCEMENTS

The announcements made in this Catalogue are based upon present conditions, and are subject to change without notice.

BUILDINGS

BUILDINGS

The physical plant of the College includes the buildings described below and a number of smaller structures, with a total valuation of approximately \$3,000,000.00.

The Academic Building, erected in 1914, contains the administrative offices of the College and provides class room, laboratory and office space for several college departments.

Bernard Sbisa Hall, erected in 1912, has a seating capacity of 2750 and is provided with a modern kitchen, cold-storage, etc. It is named in honor of Bernard Sbisa.

Aggieland Inn, erected in 1925, designed as a hotel for the use of guests of the College and other visitors, contains 36 sleeping rooms with baths, large dining room, and separate lunch room with kitchen and service equipment.

The Young Men's Christian Association Building, erected in 1914, contains offices, auditorium, lobby, social rooms, bed rooms, swimming pool, locker rooms and billiard parlor.

Guion Hall, erected in 1918. contains a modern college auditorium seating 960 on the main floor and 940 in the balcony. It is named in honor of Judge John I. Guion.

The Assembly Hall, erected in 1923, contains an auditorium seating two thousand persons, and an ample stage, dressing rooms, and other accessories.

The Hospital, erected in 1916, contains ample accommodations for the needs of the College, including modern equipment and conveniencies.

The Exchange Store, erected in 1925, contains the retail supply store of the College, which occupies the entire ground floor. The second floor is occupied by the Campus Tailor shop, the Photograph Studio and the Western Union Telegraph office.

The Memorial Gymnasium, erected in 1924. It is primarily designed to house basketball courts as well as offices for the athletic staff and coaches; it contains ample lockers, shower baths, and other facilities for all field sports; lecture rooms, retiring rooms; examination rooms, and heating plant. The basketball section has a seating capacity of about three thousand.

The Power Plant, erected in 1917, provides heat, light, and ice for College purposes.

The Chemistry Building, erected in 1902, contains offices, class rooms and completly equipped laboratories for the department of Chemistry and Chemical Engineering.

The Military Science Building, erected in 1920, contains offices and class rooms for instruction in Military Science and Tactics.

The Physics Building, erected in 1920, contains offices, class rooms, lecture rooms, and completely equipped laboratories.

The College Utilities Building, completed in 1922, contains the office, supply store and warehouse of the Department of Buildings and College Utilities, as well as the electricians', painters', and plumbers' shops. The community store, telephone office and Fire Department are also housed in this Building.

The Agricultural Building, erected in 1922, contains administrative offices for the School of Agriculture, and offices, class rooms, and labortories for various agricultural departments.

The Agricultural Engineering Building, contains offices, class rooms and laboratories for the study of gas engines, tractors and farm machinery.

The Animal Husbandry Building, erected in 1916, contains a large display area surrounded by concrete seats seating 1600 spectators; also, offices and class rooms.

The Dairy Barn, erected in 1916, contains milking rooms with stalls for 98 cows. cooling, and separating rooms, etc.

The Dairy Judging Building, erected in 1923, contains a large area for judging stock as well as offices and class rooms.

The Dairy Test Barn, erected in 1926, contains twenty-four stalls for the College dairy cows undergoing official tests for milk and butter fats, with supplementary feed storage rooms.

The Science Building, erected in 1899, used until 1922 as the Agricultural Building. Remodeled in 1924 and now used for Biology, Geology, and Entomology. The building contains offices, laboratories, and class rooms serving the needs of these departments.

The Civil Engineering Building, erected in 1909, contains offices, class rooms, drafting rooms and laboratories.

The Electrical Engineering Building. erected in 1912, contains offices, class rooms, drafting rooms and laboratories.

The Mechanical Engineering Building, erected in 1919, contains offices, class rooms, drafting rooms and laboratories.

The Mechanical Engineering Shops Building, erected in 1922, contains a comprehensive layout of the following shop units—carpentry, pattern making machine forge and foundry.

The Textile Engineering Building, erected in 1904, contains offices, carding and spinning, warp-preparation machinery, weaving, cloth finishing machinery, designing and class rooms.

The Veterinary Hospital. erected in 1908, contains clinic rooms, stalls, dog rooms, feed rooms, medicine rooms, etc.

Francis Hall, erected in 1918, contains offices, class rooms and laboratories for the School of Veterinary Medicine. It is named in honor of Dr. Mark Francis.

The Serum Laboratory, erected in 1917, provides for the manufacture of hog cholera serum and contains preparation, killing, bleeding, defibernating and laboratory rooms.

BUILDINGS

The Research Chemistry Building, erected in 1909, is occupied by the divisions of Chemistry, Entomology, Plant Pathology, and Physiology of the Texas Experiment Station.

The Research Administration Building, erected in 1918, contains administrative offices and laboratories for the research division of the Texas Experiment Station.

The Extension Service Building, erected in 1924, contains administrative offices, library and mailing rooms for the agricultural extension work.

DORMITORIES

All dormitories are screened, well ventilated and provided with sanitary conveniences.

Gathright Hall, erected in 1876; named in honor of Thomas L. Gathright, the first president of the College.

Pfeuffer Hall, erected in 1887; named in honor of George Pfeuffer, a former president of the Board of Directors.

Austin Hall, erected in 1888; named in honor of Stephen F. Austin.

Ross Hall. erected in 1892; named in honor of L. S. Ross, a former president of the College.

Foster Hall, erected in 1899; named in honor of L. L. Foster, a former president of the College.

Goodwin Hall, erected in 1908; named in honor of Hon. G. I. Goodwin. Milner Hall, erected in 1911; named in honor of R. T. Milner, a former president of the College.

Legett Hall, erected in 1911; named in honor of K. K. Legett, a former president of the Board of Directors.

Mitchell Hall, erected in 1912; named in honor of Harvey Mitchell.

Bizzell Hall. erected in 1912; named in honor of W. B. Bizzell, a former President of the College.

Alpha Hall, a frame building, converted into and used as a dormitory. Beta Hall, a frame building, converted into and used as a dormitory.

The Cottage Group, erected in 1923; contains one hundred frame cottages housing two or three students each.

The Graduate Hall, erected in 1925, for the use of students of the Graduate School, as a dormitory and containing 32 sleeping and study rooms.

SEWERAGE SYSTEM

The College is provided with a system of sewers to which are connected the buildings of the campus. The outfall of the system is threefourths of a mile from the nearest College building and nine-tenths of a mile from the nearest recitation hall or dormitory.

GROUNDS AND GARDEN .

The garden, orchard, barnyards and campus are included in the inclosure east of the railroad stations. The campus consists of some twentyfive acres of, lawn, shrubbery and flowers. The orchard, vineyard. nursery and garden are located north and east of the Academic Building.

FARM

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The farm proper comprises about three hundred and fifty acres, and has the necessary barns, silos, and outhouses. The pastures contain about one thousand acres and furnish grazing for the College herds.

EQUIPMENT

ACCOUNTING AND STATISTICS

The department of Accounting and Statistics has laboratories equipped with calculators, adding machines, slide rules, and drawing tables.

AGRICULTURAL ENGINEERING

The agricultural engineering department has special laboratories for each of the following subjects: Farm machinery' farm motors, farm shops, automobiles, tractors, farm home utilities and concrete construction. In addition to this there is a drawing room for use of classes in farm buildings, irrigation and drainage. A hundred-acre farm is provided for practical work in the various subjects.

The farm machinery and tractor laboratories are housed in a building 160x100 feet, which is entirely taken up with up-to-date farm machinery and tractors, such as should be used on Texas farms. The machinery consists of different makes of plows, harrows. planters, cultivators, harvesters, threshers, seed cleaners and grinders.

The farm motor laboratory contains twenty-five farm gas engines, together with all apparatus necessary for testing same, and a supply of extra magnetos and carburetors.

The automobile and truck laboratory contains thirty-four six, eight and twelve cylinder motors, six automobiles, two trucks, a number of chassis, soldering and babbitting room, acetylene welding outfit, special ignition apparatus, storage battery charging and repair outfit, and a number of surplus magnetos and carburetors.

The concrete construction laboratory is equipped with cement and aggregate testing apparatus, together with moulds and forms for making such simple concrete structures as are found on the farm.

The farm home utilities laboratory contains a number of isolated electric light plants with their various accessories. home water supply systems and other equipment needed in the farm home.

The farm shop laboratory is well supplied with tools and equipment necessary for the teaching of this subject.

Equipment for special field work in terracing, drainage and irrigation has been provided.

AGRONOMY

The agronomy department has three well equipped laboratories. Two of these are used for instructional purposes in soils, and one for instructional purposes in farm crops.

The main soils laboratory is equipped with a centrifuge, shaking machine, Briggs filter, electric air pump, torsion balances, chemical balances, drying ovens, hot plates, compound microscopes, evaporimeters, soil capillary tubes, soil samplers and all the smaller equipment and chemicals for a modern soils laboratory.

The soil fertility laboratory is equipped for specialized instruction

in soils for the benefit of senior students who desire to specialize in this subject, and for graduate instruction in soils.

For soil survey instruction, the department has five plane tables equipped with alidades; also other miscellaneous equipment for this work.

The farm crops laboratory is equipped for general laboratory instruction in farm crops and also for specialized instruction in commercial grain grading. For the general laboratory study of farm crops the chief items of equipment are standard seed testers. dissecting sets, hand lenses, torsion banances, insect-proof and rat-proof grain bins. Type samples and specimens of all the important field and forage crops are kept in stock for study. For the work in grain grading the chief items of equipment are two Brown-Duvel moisture testers, a Wild-oat kicker, several complete sets of dockage sieves for determining dockage in the various kinds, classes and grades of grain for practice work in determining the grades.

The department has a modern greenhouse 67x25 feet, equipped for soil fertility, farm crops and plant-breeding work. For field study the department has 35 acres of land devoted to demonstration and experimental work in crops and soils. All of the important types and varieties of farm crops adapted to this section are grown for field study.

The department maintains a rather complete technical library, in which will be found practically all of the standard works and journals pertaining to agronomy, as well as the Experiment Station bulletins and reports.

ANIMAL HUSBANDRY

The animal husbandry department is equipped with the following breeds of live stock: Standard Bred, Thorough Bred, Morgan and Percheron and saddle horses; Shorthorn, Hereford, Aberdeen-Angus, and Brahmah cattle; Shropshire, Hampshire, Southdown, Rambouillet and Delaine sheep, Angora goats; and Duroc-Jersey, Poland-China, Hampshire, and Tamworth hogs. These breeds are represented by registered breeding animals in the case of horses, and both registered breeding animals and market animals—steers, wethers, and barrows—in the case of cattle, sheep and hogs, respectively.

On the Animal Husbandry farm there are four barns, viz., a horse barn, a beef cattle barn, a sheep barn, and a hog barn. The land on which the hogs and sheep are kept is divided into small fields and pastures. thus permitting forage crops and pasturage rotation for these animals.

ARCHITECTURE

The department comprises a large drafting room where students of the several classes work together, two small drafting rooms for special drafting classes, a well lighted large art room for cast drawing and art instruction, a library and lecture room. These rooms are furnished with adequate drafting tables and lockers, a large number of casts of architectural units and sculpture, a very complete collection of building materials and samples, a collection of library reference books and plates, a projection lantern and large screen wall for lectures with an adequate

collection of lecture slides and plates upon architectural history and the listory of art. The department subscribes to architectural magazines, among which are French and English standard publications. All this equipment is being increased as the needs of the department demand. Students of Architecture also have access to the equipment of the other departments whose work is associated with Architecture.

BIOLOGY

The department in its various branches is thoroughly equipped with apparatus for lecture room and for laboratory use. There are eight laboratories—one zoological, four botanical, one bacteriological and two research. All are amply provided with tables and other general apparatus.

For the use of elementary classes, the department is provided with 60 standard 2-power microscopes, with their usual accessories; charts and models of plants and animals; a fairly good collection of prepared specimens, and a herbarium of about 3000 mounted plants. For experimental work and demonstration in the class room, there is an excellent equipment of instruments of precision largely of French and German make. For use of more advanced workers there are 20 high-power microscopes of the best makes; 3 Leitz binocular dissecting microscopes; Reickert and Minot microtomes; imbedding ovens; a large and a small incubator; two steam sterilizers; analytical balances; and a full equipment of glassware, chemicals, stains and similar materials.

The library contains about 300 books of reference and several thousand separates, bulletins and special papers. The leading journals of botany, zoology, bacteriology, and mycology are also available to the student.

CHEMISTRY AND CHEMICAL ENGINEERING

The department has the usual laboratory facilities, including a vacuum system for rapid filtration, a compressed-air system for use with blast lamps, and a ventilating system. The laboratories are supplied with hydrant, cistern and distilled water. Each student is assigned to a lockdesk containing the necessary equipment. The large lecture room, with raised seats, has a seating capacity of one hundred and sixty.

There is a separate room for technical analysis and one for advanced industrial chemistry. The former is provided with vacuum and compressed-air systems, colorimeters, calorimeters, refractometers, Levibond tinometer, combustion furnaces, gas buretts, and other special apparatus used in technical analysis. The laboratory has the usual equipment for work in physical chemistry.

The department has a good reference library.

CIVIL ENGINEERING

The equipment in the civil engineering department provides for adequate laboratory instruction and practice in surveying, hydraulics, testing of engineering material, and in office work such as drafting and designing. For the work in surveying there is a good supply of transits, levels, plane-tables, compasses, and the smaller instruments used in such work.

The hydraulics laboratory contains water meters, meter testing apparatus, impulse wheels, weirs, weighing tanks, centrifugal pumps, hydraulic ram, current meters, and other instruments for hydraulic tests and measurements.

The laboratory for testing engineering material such as steel, wood, cement, etc., contains one universal testing machine of 100,000 pounds capacity, one of 50,000 pounds and one of 20,000 pounds. There is also one torsion machine having a capacity of 50,000 inch pounds. For testing cement and sand, there are the usual briquette molds, tension machines, and other apparatus for making tests of fineness, soundness, and other properties of cement.

The road materials laboratory is well equipped with apparatus for testing both bituminous and non-bituminous highway materials. For non-bituminous materials there are a diamond core drill, diamond saw, Dorry hardness machine, Page impact machine. Deval abrasion machine and other similar equipment. For testing of bituminous materials and pavement samples the department is especially well equipped, having practically all of the standard apparatus for such tests.

In addition to laboratory and drafting room facilities there is a well furnished library of books and periodicals on civil engineering and related subjects. This library is in the Civil Engineering Building and is available for the use of students as well as instructors.

DAIRY HUSBANDRY

The department controls a complete dairy farm of 593 acres of land, the operations of which are devoted to the growing of feed crops, and the preparation and maintenance of permanent pastures for the dairy herd. Two hundred and twenty-five acres are under cultivation, the remainder being devoted to pasturage.

Modern machinery is used by this department, including breaking plows, cultivators, and harvesting machinery.

The herd consists of 161 animals, including cows, calves and bulls, of which there are 84 pure-bred Jerseys, 53 pure-bred Holsteins, 9 purebred Ayreshires, 5 pure-bred Guernseys, 3 pure-bred Dutch Belted. and one pure-bred Red Poll. The milking herd usually includes about 80 cows, which are housed in a modern dairy barn constructed of tile and concrete, and furnished completely with modern barn equipment.

The dairy manufacturing equipment is housed in a new tele-stucco building. Equipment and machinery necessary for the manufacture of butter and ice cream are available, including a modern six ton York refrigerating unit; glass lined mixing vat; motor drive homogenizer; motor drive horizontal brine freezer; power churn, and sterilizer.

DRAWING

This department is located on the fourth floor of the Academic Building. It occupies three large drawing rooms, three recitation rooms, offices etc., all of which are especially well ventilated, heated and lighted.

The department is fully equipped with necessary furniture' models, etc. For illustrative purposes there is in use in the department all modern apparatus for the draftsman, such as electric blue printing machine, universal drafting machine, pantograph. ellipsograph, etc.

A reference library of the best works on drafting, illustrating, etc. is kept in the department for the convenience and use of students.

ELECTRICAL ENGINEERING

The electrical engineering laboratories comprise three electrical machinery laboratories, a measurements laboratory, a standardizing laboratory, a photometric laboratory, a storage battery room, a storage battery repair room, a communication laboratory for the telephone, telegraph and radio work, a work shop, two rooms for building and repairing electrical machinery, and an instrument room.

The electrical laboratories are supplied with 2300 volt, three phase, 60 cycle power from the College power station. Alternating current at 110 and 220 volts is obtained through transformers. Direct current is supplied by two motor-generator sets located in the machinery laboratory. The small set consists of a 2300-volt, 50-horse power induction motor direct connected to a 35 kw., 125-volt, compound wound direct current generator. The larger set consists of a 2300-volt, 100-horse power synchronous motor direct connected to two 35kw., 250-volt, Dobrowolsky, three-wire direct current generators, so arranged that they may be operated independently or connected in series for obtaining 500 volts. A three panel switchboard controls the above equipment and the feeders to the 6-panel switchboard used for the distribution of power within the machinery laboratories and to the switchboards located in the other laboratories. Throughout all laboratories the distribution of power is controlled by a plug-and-socket system thus securing absolute flexibility.

The equipment of the machine laboratories is as follows: Two street car motors mounted on a single shaft with prony brake attachment, and equipped with both a hand controller and a master controller operating an electro-pnuematic system, twenty-eight direct-current machines ranging in size from $1\frac{1}{2}$ horse-power to 20 kilowatts and provided with various means of speed and voltage control; eight alternators ranging from $2\frac{1}{2}$ K. V. A. to 30 K. V. A.; three converters including one of the split pole type; a number of induction motors including practically all standard types; a number of constant voltage transformers; a constant current transformer; induction regulators; and several types of automatic motor starters.

The laboratories are provided with a total of more than 200 voltmeters, ammeters, wattmeters, and meters for measuring other electrical quantities.

The high tension laboratory contains a 100 K. V. A. 200,000-volt transformer. with regulator for varying the voltage, a 125 cm. spark gap, a crest voltmeter with a number of auxiliary devices.

The electrical measurements laboratory has a full equipment of the apparatus needed for the study of the fundamentals of electrical measurements. The equipment includes the following: Various types of Wheatstone bridges; a Kelvin double bridge; a Cary-Foster bridge; magnetometers, dynamometers; portable, semi-portable and wall galvanometers; astatic galvanometers; universal tangent galvanometer; calorimeters; sechometer; influence machine; electrostatic apparatus; spark coils; apparatus for testing magnetic qualities of iron and steel; standard resistances; standard cells; physical balances; universal shunts; resistance boxes; variable inductances and capacities; portable storage batteries, and various minor equipment.

The standardizing room is equipped with a Leeds and Northrup potentiometer and its accessories; Weston standard laboratory voltmeter, and millivoltmeter with shunts; a Kelvin balance; Westinghouse precision ammeter, voltmeter, and wattmeter, and standard resistances and standard cells. In this room there are also a three-vibrator oscillagraph with photographic attachment, and a motor generator set consisting of direct current motor direct connected to a set of four alternators giving a fundamental wave, and the third, fifth and seventh harmonies, so arranged that any desired phase relation may be obtained between each of the harmonies and the fundamental.

The photometric laboratory has several well arranged dark rooms suitable for various kinds of photometric work. They are equipped with Lummer-Brodhum and flicker photometers which can be used to measure the distribution of light from any angle, an Ulbricht sphere, a Taylor reflectometer, and an assortment of portable photometers making possible complete tests of illuminants and illumination.

The equipment of the communication laboratories consisting of both manual and automatic telephone switchboards and accessories has been augmented by the admission of a variable oscillator, a 250-mile artificial transmission line and an assortment of delicate measuring instruments. the gift of the Bell Telephone System. The laboratories contain a complete assortment of radio telephone and telegraph equipment including wave meter, decremeters and various types and sizes of vacuum tubes. The College operates a 500 watt broadcasting station from which regular programs are sent out. This station is available for use of instruction also.

The College maintains a complete power plant to furnish power, lights, water, heat, ice and refrigeration, and both this and the motors which operate the machinery of the various departments are available for study and test by the student.

Students are encouraged to read the literature pertaining to their professions, and the latest books on electrical engineering and a selected list of the best technical magazines are kept in the department library and are available for reading and reference work.

ENTOMOLOGY

The department of entomology maintains two laboratories, one of which is equipped with dissecting and compound microscopes, and the other with compound microscopes. In addition, the department main-

tains an insecticide laboratory equipped with the more important insecticides and spray machines, powder guns, etc.

The department has several insect models illustrating the antomy of the more common insects, together with a series of charts illustrating the life histories of insects. This equipment is supplemented by a baloptican and several hundred lantern slides illustrating the anatomy and life history of the most important insects.

The equipment in apiculture consists of a bee house and workshop containing honey extractors, wax presses, wiring device and different makes of beehives. In addition to this the department has a small apiary, where the student can familiarize himself with the practical operations of bee-keeping.

For life history work, the department has an insectory equipped with breeding cages, a hydrothermograph, and all necessary equippment for working out the life histories of insects.

A library is maintained which comprises two hundred and eighty volumes of technical books on entomology. This library contains full sets of the Transactions of the American Entomology Society, Genera Insectorum, Journal of the New York Entomological Society, Entomological News, The Canadian Entomologist and Psyche.

In addition, a reading table is maintained, on which are kept the recent publications on economic entomology and apiculture.

GEOLOGY

The department of geology is the recipient of several valuable donations which are highly prized additions to its other material. A complete set of government maps and topographic sheets and a fairly complete set of geologic folios besides most of the reports of the United States Geological Survey are available for reference and class room work. In addition to the mineral rock collections which the department has purchased, there is the donation of Mr. F. W. Steber of Dallas, a collection which includes a variety of ore and rock specimens. Several oil companies have contributed pieces of drilling equipment such as rock bits, wrenches. fishing tools, strainers, valves, a steel oil tank, etc. Other gifts include well cuttings and cores, lead, zinc, iron and sulphur ores. Laboratory facilities are being extended as rapidly as possible so as to make this material available for student use.

HORTICULTURE

The class-room work in horticulture is considerably strengthened by practical exercises in orchards, gardens, and laboratories.

There are now growing on the horticultural grounds consisting of 60 acres, orchards containing the standard varieties of peaches, pears, plums, pecans, persimmons, grapes, figs, blackberries and dewberries.

In addition to the commercial gardens, where vegetables are grown for use at the Mess Hall, plot of ground has been set aside on which a great variety of vegetables are grown under the direct supervision of the student. There is maintained in co-operation with the American Rose Society, a rose garden, which, when completed, will contain about eight hundred varieties. There is also to be found on the horticultural grounds a rather complete collection of ornamentals.

The department has ample equipment for the control of insects and diseases, including various types of sprayers.

The collection of lantern slides owned by the department which are used for illustrating different subjects, including those in landscape art, vegetable gardening and nut culture, is growing rapidly, there being now over twelve hundred.

For work in plant propagation, in forcing early vegetables and in plant breeding, and in floriculture. the students have the use of one of the finest greenhouses to be found in the Southwest. In addition, the department has an excellent greenhouse on the horticultural farm and modern laboratories and cold storage facilities in the agricultural building.

MECHANICAL ENGINEERING

In the carpenter shop are excellent work benches of special design, equipped with quick-acting vises, and the tools ordinarily found in a carpenter's kit, each student having a set of edged tools assigned to him alone. In the mill room are a number of up-to-date separately motor driven wood working machines such as jointer, surfacer, mortiser, band saw, rip saw, cross cutting saw, with dado, etc. A full outfit for glueing, veneering and wood finishing is also valuable.

The pattern shop equipment consists of pattern maker's benches, equipped with vise, drawers, lockers and an outfit of hand tools; and in addition there is an assortment of special tools in the tool room, as well as a number of small turning lathes, pattern maker's lathes, circular saw, jointers, grinder, sander, wood trimmers, etc.

The foundry is equipped with bench molding stands, with all necessary shovels, riddles and small tools, a number of floor molding kits, flasks of all kinds, a core machine, a core oven, a squeezer, a Combs gyratory riddle, a brass furnace with all necessary accessories, a No. 1 Whiting Cupola with electric-driven blower for blast, and a Clark blast meter for measuring the amount of air supplied. The other accessories for the cupola, a tumbling barrel and a grinder are also included.

The forge room equipment consists of one electric power hammer, emery wheels, forty new forges, all having power blast and exhaust, the necessary anvils, tongs, and other small tools usually found in a forge shop. An acetylene generator supplies the fuel to operate the oxy-acetylene torches for the use of students in their practice work. A Lincoln arc welder is also installed for the use of the students in the practice of arc welding both for repair and construction.

In the machine shop the equipment is very satisfactory. It consists of a full line of lathes, grinders, milling machines, automatic machines, planers, shapers, etc., many having individual motor drives.

The tool room contains a large assortment of taps, dies, drills, reamers,

chucks, and other machine accessories, as well as the small tools for laying out work accurately and properly measuring the same; calipers, micrometers, steel scales, punches, surface plates. Electric portable drills and grinder are also included in the equipment.

The engineering laboratory contains steam engines, gasoline engines, steam turbines, steam and power pumps, fans, water motors, a hot-air engine, condensers, air pump, injectors, and a full line of indicators, gauges, pyrometers, thermometers, tachometers, speed indicators, weirs, pitot tubes, prony brakes, platform scales, etc., for conducting tests, as outlined in course 403, 404. A recent addition to the equipment is a testing rack for internal combustion motors, an automobile testing floor; a locomotive air compressor; also a semi-Diesel oil engine made available through the courtesy of the San Antonio Machine and Supply Company. A triple expansion engine with condenser, cooling tower, and all necessary auxiliaries have been installed during the past year. Through the cooperation of the General Electric Company an electric dynamometer has been installed. This is of such design as to be available for testing the performance of internal combustion engines, pumps, fans, electric motors, etc.

Another addition to the equipment of this department is a railway 'locomotive in full running condition, which has been supplied through the courtesy of the Missouri Pacific Lines.

In addition, the laboratory has the use of all apparatus of the power plant, consisting of simple and compound engines, steam turbines, condensers, pumps of several different kinds; also the boilers of well known makes and different types with automatic stokers. The equipment of the steam plant makes available larger engines, condensers, air compressors, air lift pumps, etc., for instruction and test purposes.

For the class-room instruction there are numerous full-size wooden and metal models of different kinds of engines, also sections of actual air-brake equipment and other appliances and fittings for railway and power plant equipment.

Besides the above mentioned equipment, might be mentioned the fact that manufacturers have in some instances deposited or donated for the use of the department a number of standard appliances, which prove valuable to the student.

MILITARY SCIENCE AND TACTICS

The department has full equipment for Infantry, Field Artillery, Signal Corps, Cavalry, and Air Service as follows:

Infantry.—The infantry is equipped with rifles, pistols, machine guns, automatic rifles, one-pounder guns, trench mortars, hand and rifle grenades, gallery rifles, infantry packs, ammunition for all arms, and field engineering tools. Besides these arms and equipment, the infantry has facilities at hand to use all of its equipment, including an indoor gallery range and a 1,000-yard outdoor rifle range.

Field Artillery.—One 75 mm. battery complete, consisting of four 75 mm. guns, 8 caissons, 10 limbers, 2 battery and store wagons, 2 store lim-

bers, battery reel cart, 68 horses, harness and saddle equipment for all horses, and all accessories, spare parts and tools; also included in the equipment are one 155 mm. Howitzer with limber and caisson, 1 five-ton caterpillar tractor; 1 F. W. D. ammunition truck, one White reconnaisance car. The artillery equipment also includes four Browning machine guns and a complete supply of fire control instruments, such as B. C. telescopes, range finders, aiming circles, trench periscopes, prismatic compasses sitogoniometers, and an assorted supply of smaller instruments, including drawing instruments, slide rules for field artillery computations, compasses, stop watches and telephone equipment.

Cavalry.—Sixty sets of cavalry equipment consisting of saddle, saddle blanket, bridle, saddle bags, rifle scabbard, lariats, picket pins, sabres, sabre scabbard, feed bags, grain bag, halter and halter tie rope. Two pack outfits complete, consisting of a aparejo, corona, manta, lair sling and lash ropes; 60 cavalry horses; 2 pack mules; 4 draft mules; 1 wagon escort; harness.

Air Service.—One airplane and accessories; 1 Liberty motor, complete; one Wright motor (Hispano Suiza), complete; 1 rotary motor, complete; tools for overhauling motors and repair of airplanes; machine guns, aerial, 3 types; aerial machine gun sights; bombing sights; dummy drop bombs; radio sets, ground and airplane; airplane instruments; airplane propellers, airplane radiators, magnetos, carburetors.

Signal Corps.—Radio telephones; radio telegraph; military telephones and switchboards; automatic telephones and switchboards; wavemeters; batteries; buzzer instruction sets; service buzzers, buzzerphones; amplifiers; crystal receivers; spark transmitters; commercial telegraph sets; repeaters; tools, equipment and supplies necessary for installation and repair of communications equipment; literature and books for conducting technical courses in Signal Corps work.

PHYSICS

The main lecture room of the Physics Building has a seating capacity of 250. It is equipped with amphitheater seats. motor-driven blinds for darkening the room, and with a large lecture table provided with gas, water, and an electric switchboard. The blinds and lights of the room are controlled from the switchboard.

A smaller lecture room, having a seating capacity of 50, contains a lecture table equipped with water, gas, and a switchboard. Both of these lecture rooms are in direct communication with the preparation room.

The apparatus room of the first floor is equipped with a five-panel switchboard supplied with 110 and 220-volt, alternating current from the College power system, and with 110 and 220-volt direct current from a 20 kw. motor-generator in the basement. By a plug-and-socket system either alternating or direct current can be distributed by individual lines to any part of the laboratories and to the lecture rooms.

One of the two laboratories of the first floor contains sixteen tables,

each supplied with water, sink and gas. It contains also tables for sensitive balances. The other laboratory, designed for electrical measurements, is provided with numerous well distributed outlets for separate electrical lines to the switchboard.

The shop. also on the first floor, is equipped with a motor-driven planer, lathe, rip saw and drill press; stock material and the usual metal and wood working tools.

The basement consists of one general laboratory; ten smaller laboratories for special work, and equipment room for the motor-generator, **a** storage battery room, a general store-room and a store-room for chemicals.

In the two larger laboratories are fourteen tables mounted on masonry piers which are free from the floor. These tables may be used either for general practice or for special work. Each table is supplied with gas and a separate electrical line to the switchboard.

Two of the smaller laboratories are black and suitable for photometric work. Another 40x20 feet is suitable for general experiments in light.

RURAL SOCIOLOGY

The department has an extensive library of State and Federal reports and bulletins, together with clipping files, and books giving accounts of various forms of social work. It also has a number of maps and charts illustrating in a graphic manner many questions connected with community organizations and development. Apparatus for working out the laboratory problems peculiar to this field are available.

Connections have been established by the department for giving the students practical contact with local and State social problems, especially in the field of community organizations.

TEXTILE ENGINEERING

For yarn manufacture there is ample equipment necessary to produce carded or combed yarns, and with its machines for making chain or sized warps of either single or double yarns.

In the weaving room there are fourteen Northrop looms, and one Stafford loom, which are entirely automatic, and two plain looms for ordinary plain goods. There are two dobby looms, with box motion, to insert four colors for filling; one dobby loom for terry towels; one dress goods loom. with dobby and boxes for making seven-colored pattern; one loom for weaving narrow Jacquard dress goods' one Jacquard loom for weaving table covers and one for fancy towels.

The finishing machinery is for ordinary ducks, sheetings or drills, and consists of an inspecting machine, railway sewing and rolling machine, folder and bale press.

VETERINARY ANATOMY

The laboratory of anatomy has a number of mounted and unmounted skeletons of the domestic animals, and about twelve sets of disarticulated skulls. There are a number of preparations of muscles and ligaments, both dry and wet specimens. There are also preparations of the brain, eye, feet and other organs preserved in formaline and a number of charts and papier-mache models. There are the usual miscroscopes, microtomes, embedding apparatus, strains, reagents, and apparatus used in histology and embryology, and five sets of sections showing the embryology of the chick and the pig.

VETERINARY MEDICINE AND SURGERY

The class-room work, practice and clinics, are largely conducted at the Veterinary Hospital, which has a large operating room equipped with operating tables for large and small animals, stocks, casting harness, and instruments for operations and treatment of diseases of live stock. A dispensary which is stocked with necessary drugs and biologics is maintained. Facilities for keeping records of each case are provided; and complete records are stored in fireproof vaults for future reference. There are wards for sick dogs and other small animals. Provision is made for isolation of animals with infectious diseases and transmissible skin diseases.

A large barn, 50x120 feet, is used for keeping horses, mules, cattle, sheep and goats which are being treated. There are also several other barns and small houses used for isolating animals. After animals are in condition that they do not need daily attention, they are turned in a large pasture to permit occasional freatment and observation until complete' recovery takes place.

The serum laboratory offers an unusual opportunity for students to become familiar with the preparation of anti-hog cholera serum, autogenous bacterins and other biologics.

Ambulance service for large and small animals is available; also automobiles for transporting students to see cases that cannot be brought to the College.

A post-mortem building with skylights, sanitary floor, hoisting apparatus, and other equipment where post-mortem examination is made on all animals that die in the clinics and many dead animals from Bryan and the surrounding country.

A slaughter house with sanitary floor, overhead tracks, hoisting apparatus, scalding vat, meat blocks and cold storage for teaching the slaughtering, cutting, curing and inspection of meat and meat products.

VETERINARY PATHOLOGY

The department is located on the third floor of Francis Hall and has the usual equipment found in laboratories where pathology, bacteriology, and allied subjects are taught.

In connection with the department a pathological museum containing preserved specimens of various disease processes and parasites is maintained.

VETERINARY PHYSIOLOGY AND PHARMACOLOGY

The Physiology laboratory is well equipped with apparatus, reagents, chemicals, etc., for the proper instruction in pathological chemistry, experimental physiology, urine, blood, milk, and gastric analysis, and for producing graphic records of the physiological process of the body.

The pharmacy and experimental pharmacology laboratory is equipped with the apparatus, reagents, chemicals, etc., essential for a thorough training in the preparation of all the official and the more common proprietary medicinal preparations, and for experimental work in the determination of the action of drugs on the living body. It also includes the necessary apparatus for the examination of arsenic, lime-sulphur, and other dips which are commonly used.

The toxicology department is equipped with all the apparatus, drugs, chemicals, experimental animals, etc., essential to the proper study of the action of inorganic and organic poisons, and poisonous plants on the living animal, their detection and the treatment for them.

The apparatus consists of the necessary glassware, mortars, pill tiles, hot water funnels, torsion and laboratory balances, kymographs, pneumographs, plethysmograph tubes, egographs, tambours, manometers, muscle levers, cardiac levers, saccharometers, urinometers, ureometers, indiconometers, hydrometers, electric centrifuge, electric water bath (for digestion experiments), respiratory and circulatory schemes, microscopes, spectroscope, drug mill, steam mill, suppository machine and mold, tablet machine, triturate tablet molds and all other necessary equipment. The department also cultivates a garden of medicinal and pojsonous plants, which are used in the above courses.

THE SCHOOL OF VOCATIONAL TEACHING

The School of Vocational Teaching occupies six rooms on the third floor of the Academic Buiding. The classroom for agricultural students is equipped with movable tables and chairs, slide and film projectors, etc, to serve as an example of a good type for high school departments of agriculture. The Visual Instruction laboratory is equipped with mimeograph, mimeoscope, charting board, photograph reducing and enlarging apparatus, motion picture rewind, projection and motion picture machines and cabinets for lantern slides.

The A. and M. Consolidated School, located on the College Campus, affords excellent opportunity for observation and directed teaching. This project in school consolidation and transportation of pupils at public expense, provides exceptional facilities for the study of current problems in school administration and management.

PART III

ADMISSION, EXPENSES

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ADMISSION

All communications in regard to admission should be addressed to the Registrar, Agricultural and Mechanical College of Texas, College Station, Texas.

GENERAL REQUIREMENTS

The candidate for admission to the College must be of good moral character, at least sixteen years of age, and physically able to perform the duties of a cadet. He must be free from contagious or infectious disease and must present a satisfactory certificate of recent vaccination against smallpox and typhoid-paratyphoid fever, or be vaccinated against both upon entering the College.

SCHOLARSHIP REQUIREMENTS FOR ADMISSION

1. Admission by Certificate.—Graduation from an accredited secondary school, with a minimum of fifteen approved units, is required for admission by certificate. Three units of English, two units of algebra and one unit of plane geometry must be presented by all candidates; the remaining nine units must be offered from the subjects included in List B, below.

No credit is granted for work done in an accredited school unless the candidate is a graduate of the school.

It is of the highest importance that credentials be submitted in advance. If this cannot be done, the candidate should bring them at the opening of the session. Without the credentials he cannot be admitted, and valuable time will be lost if he has to send for them after reaching College Station.

Blanks for submitting credentials may be obtained upon application to the Registrar.

Subjects and Units Accepted for Admission

LIST A. PRESCRIBED UNITS

| English | | 5 | units |
|-----------|-------|---|-------|
| Algebra | | 2 | units |
| Plane Geo | metry | 1 | unit |

| English (4th unit)I unit | Natural Sciences: |
|--|-----------------------------|
| Mathematics: | Biology 1 unit |
| Solid Geometry | Botany 1 unit |
| Trigonometry1/2 unit | Chemistry 1 unit |
| Advanced Arithmetic | General Science 1 unit |
| Social Sciences: | Physics 1 unit |
| Ancient History1 unit | Physiography 1/2 unit |
| Modern History1 unit | Physiology ½ or 1 unit |
| Eng. History | Zoology 1 unit |
| Amer. History | *Vocational Subjects: |
| Civics ¹ / ₂ or 1 unit | Agriculture1 to 4 units |
| Economics | Bookkeeping 1 unit |
| Foreign Languages: | Drawing1 to 4 units |
| Latin2 to 4 units | Com. Arithmetic1/2 unit |
| French2 to 4 units | Com. Law1/2 unit |
| German2 to 4 units | Com. Geography1/2 unit |
| Spanish2 to 4 units | Manual Training1 to 4 units |
| | Stenography and |
| | Typewriting; 1 unit |
| | Pub. Speaking |
| | |

LIST B. ELECTIVE UNITS

*Not more than 4 units of Vocational work will be accepted for admission.

Special Requirements for Engineering Students.—In the School of Engineering students not presenting solid geometry for entrance will be required to make up that subject before the beginning of the Sophomore year.

Students planning to enter the School of Engineering are urged to complete solid geometry in high school. A thorough course in high school physics is strongly recommended for all students.

2. Admission by Examination.—Any or all of the scholarship requirements may be met by passing the entrance examinations.

The spring entrance examinations are held throughout the State in May, under the supervision of the State Department of Education. These examinations are conducted in each county by responsible school officials and the papers are sent to the State Department of Education to be graded. On the basis of these papers uniform Entrance Certificates are issued, which will be accepted for admission to any Texas College, provided the subjects certified cover the entrance requirements of the college to which application for admission is made. Under this system students are allowed to take examinations at the close of each high school year, in the subjects studied during that year, so that at the end of three or four years of high school work they should have from ten to fifteen entrance credits. This method of admission should appeal particularly to students from non-accredited high schools. Further information regarding the spring entrance examinations may be obtained from the State Depertment of Education, Austin.

Fall entrance examinations will be held at the College September 15, 16, and 17, 1927, under the supervision of the College authorities, and will cover all the subjects required or accepted for admission as outlined above.

SCHEDULE OF FALL ENTRANCE EXAMINATIONS

Note: Acceptable laboratory note books must be presented in connection with the examinations in science subjects.

| Hour | September 15 | September 16 | September 17 |
|---------------|---------------------------|--------------------------|---------------------------|
| 8-10 | Algebra, Agriculture, | Plane Geometry, Physiog- | Solid Geometry, Trigonom- |
| | Sociology | graphy | etry, Drawing |
| 10-1 2 | Botany, English, Manual | Physics, Latin, Stenog- | American History, Book- |
| | Training | graphy and Typewriting | keeping, Com. Arith. |
| 1-3 | Ancient Hist., Physiology | Modern History, Biology, | English History, General |
| | | Psychology | Science, Com. Law |
| 3-5 | Civics, Chemistry, Public | French, Adv. Arithmetic, | German, Spanish, Zoology, |
| | Speaking | Economics | Com. Geog. |

3. Admission by Individual Approval.—A candidate over twenty-one years of age, who has not recently attended school and who cannot satisfy the entrance requirements in full, may be admitted to the Freshman class without examination, subject to the following requirements:

(1) He must make application on the official entrance blank.

(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.

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.

ADMISSION TO ADVANCED STANDING

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

(1) The candidate must present a letter 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.

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

AD MISSION

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

It is esesntial 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 examinations at the College, and shall not include work presented in satisfaction of the entrance requirements.

ADMISSION OF SPECIAL STUDENTS

At the discretion of the Dean of the College, a limited number of young men over twenty-one years of age n.ay 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. A record of his preparatory work must be submitted on the official entrance blank, and must be accompanied by a statement showing (a) his experience; (b) a plan of study, enumerating the courses he desires to pursue; and (c) 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 of the College.

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 of the College.

ADMISSION TO THE COLLEGIATE TWO-YEAR COURSES

The College offers the following Collegiate Two-year Courses: Two-year Course in Textile Engineering.

Two-year Course in Cotton Marketing and Classing.

The requirements for admission to these courses are the same as for the regular four-year courses.

ADMISSION TO THE NON-COLLEGIATE TWO-YEAR COURSE IN AGRICULTURE

A candidate for admission to the Two-year Course in Agriculture must be eighteen years of age, except in the case of a graduate of a non-accredited school, who may be admitted at the age of sixteen years. He must satisfy the general requirements in regard to health, character, and vaccination, and must present a certificate showing the satisfactory **•** ompletion of the tenth grade of a clasisfied school, or its equivalent.

The Two-year Course in Agriculture is not open to candidates who are qualified to enter a four-year course.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

ADMISSION AT THE BEGINNING OF THE SECOND TERM

For the benefit of students admitted at the beginning of the second term, certain first term subjects are repeated. By completing these subjects, and by attending the summer session for twelve weeks, the student should be able to graduate with his class. For those who are unable to attend the summer session, it is not advisable to enter at the beginning of the second term.

REGISTRATION

Upon the arrival at the College young men intending to enter will report at once to the Academic Building for full information in regard to registration.

Every student is required to register when he first enters the College and thereafter at the beginning of each term.

In the case of irregular and special students, registration is not complete until their assignment cards are returned, properly signed, to the Registrar.

SESSION

The session begins on the third Wednesday in September and extends through thirty-seven weeks.

Wednesday and Thursday, September 21 and 22, will be devoted to the registration of new and old students respectively. Recitations will begin Friday, September 23

EXPENSES

EXPENSES

EXPENSES FOR THE SESSION

The fixed charges are:

| Maintenance, first term | 125.00 |
|------------------------------|--------|
| Maintenance, second term | 125.00 |
| *Matriculation fee | 27.00 |
| Room key deposit, returnable | 1.00 |
| | |

\$278.**00**

*For old students who register on the days set apart for that purpose the matriculation fee is \$25.00; for old students who in the second term do not register on the days set apart for that purpose there is charged an additional matriculation fee of \$2.00.

Additional expenses include:

| Laboratory fees, about | 610. 00 |
|---|----------------|
| Text-books, from \$15.00 to | 25.00 |
| For Freshman engineering students, drawing instruments, about | 15.00 |
| Student Activities fee, voluntary | 15.00 |

Contingent Deposit.—In certain laboratory courses the student is required to make a deposit to cover breakage and damage to equipment. The amount of the deposit, less charges for breakage and damage, is returned to the student.

Notes.—A limited number of students, needing financial assistance, may make notes with the College for part of their maintenance. Application blanks for such loans may be obtained from the Fiscal Department, and must be properly filled out and returned to the President's Office 30 days before opening of the session 1927-28.

Personal checks will not be accepted.

Payment for each term must be made in advance. A student entering during a term will be charged maintenance only for the remainder of that term.

Deductions.—No deductions will be made for entrance within 15 days after the opening of a term, nor will there be any refund for the last 15 days of a term or the last 15 days paid for.

Maintenance.—Maintenance includes board, room-rent, heat and light, laundry. Rooms are furnished with single bedsteads and mattresses, table, and chairs Forfeiture on Withdrawal.—Refund of maintenance will be made only in case the student is required to withdraw by Faculty action or in case of sickness disqualifying him for the discharge of his duties for the rest of the term. When such sickness takes place at the College, it must be tatested by the College Surgeon before the student can receive the refund of the unused portion of his maintenance.

Matriculation fce.—The matriculation fee entitles the student to the usual privileges of a student of the College, including the use of the library and certain incidental supplies, and medical service. Medical service covers the professional services of the College Surgeon and the hospital staff. Surgical operations and charges for consultations with outside physicians requested by parents are not included.

The matriculation fee is payable upon registration and is in no case refunded.

Laboratory fees.—The laboratory fees cover in part the cost of materials used by the student in his laboratory work. The total amount of these fees varies according to the classification of the student. The fees for the several courses are listed under "Courses of Instruction by Departments." They are payable during registration at the beginning of each term.

Student Activities. Fee.—The student activities fee is for the support of student activities, and by a practically unanimous vote of the student body this fee has been fixed at \$15.00. This fee is paid at registration along with other fees, but it is not compulsory. A student entering after the Christmas holidays will pay only \$9.25. Cn payment of this fee a student is entitled to be admitted to all intercollegiate and inter-scholastic contests held at College Station, to receive a copy of the Longhorn, the College annual, and one annual subscription to the Battalion, the student college publication, throughout the scholastic year.

Graduate Students.—A graduate student who is not a member of the College Staff shall pay the matriculation fee, laboratory fees, and maintenance. For those who room in Graduate Hall the maintenance charge is increased by the amount of the charge for room-rent in that hall.

Members of the College Staft.—Full time members of the College Staff are permitted to register for not more than one-fourth of a full-term's work whether graduate or undergraduate. They pay a matriculation fee of \$7.50 the first year, and \$2.50 for each succeeding year; and laboratory fees in certain courses. For members of the staff the matriculation fee does not include medical service.

Day Students.--Day students pay the matriculation fee, and laboratory fees.

EXPENSES

Deposits.—Deposits may be made with the Fiscal Department. Depositors will draw their money by giving receipt direct to the Fiscal Department as money is required. Deposits and withdrawals must be given in even dollars.

Cbecks.—A graduated collection fee will be charged on all out of town collections, except bank exchange, postal money orders and express money orders. Checks or drafts that have been altered in any way will not be accepted.

Unpaid Checks.—If a check or draft accepted by the Fiscal Department as cash 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. If this penalty and the amount of the check are not paid within seven days after notice is sent from the Fiscal Department further service will be withheld from the person not complying with this regulation.

Duplicate Receipts.—A fee of fifty cents will be charged for duplicate receipts.

UNIFORM

Attention is called to the following regulations issued by the Secretary •f War with reference to the commutation of uniforms:

"Institutions authorized to draw the commutation will provide the uniforms for the students, crediting the student's account with the amount of commutation allowed, and charging the said account the cost of the uniform furnished, and when they have been delivered, fitted, and given to the student, vouchers, War Department form No. 330, will be duly accomplished"

Cadets should have in their possession the following articles of uniform: 1 College regulation woolen uniform, complete.

- 1 extra pair woolen breeches.
- l cap with ornaments.
- l regulation hat.
- 1 silk hat cord.
- 3 regulation o. d. shirts at least one of which is woolen.
- 1 soft white shirt with collar attached.
- 1 Sam Browne belt.
- 1 pair spiral leggins; for mounted branches, mounted canvas leggins instead.
- 1 pair russet service shoes.
- I regulation waist belt.
- 1 set collar ornaments for shirt.

- 1 set collar ornaments and lapel ornaments for coat.
- 4 R. O. T. C. shields with pipings the color of branch of service.
- 1 regulation black tie.
- 1 blue star.
- 1 suit unionalls.

All articles of uniform must meet the approval of the Professor of Military Science and Tactics. The above articles may be purchased from the Exchange Store at a cost of about \$85.00 insuring approval by the Professor of Military Science and Tactics as regulation. In order to refund to the students of the first and third years the thirty dollars from the United States government, the College must furnish to the student thirty dollars worth of uniform equipment, preferably a complete woolen uniform. Students who do not buy at least thirty dollars worth of equipment from the College Store cannot receive a refund from the United States Government.

It is not contemplated that the above mentioned articles must be urchased each year. Uniform dress is more economical than civilian cress if proper care is taken of the clothing and articles left over from the first year may be used as long as serviceable, by upper classmen. PART IV COURSES OF STUDY

COURSES OF STUDY

There are (a) seventeen regular courses, extending through four years; of these the course in Liberal Arts leads to the degree of Bachelor of Arts; the course in Veterinary Medicine leads to the degree of Doctor of Veterinary Medicine; the others lead to the degree. of Bachelor of Science, the particular course being specified in the diploma; (b) one regular sixyear course leading to the degrees of Bachelor of Science and of Doctor of Veterinary Medicine; (c) graduate courses and short courses are shown below.

REGULAR FOUR-YEAR COURSES

I.-Course in Agriculture. III.-Course in Mechanical Engineering. IV.-Course in Civil Engineering. V.-Course in Electrical Engineering. VI.-Course in Textile Engineering. VIII.—Course in Chemical Engineering. IX.-Course in Architecture. X.-Course in Science. XI.-Course in Veterinary Medicine. XII.—Course in Agricultural Education. XIII.-Course in Industrial Education. XIV.—Course in Agricultural Administration. XV.-Course in Agricultural Engineering. XVI.-Course in Rural Education. XIX.-Course in Liberal Arts. XX.-Course in Landscape Art. XXII.—Course in Industrial Arts.

REGULAR SIX-YEAR COURSE

XXI.-Course in Agriculture and Veterinary Medicine.

GRADUATE COURSES

Courses of study leading to the degree of Master of Science are offered in:

Agricultural Administration, Agricultural Education, Agricultural Engineering, Agriculture, Architecture, Chemical Engineering, Civil Engineering, Electrical Engineering, Industrial Education, Mechanical Engineering, Rural Education, Science, Veterinary Medicine.

TWO-YEAR COURSES

(C)—Course in Agriculture (Non-Collegiate). XVII.—Course in Textile Engineering. XVIII.—Course in Cotton Marketing and Classing.

THE SCHOOL OF AGRICULTURE

In the School of Agriculture there are offered the following courses: REGULAR FOUR-YEAR COURSES

Course in Agriculture.

Course in Agricultural Administration.

Course in Agricultural Engineering.

Course in Landscape Art.

TWO-YEAR COURSE

Two-year Course in Agriculture.

COURSE IN AGRICULTURE

The regular four-year course has as its main object the preparation of young men for the business of farming, for the pursuit of scientific investigation along some line of agriculture, for becoming county demonstration agents, or extension workers, and for teaching in the high schools and It also affords excellent preparation for young agricultural colleges. men who intend to follow business pursuits, especially for merchants Systematic training is given in the sciences of biology, and bankers. chemistry, entomology and geology, which are fundamental to the study of scientific agriculture, and in technical subjects, covering the main divisions of agriculture, including agricultural engineering, agronomy, animal husbandry, farm management, horticulture, poultry husbandry, and rural sociology. 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 eleven groups of studies. This arrangement affords the student a wide range of subjects from which to choose his major work, permitting him to specialize in agricultural education, agricultural engineering, agronomy, animal husbandry, cotton production, dairy husbandry, entomology, horticulture, landscape art, poultry husbandry, or in rural sociology.

COURSE IN AGRICULTURAL ADMINISTRATION

The course in Agricultural Administration stresses the business side of agriculture rather than the technological side, although the latter is not neglected.

The central aim of the course is to prepare men to become agricultural economists in the broad sense of the term. This involves a much broader concept of agriculture than has hitherto been generally held. It involves the concept that farmers will become associated in powerful business organizations carrying on their commercial operations in accordance with fundamental principles that have been approved in other lines of industry.

The factors that promote the economic efficiency of the individual farms are given careful consideration as the farmsteads are the pillars upon which the great business superstructure of agriculture must gradually be

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built. Economical growing of plant and animal products upon the individual farms must ever be an indispensable prerequisite to successful farmer business organizations.

Such sciences as statistics and accounting are used as tools to bring the great mass of world data pertaining to agriculture into such form that they may be analyzed and interpreted. It is because the problems relating to the economics of agriculture require exact measurement, or as we say, quantitative treatment, that so much use is made of mathematics, accountancy and statistics in the course in Agricultural Administration.

Men who have finished this course will be well equipped to enter general business such as banker or merchant, etc., to administer landed estates, large or small; to enter the Civil Service in the field of marketing, statistics, etc.; to become managers of a business, either private or co-operative; to serve as agricultural advisers in chambers of commerce, corporations, including railroads; to serve as County Agents; and as instructors and research students in economics and commercial subjects.

It should perhaps be emphasized that there is at present a great need for business men who have a thorough understanding of both the economic and the technical side of agriculture. This is especially true of a state like Texas, which is so predominantly agricultural. Much of the misunderstanding that now exists between rural and urban communities will be dispelled when men who have taken this course, with the broad vision it inculcates, become distributed as business men and leaders all over the state.

By April 15 of his sophomore year, the student will choose one of the four groups: (1) Accounting and Statistics; (2) Agricultural Economics; (3) Farm and Ranch Management; (4) Marketing and Finance.

COURSE IN AGRICULTURAL ENGINEERING

The course in Agricultural Engineering is designed to give the student an engineering training with an agricultural viewpoint. A thorough grounding in fundamental engineering principles is given, as much time is devoted to purely agricultural subjects as possible, and the application of engineering to agriculture receives its share of attention.

The need of such engineers is being felt more and more each year as the demand grows for farms to be better equipped with power machinery, farm buildings and home conveniences and more land to be reclaimed by drainage, irrigation and clearing.

Graduates of this course are prepared for service in the following lines: with the colleges and government in teaching extension and experiment station work; with manufacturers of farm machinery, gas engines, tractors, other farm equipment and farm buildings, in advertising sales and designing work; with engineering and contracting firms doing irrigation work and drainage work; and with farm and trade journals.

COURSE IN LANDSCAPE ART

The purpose of this course is to train students in the development of outdoor areas, such as flower gardens, both formal and informal, large and small estates, parks and playgrounds, cemeteries and the surroundings of buildings, private, semi-public, and public. The object of the landscape designer is to create not only beautiful compositions, but to plan, direct and to carry to completion problems that will satisfy the esthetic taste and in addition be fundamentally practicable.

In order to perform this work properly, the student should have some knowledge of the basic sciences and in addition a considerable amount of architecture, horticulture and civil engineering. It is not necessary that he be equally proficient in all phases of landscape art, as the work is sufficiently broad to enable men of diverse talents to select and follow some particular sub-division of the work. Students whose primary qualification is a talent for drawing become designers, others are more interested in the horticultural side and become superintendent of planting. Still others may prefer landscape construction or one of the many divisions of civic improvement. Extension landscape work, superintendents of large parks or cemeteries, members of city park boards or park commissioners are some of the other fields open to graduates in this group. In addition the United States Department of Agriculture now employs landscape architects, the positions being filled under Civil Service Rules.

While the student can, with the training he receives at the College, begin practice immediately after graduation, an apprentice course under a competent landscape architect or actual work in a good nursery, or both, will be found of great value. The students are urged to spend some considerable part of their summer vacations in some related field, thus gaining technical knowledge and experience while still in college and thereby shortening or eliminating entirely an apprentice course after graduation.

TWO-YEAR COURSE IN AGRICULTURE

This course is intended for young men who wish to spend one or two years in preparing to go back to the farm and apply the more important scientific methods of farming which have been worked out in recent years. To this end the course is made highly practical and includes much of the technical work required in the four-year course. In the first year, the studies are nearly all prescribed; in the second year, they are elective. The electives must be chosen under the advice and direction of the Dean of the School of Agriculture. Students who have approved farm experience will, upon completion of this course, be awarded certificates.

THE SCHOOL OF ARTS AND SCIENCES

In the School of Arts and Sciences there are otfered the following four-year courses:

REGULAR FOUR-YEAR COURSES

Course in Liberal Arts. Course in Science.

COURSE IN LIBERAL ARTS

This course is planned to meet the needs of students who have not made a definite decision regarding their life work, and who desire adequate preparation for intelligent citizenship, or a broad foundation for further education. The program of studies, especially in the upper years, is shaped to meet the needs and aptitudes of the individual student.

The first two years of the course in Liberal Arts provide the necessary fundamental preparation for students who are planning to study law.

This course also offers excellent facilities for the training of teachers of English, history, economics, languages, mathematics, and physical education.

The course in Liberal Arts leads to the degree of Bachelor of Arts.

COURSE IN SCIENCE

The work of the course in Science is planned with the following purposes in view:

1. To prepare students for research in the various fields of scientific activity, by means of thorough instruction in the sciences of biology, chemistry, entomology, geology, mathematics, and physics, especially as they relate to agriculture, engineering, and allied industries.

2. To provide the necessary fundamental preparation for students planning to enter upon the study of medicine.

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

Students in the course in Science who complete in this College at least two years of work preparatory to Medicine, and who subsequently complete the first two years in Medicine in a class A medical college, will be awarded the degree of Bachelor of Science, in Science, upon transferring their medical credits back to this institution. The work completed in this institution must include all of the prescribed subjects listed for the freshman and sophomore years of the Course in Science, and at least ten hours of approved electives.

THE SCHOOL OF ENGINEERING

In the School of Engineering there are offered the following courses:

REGULAR FOUR-YEAR COURSES

Course in Architecture. Course in Chemical Engineering. Course in Civil Engineering. Course in Electrical Engineering. Course in Mechanical Engineering. Course in Textile Engineering.

TWO-YEAR COURSES

Two-year course in Textile Engineering. Two-year course in Cotton Marketing and Classing.

COURSE IN ARCHITECTURE

The course in Architecture is planned to give a thorough instruction in those subjects which are generally recognized as necessary in the preparation of students for work in architectural design and building construction. It is arranged to make the practice classes reflect the instruction given in the theoretical subjects and to associate the two in practical applications and problems, which are intended to prepare the student for immediate usefulness and earning ability after graduation. While particular emphasis is given throughout the course to the unison of design and construction which exists in all practical architectural work, the course is arranged in two groups; Group 1, which develops special ability in composition, planning, and rendering in the later years of the course; Group 2, which devotes particular attention to the structural elements of architectural practice during the later years. The same work is done by the Freshman class in these two groups, and as the courses develop, the emphasis upon the special work of each group is increased, until in the Senior year, they become distinct and separate. Both groups give a sufficiently broad training in Architecture to make the student effective in general architectural work after graduation.

In the selection of either of these groups the student should be guided by his natural inclination toward the type of work which is emphasized in that group. Graduates in Architecture find positions as draughtsmen, designers, superintendents or general assistants in architects' offices; in the architectural and engineering departments of business and railway corporations; in construction companies; in state and municipal employment and in the Federal Civil Service. A few years of practical experience should fit the graduate to enter upon independent architectural practice

COURSES OF STUDY

COURSE IN CHEMICAL ENGINEERING

This course is designed to prepare young men for technical work in those industries in which raw materials undergo a chemical change in the process of manufacture. Many fields are open to students trained in applied chemistry, and inquiries are continually being received asking for men capable of filling important positions in such industries. Some industries important to the present and future development of this State are those dealing with cottonseed products, sugar, leather, petroleum, cement, ceramics, and iron and steel. The analytical chemistry given in the course is sufficient to enable the graduate to engage in the work of a commercial plant or to enter an industrial plant as a control chemist. The control chemist repeatedly analyzes and evaluates the raw material used in the manufacture as well as the intermediate and finished products. It is through such control that industries of this kind have been made scientific. Pure food laws and other legal enactments calculated to protect the people against fraud have, of late years, greatly accentuated the importance of this work. Along with the chemistry, enough work is given in general engineering practice to enable the graduate who enters the works as a control chemist to come in time to a full understanding and mastery of the industry in which he is engaged.

COURSE IN CIVIL ENGINEERING

The course in Civil Engineering has for its object the thorough grounding of young men in the underlying principles of engineering, with such training in the art of putting these principles into practical use as will enable graduates in the course to give satisfactory service in an engineering organization immediately upon graduation.

During the first three years the student is given training in the subjects common to all civil engineering courses, such as surveying, railroad engineering, mechanics, strength of materials, masonry structures, and stress analysis. In the fourth year he elects one of the three groups, general civil engineering, highway engineering or municipal and sanitary engineering. Part of the work for these three groups is the same for all. In the highway group special emphasis is placed on pavements and highway materials, while in the general civil engineering group somewhat more attention is given to stresses and design of bridges and other structures. In the municipal and sanitary engineering group less time is devoted to structures than for the other two, with correspondingly greater emphasis on water supply, sewage disposal, sanitation, and other municipal problems. Either group will fit the student for entering any of the many lines of work open to civil engineers, among which may be mentioned the following: professional practice in surveying; water supply, sewerage and sewage disposal; railway location, construction and maintenance, the design and construction of dams, reservoirs, canals, foundations, buildings, bridges, and other structures; design, construction and maintenance of roads and pavements; planning and excution of sanitary measures for rural and urban communities, administration of city business as city manager, research work in colleges or government bureaus; technical service of various kinds in the industries, leading to executive positions.

COURSE IN ELECTRICAL ENGINEERING.

The course in Electrical Engineering is designed to give the student a thorough training in the underlying principles of direct and alternating current phenomena and of electric measurements. It provides training in subjects fundamental to the general practice of the engineering profession, in the theory of electricity, and in the application of the theory to practical problems in many branches of engineering.

The work of the first three years of the course includes the mathematics, chemistry, physics, drawing and mechanics fundamental to any engineering course. The electrical engineering subjects begin in the sophomore year and continue in an increasing amount through the junior and senior years. Much emphasis is put on the fundamental principles of electrical engineering, but the fundamentals are vitalized by illustration of their applications in engineering practice. In the senior year, without reducing the time devoted to fundamental subjects, an opportunity is given the student to make a study of the application of electrical engineering to some field of engineering. This is done with two purposes; the first, and more important, is to impress more firmly in the student's mind the principles already covered; and the second is to give the student specific information about some branch of electrical engineering.

Electrical Engineering presents broad opportunities for the young man with the proper training. A few of the fields which he may enter are outlined below:

The electric power plant in a community has come to be considered the source of energy not only for the lighting of the buildings and streets, but for the operation of all kinds of machinery ranging in size from the largest factory to the sewing machine and the vacuum cleaner. It is recognized that technically trained engineers are needed not only for the more highly technical positions in the organization of the central stations but that by virtue of their technical knowledge they are also best qualified for practically every position of responsibility in such organizations.

The utilization of electrical energy by manufacturing organizations has necessitated the employment of electrical engineers to design the installation of the electrical machinery and supervise it when it is in operation.

The electric railway industry is another field in which electrical engineers are required, and the electrification of steam railroads has created a demand for electrical engineers to supervise the electrical equipment used in the production of the power and operation of the trains. The electrification of railroads is in its infancy but the decided gain in efficiency from operating with electricity instead of steam will cause a steady increase in the number of roads to be electrified. I he telephone and telegraph companies have always used a limited number of electrical engineers but with the greater complexity of electrical devices which are displacing the simpler systems of communication, trained engineers are in demand not only for the more highly specialized positions but also for administrative and executive positions where a knowledge of electrical engineering is becoming important. Radio engineering is a field for electrical engineers which, while comparatively new, bids fair to become of considerable importance.

Many electrical engineers are needed in organizations engaged in the manufacture of electrical machinery and its proper application, its sale and erection.

There are also a great many other subdivisions, such as that of the illuminating engineer, the signal engineer, the battery engineer, and a score of others which offer excellent fields for the men with proper training.

The course is outlined with a view to giving a young man such fundamental principles of electrical engineering and such mental development and faculty of analysis, as will enable him to rise to a position of responsibility in any one of the several fields of electrical engineering.

A Signal Corps Unit of the Reserve Officer's Training Corps has been established at the College and electrical engineering students who elect to become members of this unit have an opportunity to receive thorough instruction in telephone, telegraph and radio engineering in' addition to their other engineering work. For use in the Signal Corps work, the government has supplied a complete assortment of modern equipment.

A branch of the American Institute of Electrical Engineers has been organized among the students and affords the means of keeping students in touch with the latest development in the electrical field.

COURSE IN MECHANICAL ENGINEERING

The course in Mechanical Engineering is designed with a view of giving the student such training as will fit him to design, construct and errect machinery, power and industrial plants, equipment, etc., and to manage or to operate the same with the greatest economy of labor and materials.

It is not possible to give the student that skill in the shops and that experience in the laboratories which come with long service in practical work, but the aim is to give him the power to understand and apply the underlying principles which are involved in all problems met with in practical engineering.

When it is remembered that there is a steam power plant or other mechanical equipment connected with practically every industrial enterprise it is apparent that the graduates from the course in Mechanical Engineering should find a large field for their activities in the industrial development of the State. While the chief aim of the curriculum is to give a thorough grounding in the fundamentals it is possible for the student, by group selection in his senior year and by selection of his electives, to do a limited amount of specializing along the line of his choice. The group arrangement of the senior year enables the student to specialize in power plant work, in transportation and railway mechanical engineering, or in factory management and industrial engineering. The electives enable the student to specialize in cottonseed oil industry, or in petroleum industry. The training at the College, followed by a few years contact with the practical work, should fit one to take charge of the operation or of the management of almost any industrial enterprise whether strictly mechanical engineering or involving other activities as well.

Included in the field of the graduate from this course are the following: railway motive power, automotive and marine transportation, refrigeration, steam and oil engine power equipment, heating and ventilation, iron and steel production and fabrication, machine tool industry, lumber production and utilization, factory management, production and refining of petroleum, and other mineral resources, and also practically unlimited other lines.

In addition to the purely technical studies, the Mechanical Engineering course has a well balanced portion of cultural subjects which provide a good general education and equip the graduate for leadership in his community. The habits of accurate analysis and the training in logical thinking make him better a citizen and a more desirable leader.

COURSE IN TEXTILE ENGINEERING

The object of this course is to prepare young men for entering the field of cotton manufacturing. The unprecedented development of the cotton milling industry in the South has brought about an era of prosperity and created a strong demand for educated young men in the industry. The State of Texas offers excellent advantages for the manufacture of cotton goods in its vast supply of raw material, intelligent labor, and excellent climatic conditions, and it is believed that cotton manufacturing will develop as rapidly as skilled and capable managers familar with local conditions are to be had. The studies outlined have been selected with a view of giving theoretical and practical training in the manufacture of cotton goods as thorough as is possible in the time available.

Graduates from this course are prepared to enter the cotton mills to operate any machinery. After a study of labor conditions and requirements they are in line for positions of overseers, superintendents and managers. Graduates may also find employment in the fields of mill engineering and architecture, installation of equipment, dyeing, and the sale of machinery and supplies.

TWO-YEAR COURSE IN TEXTILE ENGINEERING

The two-year course in Textile Engineering is intended for young men who wish to take up the work of cotton manufacturing and cannot spend more than two years in preparation.

COURSES OF STUDY

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The aim is to prepare young men for responsible positions in a cotton mill after a short term of apprenticeship. A limited number of students taking either textile course will be given employment during their vacant periods in operating the equipment of the department which is turning out a commercial product. In this way students are encouraged to devote a good deal more time to the operation of the machinery, which should better fit them for their career in the mill and at the same time help to pay their expenses in college. Certificates will be given students who complete the work as outlined.

Students completing this course are fitted in a limited way for the same fields that are open to graduates.

The entrance requirements for this course are the same as for the four-year course.

This course will be withdrawn after the session 1927-28.

TWO-YEAR COURSE IN COTTON MARKETING AND CLASSING

The two-year course in Marketing and Classing is intended for the student who expects to enter the correspondence business either as buyer, or office man. The course of study is designed to familarize the student with the position of cotton among agricultural resources, the economics of cotton, business law, money and banking, marketing, and waste in manufacture as related to cotton. Courses are offered giving the fundamental principles and much detail of cotton office accounting. The course proposes to give, in addition to the fundamental subjects, some general educational courses which will better fit the student for the cotton business.

The entrance requirements for this course are the same as for the four-year courses.

THE SCHOOL OF VETERINARY MEDICINE

COURSE IN VETERINARY MEDICINE

This course has for its object the systematic training of young men in all matters pertaining to diseases of domestic animals.

The freshman and sophomore years are, in large measure, devoted to those physical and biological studies that contribute so much to an understanding of problems of health and diseases. The junior and senior years are almost entirely devoted to studies of a technical nature.

Those who expect to engage in ranching, dairying or some other branch of animal industry, will find the course of great value to them in preventing serious losses from diseases or mismanagement of their animals. Those who possess a biological mind will find it an interesting life study, and such men are in great demand in matters of public health or as investigators in Experiment Stations. Those who pursue the course from commercial motives will find its rewards are similar to those of any other form of human endeavor in that these will always be in proportion to the intelligence and energy displayed by the individual.

When it is recalled that the value of domestic animals in Texas is about five hundred million dollars, its becomes apparent that men informed on such matters will be of great value to the State.

COURSE IN AGRICULTURE AND VETERINARY MEDICINE

This course offers an opportunity for students to get training both in Animal Husbandry and in Veterinary Medicine. It is so arranged that the courses of study in both curricula can be completed in six years. In many instances it is desirable that students entering into the animal industries have a more thorough understanding of Veterinary Medicine than can be given in the four-year course in Animal Husbandry. It is also true that many positions which are open to graduates in Veterinary Medicine carry with them the responsibilities that require more training in Animal Husbandry than can be offered in the four-year course.

It is thought that this course will come more nearly fulfilling the requirements of young men going into many live stock pursuits than the College has yet had the opportunity to offer.

THE SCHOOL OF VOCATIONAL TEACHING

In the School of Vocational Teaching there are offered the following courses:

REGULAR FOUR-YEAR COURSES.

Course in Agricultural Education Course in Industrial Arts Course in Industrial Education Course in Rural Education

COURSE IN AGRICULTURAL EDUCATION

^a This course is designed to give the teacher of vocational agriculture the minimum preparation and training, in both technical agriculture and in education subjects, required to qualify under the Federal Vocational Education Act. The course permits a sufficient number of electives to enable students coming from Junior Colleges and State Teachers' Colleges to transfer to this institution with little or no loss of time.

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) forty-five hours of technical agriculture; (2) fourteen hours of education subjects as prescribed in the curriculum, and (3) one year's residence.

COURSE IN INDUSTRIAL ARTS

The purpose of this course is to prepare men to teach Industrial Arts or Manual Training as offered in the public schools. The course is arranged so that during the first three years the student will obtain a general training in fundamental technical courses. The large number of electives in the senior year will permit him to specialize in the one or two courses he prefers to teach.

The Junior High School movement has created a demand for well trained instructors for this type of work. Any young man, mechanically inclined and interested in boys and their work, should find this a very profitable course.

COURSE IN INDUSTRIAL EDUCATION

This course is intended to train teachers, supervisors, and directors for the general continuation and trade and industrial schools of Texas. Since the men graduating from this course are to qualify as teachers under the state plan for Vocational Education, a candidate for a degree in Industrial Education must qualify under one of the following requirements:

1. Seven years experience (three beyond the apprenticeship period) as a wage earner at the trade the student intends to teach. (For teachers of shop work.)

- 2. Two years of practical experience as a wage earner in a trade or industrial occupation and two years of technical training in a school of engineering. (For teachers or related subjects.)
- 3. Four years of technical training in a school of engineering. (For teachers of related subjects.)

The candidate for a degree in this course must also have at least one year of 144 clock hours of successful teaching of some phase of trade and industrial work under the Smith-Hughes Act.

COURSE IN RURAL EDUCATION

This course is offered in response to the increasing demand for high school principals and superintendents who have had the benefit of an agricultural college education in their preparation for leadership in the solution of rural life problems. The curriculum in rural education permits the student to qualify for the various elementary and high school certificates granted on college credits by the State Department of Education.

TEACHERS CERTIFICATES

1. An elementary certificate good for four years, or a high-school certificate good for two years, may be obtained upon completion of the work prescribed for Freshmen in the course in Rural Education, or its equivalent.

2. An elementary certificate good for six years may be obtained on completion of two years work in rural education, or its equivalent.

3. By substituting Rural Education 321 and 322 for Rural Education 221 and 222, the student may qualify for a four-year high-school certificate at the end of his second year in college.

4. A high-school certificate good for six years may be obtained on completion of three years work in rural education or its equivalent.

5. The permanent high-school certificate may be obtained upon completion of the four-year course in rural education, or its equivalent

THE GRADUATE SCHOOL

General Statement.—The Graduate School was established in 1924. Prior to that time graduate work was administered by the General Faculty, acting through a Committee on Graduate Studies. The Faculty of the Graduate School consists of such members as the teaching staff and of the staff of the Agricultural Experiment Station as the General Faculty may determine, and has general jurisdiction over all matters relating to graduate work.

Administration.—Matters of general policy are considered by the Graduate Council, which reports its recommendations to the Faculty of the School. In cases in which prompt action is desirable the Council is authorized to act, reporting its action to the Faculty for ratification.

The Executive Committee, consisting of five members of the Council, is authorized in routine matters to take final action in accordance with the general policies.

The Dean of the Graduate School is the representative of the Faculty in dealing with individuals, and is charged with the execution of its regulations. Petitions are acted upon by the Dean or by the Executive Committee, as the case may require.

All communications relating to graduate work should be addressed to the Dean of the Graduate School.

Character of Graduate Work.—The principal aim of graduate study is the development of the power of independent work and the promotion of the spirit of research. Each candidate for a degree is expected to have a wide knowledge of his subject and of related fields of work; the graduate student is not expected to get from lecture and laboratory courses all the knowledge and training necessary to meet the requirements for his degree.

Degrees.—The completion of an approved course of study in the Graduate School leads to the degree of Master of Science. Professional degrees in engineering—Chemical Engineer, Civil Engineer, Electrical Engineer, Mechanical Engineer,—are offered on the basis of acceptable professional experience, a thesis, and an examination.

REQUIREMENTS FOR THE MASTER'S DEGREE

General.—The master's degree denotes that attainment which a student of good native ability, who has received an appropriate bachelor's degree, may reasonably expect to attain in one year of entire and successful devotion to advanced studies, with adequate facilities and under competent direction. The courses of study leading to this degree do not make research the chief consideration, but are intended to serve as an introduction to the methods and discipline of research.

Specification as to Course.—The course of study pursued is specified in the diploma. In his application for admission the student must designate as his course of study one of the following: Agricultural Administration. Agricultural Education. Agricultural Engineering. Agriculture. Architecture. Chemical Engineering. Civil Engineering. Electrical Engineering. Industrial Education. Mechanical Engineering. Rural Education. Science. Veterinary Medicine.

Admission.—In order to be admitted to a course of study leading to the master's degree, the candidate must satisfy the following requirements:

1. He must be a graduate of this College or of some other approved institution whose requirements for graduation are substantially equivalent to those of this College.

2. His undergraduate course of study must be of such nature as to afford a satisfactory foundation for the graduate studies he proposes to take up.

3. His undergraduate record must be of such high order as to satisfy the committee that he is qualified by native ability and by training to pursue graduate studies with profit and with credit. In case it does not fully meet this requirement, the committee may require the completion of additional undergraduate work with a grade of at least B.

Application.—Application for admission should be made at least one month in advance, and in case the candidate comes from another institution, his application must be accompanied by a complete transcript of his undergraduate record, properly certified.

Admission to Candidacy.—Admission as a graduate student does not imply admission as a candidate for a degree. In order to become a candidate for an advanced degree, the student must make formal application,—in the regular session before December 15, and in the summer session one week before the close of his first term. The application will be approved only in the case the student has demonstrated his ability to do graduate work in creditable manner.

Registration.—Graduate students must register at the beginning of each term at the office of the Registrar and of the Dean.

Their assignment cards are to be approved by the Dean.

Amount of Work.—The candidate for the degree of Master Science must do at least one full year's work. By this is meant that he must register for, attend, and complete courses amounting to at least sixteen term hours each term, and in addition must submit a satisfactory thesis. Four term hours each term are assigned to the thesis. The total requirements for the year, therefore, amount to forty term hours. *Course of Study.*—The subjects constituting the student's complete course of study are to be chosen subject to the approval of the Executive Committee.

In general, the work must be made up of graduate courses, and in every case must include at least twelve term hours each term in such courses in addition to the thesis. In cases in which it may be deemed advisable the remainder may consist of advanced undergraduate courses. Each hour of theory involves two hours of preparation.

Major and Minor Subjects.—For the degree of Master of Science in Agricultural Administration, in Agricultural Education, in Agricultural Engineering, in Agriculture, in Industrial Education, in Rural Education, in Science, in Veterinary Science, the candidate must choose a major subject and one or two minor subjects. A major or a minor denotes the field of knowledge of a department. With the approval of the Executive Committee, the major may be taken in two closely allied departments. In his major subject the student must take courses amounting to at least eight term hours each term, in addition to his thesis. Courses in minor subjects must be chosen by the student after consultation with the head of his major department.

Residence.—The master's degree will not be conferred except after a residence of at least one year at the College. For candidates engaged in teaching or other regular employment, the period of residence will be increased to such extent as the committee may determine. Members of the Staff may not take in any term of the regular session more than one-fourth of a full term's work.

Work in Summer Session.—The residence requirement may be satisfied by residence during four summer terms of six weeks each. Courses offered in the summer session cover essentially the same ground as that covered by the corresponding courses of the regular session. The maximum amount of work for which a student may register in a summer term is eight term hours. In the summer session each hour of theory involves three hours of preparation.

The candidate who spends only four summer terms in residence may fulfill the requirements for the master's degree, provided that, in the ad interim periods between summer sessions, he does the greater part of the work on his thesis. Authority to do thesis work in this way must be obtained through the Dean, and the student must make such reports of progress as the head of his major department may require.

Work in Absentia.—No provision is made for work in absentia except that the student who is in residence during summer sessions only must do the greater part of his thesis work between summer sessions as stated above.

Courses Offered by Experiment Station Staff.—In addition to the courses offered by the several departments of instruction there are graduate courses offered by members of the Agricultural Experiment Station Staff and described under the respective departments of instruction.

Quality of Work.—In order to be allowed to go on with his course a graduate student must give continued satisfaction in his work. *Initiative.*—In carrying on his work in the Graduate School, the student is expected to keep himself informed as to the regulations and to assume the initiative in complying with them.

Thesis.—The candidate must submit a thesis, which shall be based upon his work in the department in which he takes his leading subject. Its title must be submitted to the committee through the head of the department in which it is to be written for approval by November 15. In matter and style the thesis must be acceptable to the head of the department in which it is written and to the committee. It must show that the candidate has the ability to do independent work; and, by correct citation of authorities, must show that he has satisfactory acquaintance with the literature of his field.

The thesis must be typewritten on paper $8\frac{1}{2}$ inches by 11 inches; two weeks before commencement it must be presented to the Dean through the head of the department in completed form ready for binding. Before the degree is conferred a bound copy for the College library must be deposited with the Dean.

Examinations.—At the close of the term written examinations are held in each graduate course and it is the duty of the head of the department concerned to file with the Dean a copy of the questions. In addition to the term examinations, a student must pass a final examination covering his entire course of study and his thesis. The final examination may be oral or written or both and is open to the committee and to members of the Faculty.

Reports.—Heads of departments will make reports to the Registrar at the end of each term on ail graduate work done in their respective departments and such other reports on the progress of their graduate students **as** the Dean may request.

Special Committee.—The instructors under whom a graduate student takes work shall constitute a special committee to direct and advise him concerning his work and to represent him before the Executive Committee. The instructor in charge of the leading subject shall be chairman of the special committee in each case.

Fees.— A statement of the fees to be paid by graduate students is given under "expenses" in Part III.

Leave of Absence or Withdrawal.—Requests for authority to be absent from the College or to withdraw permanently must be presented to the Dean through the Commandant.

Graduation.—Candidates for advanced degrees who expect to complete their work at the end of a given term must give written notice to the Dean to that effect at least one month in advance. When a candidate has to the satisfaction of the Executive Committee completed the requirements for an advanced degree he will be recommended to the Faculty for his degree. The diploma fee is \$7.50.

PROFESSIONAL DEGREES IN ENGINEERING

The professional degrees in engineering, Chemical Engineer, Civil Engineer, Electrical Engineer, Mechanical Engineer, are open only to men who have received from this College the degree of Bachelor of Science or Master of Science in an engineering course.

The requirements for any one of these degrees include acceptable professional experience, a thesis, and an examination. In detail the requirements are as follows:

The candidate must have been engaged in acceptable professional work for a period of not less than four years after graduation, and must have been in responsible charge of such work for at least one year. The applicant who holds the degree of Master of Science in an engineering course is regarded as having met the time requirement if he has devoted three years to professional practice or to teaching engineering subjects.

In connection with his application for authority to register, the candidate must submit an orderly and detailed statement of his professional experience for the consideration of the Executive Committee. He must also submit a title for his thesis and a general outline of the thesis.

At a time to be designated by the Dean he must report at the College for an examination covering his professional experience, his thesis and the research or study which forms its basis.

The thesis must correspond in form to the master's thesis described above. It must not be simply a descriptive discussion of some ordinary engineering project, nor a digest of engineering literature, but must be of an analytical character and must constitute a distinct contribution to engineering science. The thesis in final form must be in the hands of the Dean three weeks before commencement.

The degree is conferred only at commencement, and application for registration must be made not later than November 1 preceding. In case a student does not complete the work for his degree within two years after registration, his registration will be cancelled.

The fees are a registration fee of \$5.00 to be paid at registration, and a diploma fee of \$7.50 to be paid before commencement.

No residence study is required.

SCHOLARSHIPS AND FELLOWSHIPS

The College offers annually a limited number of graduate scholarships, each carrying a stipend of 200.00, and of fellowships, each carrying a stipend of 600.00. In either case payments are made in eight equal installments.

An applicant for a scholarship or o fellowship must meet the requirements for admission to the Graduate School and must express his intention of completing in this College the requirements for the master's degree. He must also agree, in consideration of the award, to render a reasonable amount of service, to be determined by the Dean of the Graduate School and the head of the department in which he takes his major work. Application must be made on forms to be obtained from the Dean of the Graduate School and must be accompanied by a letter of recommendation from the President or other officer of the institution from which the applicant comes.

Nominations to scholarships or fellowships are made on the basis of worthiness of character, scholastic attainments, and promise of success in the principal field of study to which the applicant proposes to devote himself. They are made by the Dean of the Graduate School, subject to the approval of the President.

TEXAS POWER AND LIGHT COMPANY FELLOWSHIP IN ENGINEERING

The Texas Power & Light Company offers a graduate fellowship in engineering having a value of six hundred dollars and open to graduates from the Electrical Engineering or Mechanical Engineering courses. The selection is made each year by a committee on the basis of the applicant's fitness for some branch of the public utility field and his ability to profit by his studies, due consideration being given to his undergraduate scholastic record.

WEST TEXAS UTILITIES COMPANY SCHOLARSHIP

The West Texas Utilities Company has established an annual scholarship with a value of two hundred and fi^fty dollars (\$250) for the senior or graduate student in Electrical Engineering doing the most satisfactory work in public utility problems. The award is based on proficiency in certain courses in the College and also on initiative and grasp of the public utility problems as demonstrated by a paper on some aspect of public utility operation.

CURRICULA

THEORY, PRACTICE, TERM-HOUR

In the curricula shown on the following pages, the time devoted each week to the several subjects is expressed in clock-hours. The hours devoted to "theory" (which includes recitations and lectures) are indicated in the column headed "Th.," the hours devoted to "practice" (which includes work in laboratory, shop, drawing room or field) are indicated in the column headed 'Pr."

A "term-hour" is one clock-hour of "theory" or two clock-hours of "practice" per week for one term.

Notes.-1. In addition to the work shown in the several curricula,

(a) All first-year students are required to take physical training two hours a week.

(b) Students taking English are required to attend conferences with their instructors.

(c) In the four-year agricultural and engineering courses all students are required to attend an assembly not oftener than once a month.

(d) 'Members of the R. O. T. C. are required to devote two afternoons in the second term of every year to taget practice.

2. Junior and senior courses in Military Science are required of members of the advanced courses in the R. O. T. C.; they are not open to other students.

THE SCHOOL OF AGRICULTURE

1.—COURSE IN AGRICULTURE

FRESHMAN YEAR

| Hour. First Term W | s per eek | Hours Second Term We | |
|--|--------------|--|-----|
| Tirst term W | Pr. | Second Term We | Pr. |
| Agricultural Economics 101 3 Agricultural Resources | 0 | Agricultural Economics 102 | 0 |
| Animal Husbandry 107 2 General Animal Husbandry | 4 | Agronomy 105 | 2 |
| Biology 101 2 General Botany | 4 | Biology 102 | 4 |
| Chemistry 101 | 3. | Chemistry 102 | 3 |
| English 103 | 0 | English 104 | 0 |
| Military Science 1 | 2 | Military Science 1 | 2 |
| 14 | 13 | r ² 15 | 11 |
| 'soi | HOMOR | E YEAR | , |
| **Biology 207 2 Zoology | 4 | Agricultural Eng. 201 2 Farm Machinery | 2 |
| English 203 | 0 | **Biology 206 1 Bacteriology | 4 |
| Entomology 201 | 2 | Chemistry 206 3 Organic | 2 |
| Geology 201 3 General | 2 | Dairy Husbandry 202 2 Dairying | 2 |
| Horticulture 201 | 2 | English 204 | · 0 |
| Military Science | 2 | Military Science | 2 |
| | | | |
| 15 | 12 | 14_ | 12 |
| *To be chos | en fro | m the following: | |
| Agricultural Eng. 203 2 Gas Engines | 2 | Agricultural Education 207 3 Educational Psychology | 0 |
| Animal Husbandry 203 1 Market Classes and Grades | 4 | Animal Husbandry 202 2 Breed Types | 2 |
| Poultry Husbandry 102 2 | 2 | Geology 210 2 | 2. |

Poultry Husbandry 102 2 Farm Poultry

Geology 210 2 Agricultural Horticulture 202 2 Vegetable Gardening

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**One half of the class will take Biology 207 the first term and Biology 206 the second term. The other half will take those subjects in the reverse order. Students who intend to take Group 4, 4a, or 9 may substitute Biology 35, Plant Physiology (3-2) for Biology 207.

GROUP 2. AGRICULTURAL EDUCATION

| | JUNIOR | YEAR | |
|--|---------------|--|----------|
| Hour First Term W | s per 'eek | Hours Second Term Wee | ĸ |
| Th: Agricultural Education 305 3 | Pr. 0 | Agricultural Education 308. 3 | Pr. 0 |
| Principles of Education Agronomy 301 | 2 | Educational Psychology Economics 403 | 0 |
| Soils Chemistry 309 3 | 3 | Principles English 303 2 | 0 |
| Agricultural Chemistry *Elective | 2 | Argumentation *Elective | • |
| 18 | 5 | 20 | 0 |
| | | | |
| Agricultural Economics 411 3 | senior 2 | Agricultural Education 402 3 | 2 |
| Agricultural Economics Agricultural Education 401 3 | 2 | Teaching Vocational Agriculture English 401 2 | 0 |
| Teaching Vocational Agriculture | 2 | Public Speaking | U |
| *Elective12 | _ | Farm and Ranch Manage- ment 401 | 2 |
| 18 | 4 | Farm Management *Elective11 | |
| | | 19 | 4 |
| | 9 | | |
| GROUP 3. AGRIC | CULTI | JRAL ENGINEERING | |
| | JUNIOR | YEAR | |
| Agricultural Eng. 305 | 4 | Agricultural Engineering 214 2 Tractors | 4 |
| Agronomy 301 | 2 | Economics 403 3 Principles | 0 |
| Chemistry 309 3 | 3 | English 303 2 | 0 |
| Agricultural Chemistry *Elective | | Argumentation *Elective11 | |
| 16 | 9 | 18 | 4 |
| | SENIOR | | |
| Agricultural Economics 411 3 | 2 | Agricultural Engineering 402 2 | 4 |
| Agricultural Economics Agricultural Engineering 413 2 | 3 | Automobiles and Trucks English 401 2 | 0 |
| Farm Buildings *Elective | | Public Speaking Farm and Ranch Manage- | - |
| | <u> </u> | ment 401 3 | 2 |
| 18 | 5. | Farm Management *Elective10 | |
| | | | |
| | | 17 | 6 |

GROUP 4. AGRONOMY

| | JUNIOR | YEAR | | |
|--|----------------|--|--------------|-----|
| Hour First Term W | rs per Veek | Second Term | Hours Wee | |
| Th. | Pr. | | Th. | Pr. |
| Agronomy 301 | 2 | Agronomy 308 | 2 | 2 |
| Chemistry 309 | 3 | Forage Crops Agronomy 314 Field Crops | | 2 |
| Genetics 301 3 | 2 | Economics 403 | 3 | 0 |
| Genetics *Elective | | Principles English 303 | 2 | 0 |
| 18 | 7 | Argumentation Genetics 304 | 3 | 2 |
| | | Plant Breeding *Elective | 5 | |
| | | | 18 | 6 |
| | SENIOR | YEAR | 10 | 0 |
| Agricultural Economics 411 3 | 2 | Agronomy 416 | . 1 | 0 |
| Agricultural Economics Agronomy 411 2 | 2 | Soils and Crops Seminar English 401 | 2 | 0 |
| Agronomy 411 2. Soil Fertility Agronomy 415 1 | | Public Sneaking | | Ū |
| Solls and Crops Seminar | 0 | Farm and Ranch Manage ment 401 | ;- 3 | 2 |
| Animal Husbandry 409 3 Animal Nutrition and Feeding | 2 | Farm Management *Elective | | |
| *Elective | | Elective | | |
| 17 | 6 | | 19 | 2 |
| | 0 | ICTION AND MARKETH | NC | |
| | JUNIOR | JCTION AND MARKETI | NG | |
| Agronomy 301 | 2 | Agronomy 316 | . 2 | 2 |
| Soils | 3 | Fiber Crops | ż | 2 |
| Chemistry 309 | - | Fiber Crops Agronomy 411 Soil Fertility Economics 403 | | |
| Genetics | 2 | | | 0 |
| *Elective9 | | English 303 | . 2 | 0 |
| $\overline{18}$ | 7 | Genetics 304 | 3 | 2 |
| | - | Genetics 304 Plant Breeding *Elective | 7 | |
| | | | | _ |
| | SENIOR | VEAR | 1819 | 6 |
| Agricultural Economics 411 3 | 2 | | . 1 | 0 |
| Agricultural Economics Agricultural Engineering 419 2 | 2 | Agronomy 420 Cotton Research Methods English 401 | ່າ | 0 |
| Cotton Machinery Biology 315 | _ | Public Speaking | | 0 |
| Botany of the Cotton Plant | 2 | Farm and Ranch Manage ment 401 | - 3 | 2 |
| Entomology 411 2 Cotton Insects | 2 | Farm Management | | 2 |
| Textile Engineering 413 1 | 2 | Genetics 402 Orgin, Classification and | | 2 |
| Cotton Classing *Elective5 | | Breeding of Cotton Marketing and Finance 504. Cotton Economics | . 2 | 4 |
| 15 | 10 | Textile Engineering 414 | . 0 | 2 |
| | | *Elective | 5 | |
| | | | 15 | 10 |

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SCHOOL OF AGRICULTURE

| | JUNIOR | YEAR | | |
|--|----------------------------|---|---------------------|---------------------|
| First Term | ours per Week h. Pr. | Second Term | lours Wee Th. | ĥ |
| Agronomy 301 | | Economics 403 | | 0 |
| Animal Husbandry 303 | 32 | English 303 Argumentation | 2 | 0 |
| Chemistry 309 | 3 3 | Genetics 306 | 2 | 2 |
| Genetics 301 | 3 2 | Veterinary Anatomy 302 Anatomy and Physiology | 2 | 2 |
| *Elective | 5 | *Elective | 9 | |
| 1 | 7 9 | | 18 | 4 |
| | SENIOR | YEAR | | |
| Agricultural Economics 411. | 3 2 | English 401 Public Speaking | 2 | 0 |
| Veterinary Medicince 403 Animal Discases *Elective | | Farm and Ranch Manage- ment 401 Farm Management | | 2 |
| | | *Elective | 14 | |
| 18 | 84 | | 19 | $\frac{1}{2}$ |
| Nota In group 5 the sa | ator alact | ives must include at least one | | r c o |

GROUP 5. ANIMAL HUSBANDRY

Note.-In group 5, the senior electives must include at least one course in Animal Husbandry each term.

GROUP 7. DAIRY HUSBANDRY

| | JUNIOR | YEAR . | |
|--|--------|---|---|
| Agronomy 301 3 Soils | 2 | Dairy Husbandry 306 3 Butter Making and Factory Man. | 2 |
| Chemistry 309 | 3 | Economics 403 | 0 |
| Dairy Husbandry 301 2 Market Milk | 2 | English 303 2 Argumentation | 0 |
| Dairy Husbandry 303 0 Adv. Dairy Cattle Judging | 2 | *Elective | |
| Genetics 301 | 2 | $\overline{20}$ | 2 |
| *Elective 5 | | | |
| 16 | 11 | | |
| | SENIOR | YEAR | |
| Agricultural Economics 411 3 Agricultural Economics | 2 | English 401 2 Public Speaking | 0 |
| Animal Husbandry 303 3 Animal Nutrition | 2 | Farm and Ranch Manage- | 2 |
| Dairy Husbandry 409 1 | 4 | ment 401 3 Farm Management | 2 |
| Adv. Study of Dairy Breeds *Elective | | *Elective14 | |
| $\frac{1}{16}$ | 8 | 19 | 2 |
| | | | |

| GROUP 8. ENTO | MOLOGY |
|---------------|--------|
|---------------|--------|

| | JUNIOR | YEAR | |
|--|---------------|---|----------|
| First Term W | s per 'eek | Second Term We | |
| Agronomy 301 | Pr. 2 | Economics 403 | |
| Soils Chemistry 309 | 3 | Principles English 303 2 | 0 |
| Agricultural Chemistry Entomology 301 2 | 4 | Argumentation Entomology 302 2 | 4 |
| Systematic *Elective 8 | | Systematic *Elective10 | |
| . 16 | 9 | 17 | 4 |
| | SENIOR | YEAR | |
| Entomology 401 2 | 4 | English 401 2 | 0 |
| Economic Genetics 301 | 2 | Public Speaking Entomology 402 2 | 4 |
| Genetics *Elective11 | | *Elective | |
| . 16 | 6 | 17 | <u>-</u> |
| GROUP 9. | HOP | RTICULTURE | |
| | UNIOR | YEAR | |
| Agronomy 301 3 | 2 | Economics 403 3 Principles | 0 |
| Chemistry 309 | 3 | English 303 2 Argumentation | 0 |
| Genetics 301 3 | 2 | Genetics 304 3 | . 2 |
| Genetics Horticulture 317 2 | 4 | Plant Breeding Horticulture 310 2 | 2 |
| Principles of Fruit Production *Elective | | Horticulture 318 2 | 4 |
| 16 | 11 | Principles of Fruit Production *Elective | |
| | | 17 | 8 |
| | SENIOR | | |
| Agricultural Economics 411 3 Agricultural Economics | 2 | Biology 416 2 Plant Diseases | 4 |
| Horticulture 401 3 Promology | 2 | English 401 | 0 |
| Horticulture 419 1 Experimental Horticulture | 0 | Horticulture 420 0 Experimental Horticulture | 4 · |
| Horticulture 421 | 2 | *Elective | |
| *Elective | | 16 | 8 |
| . 17 | 6 | | |
| GROUP 10. | . LAN | NDSCAPE ART | |
| | JUNIOR | YEAR | |

| . JUN | NIOR YEAR | |
|--|------------------------------------|---|
| Agricultural Engineering 305 3 4 Surveying and Drainage | 4 Economics 403 | 0 |
| Agronomy 301 | 2 English 303 2 (Argumentation | 0 |
| Landscape Art 301 | 4 Landscape Art 302 | 0 |
| | - ' | - |
| 17 10 | 0 20 | 0 |

SCHOOL OF AGRICULTURE

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| | 5 | SENIOR | YEAR | | |
|----------------------------|-------|--------|-------------------|-------|-----|
| F | Iours | s per | | Hours | |
| First Term | | eek | Second Term | We | |
| | Th. | Pr. | E U U U U | Th. | Pr. |
| Agricultural Economics 411 | 3 | 2 | English 401 | 2 | 0 |
| Agricultural Economics | | | Public Speaking | | |
| Architecture 407 | 2 | 0 | Landscape Art 402 | 3 | 8 |
| History of Art | | | Landscape Art | | |
| Landscape Art 401 | 3 | 8 | *Elective | 11 | |
| Landscape Art | - | - | | | |
| *Elective | 7 | | | 16 | 0 |
| | | | | 10 | 0 |
| | 1.5 | 10 | | | |
| | 15 | 10 | | | |

GROUP 11. POULTRY HUSBANDRY

| Agronomy 301 | JUNIOR 2 3 2 | Economics 403 | 0 0 0 |
|---|-----------------------|---|-------------|
| Poultry Husbandry 301 2 Preparing for Market | 2 | Poultry Husbandry 302 3 Feeding and Brooding | 2 |
| *Elective | | *Elective9 | |
| 16 | 9 | 19 | 2 |
| | SENIOR | YEAR | |
| Agricultural Economics 411 3 | 2 | English 401 2 Public Speaking | 0 |
| Poultry Husbandry 401 2 Management | 2 | Poultry Husbandry 402 2 Poultry Farming | 2 |
| Poultry Husbandry 403 2 Judging | 2 | *Elective15 | _ |
| *Elective | | 19 | 2 |
| 17 | 6 | | |

GROUP 12. RURAL SOCIOLOGY

| | JUNIOR | YEAR | |
|---|----------|--|---|
| Accounting and Statistics 303 2 Statistical Method | 4 | Agricultural Economics 312 2 Agricultural Economics | 2 |
| Economics 403 | 0 | English 303 2 | 0 |
| Rural Sociology 311 [•] | 0 | Rural Sociology 312 | 0 |
| *Elective10 | | *Elective12 | |
| | <u> </u> | \rightarrow | - |
| 18 | 4 | 19 | 2 |
| | SENIOR | YEAR | |
| Rural Sociology 407 2 Rural Sociology | 2 | English 401 2 Public Speaking | 0 |
| *Elective 17 | 7 | Rural Sociology 415 | 2 |
| 19 | 2 | *Elective | |
| | | | _ |
| | | 19 | 2 |

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XIV.—COURSE IN AGRICULTURAL ADMINISTRATION

| FR | ESHMA | N YEAR | |
|--|----------|---|-----------------|
| | eek | | s per eek |
| Th. Agricultural Economics 101 3 | Pr. 0 | Agricultural Economics 102_3 | Pr. 0 |
| Agricultural Resources Biology 101 2 | 4 | Agricultural Resources Biology 102 2 | 4 |
| General Botany Chemistry 101 | 3 | General Botany Chemistry 102 | 3 |
| Inorganic English 103 | 0. | Inorganic English 104 | 0 |
| Rhetoric and Composition Mathematics 101 | 0 · | Rhetoric and Composition Mathematics 102 | 0 |
| Algebra Military Science 1 | 2 | Algebra Military Science 1 | `2 |
| | 9 | 15 | 9 |
| •• | HOMOR | | - |
| Accounting and Statistics 201 2 | 4 | Accounting and Statistics 202 2 | 4 |
| Agronomy 105 | 2 | Principles of Accounting Agronomy 301 | . 2 |
| Crop Production Economics 203 | 0 | Soils | 4 |
| Principles English 203 2 | Ö. | Animal Husbandry 107 2 General Animal Husbandry Economics 204 3 | 0 |
| Composition and Literature *Horticulture 202 | 2. | English 204 2 | 0 |
| Vegetable Gardening Military Science 1 | 2 . | Composition and Literature Military Science 1 | 2 |
| 13 | 10 | $\frac{1}{13}$ | $\overline{12}$ |
| *Or Dairy Husbandry 202 (2-2) | | 19 | 12 |
| or Poultry Husbandry 102 | (2-2) | | |
| | INITIN | G AND STATISTICS | |
| | JUNIOR | 1 | |
| Accounting and Statistics 301 2 | 4 | Accounting and Statistics 302 1 | 4 |
| Theory and Practice of Accountin Accounting and Statistics 303 2 | g 4 | Auditing Agricultural Economics 312 2 | 2 |
| Statistical Method | | Agricultural Economics | 0 |
| Elective10 | _ | English 303 2 Argumentation | 0 |
| . 14 | 8 | Elective10 | |
| (1928 29) | | 15 | 6 |
| 1, Q2° | SENIOR | YEAR | |
| Accounting and Statistics 401 I | 4 | **Elective | |
| Cost Accounting English 401 2 | 0 | $\frac{1}{18}$ | 0 |
| A Public Speaking | v | 18 | U |
| د فغذائه العلم | | | |
| . 16 | 4 | | |
| *Must include at least one | course | in the Department of Account | ting |

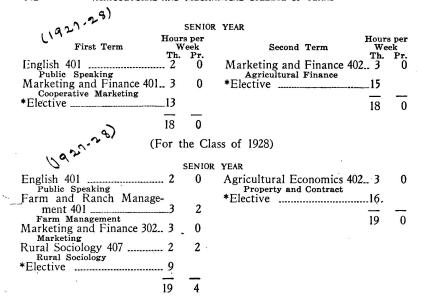
and Statistics. - Service years a service on the Department of Accounting NOTE.—In group 1 the electives must include at least one course in the Department of Accounting and Statistics.

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SCHOOL OF AGRICULTURE

GROUP 2. AGRICULTURAL ECONOMICS JUNIOR YEAR Hours per Hours per First Term Week Second Term Week Th. Pr. Th. Pr. Accounting and Statistics 303 2 4 Agricultural Economics 312. 2 2 Statistical Method History 307 Agricultural Economics 0 English 303 2 0 Industrial History of England Argumentation 0 *Elective _____11 United States 4 16 *Elective _____ [1928.29) 17 2 SENIOR YEAR Agricultural Economics 423.. 3 Outline of Land Economics Agricultural Economics 402.73 0 0 Economics 413 3 0 n Advanced Theory *Elective 0 12 Public Speaking *Elective _____ 18 0 18 0 GROUP 3. FARM AND RANCH MANAGEMENT JUNIOR YEAR Accounting and Statistics 303 2 4 Agricultural Economics 312.. 2 2 Statistical Method Agricultural Engineering 321 1 4 2 Field Crops . Farm Shops Animal Husbandry 409 3 2 Dairy Husbandry 202 2 2 Animal Nutrition Dairying English 303 2 Farm and Ranch Manage-0 ment 301 1 4 Argumentation Poultry Husbandry 302..... 3 2 Farm Records and Cost Analysis Poultry Brooding and *Elective _____ 4 Feeding *Elective 11 14 (1928-29) 16 8 SENIOR YEAR English 401 2 0 Agronomy 308 2 Forage Crops 2 Public Speaking Farm and Ranch Manage-Farm and Ranch Management 402 1 ment 401 3 2 6 Farm Management Farm Management *Elective12 *Elective _____ _11 17 2 14 8 GROUP 4. MARKETING AND FINANCE JUNIOR YEAR Accounting and Statistics 303 2 Agricultural Economics 312. 2 4 2 Agricultural Economics English 303 2 0 0 Argumentation Money and Banking *Elective _____11 Marketing and Finance 302... 3 0 Principles of Marketing -----*Elective 16 4 10 11 17 2

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS



XV.—COURSE IN AGRICULTURAL ENGINEERING

| FRESH MAN YEAR | | | | | | | |
|--|--|---|------------|---------------------|--|--|--|
| | rs per Veek | F Second Term | Iour We | s pe r ek | | | |
| Agricultural Engineering 101 0 | | Agricultural Engineering 102 | Th. | Pr. 3 | | | |
| Farm Shop Animal Husbandry 107 2 | 4 | Farm Shop Agronomy 105 | 3 | 2 | | | |
| General Animal Husbandry Chemistry 101 | 3 | Crop Production Chemistry 102 | 3 | 3 | | | |
| Inorganic English 103 | 0 | Inorganic English 104 | 3 | 0 | | | |
| Rhetoric and Composition Mathematics 101 | 0 | Rhetoric and Composition Mathematics 102 | 3 | 0 | | | |
| Algebra Mathematics 103 3 Trigonometry | 0 | Algebra Mathematics 104 Analytics | 3 | 0 | | | |
| Military Science 1 | 2 | Military Science | 1 | 2 | | | |
| 15 | 12:1 | | 16 | 10 | | | |
| so | PHOMOR | | 9 | ~ ~ | | | |
| Agricultural Engineering 203 2 Gas Engines | 2 | Agricultural Engineering 214 Tractors | 2 | 4 | | | |
| Drawing 101 | 2 | Civil Engineering 204 | . 3 | 0 | | | |
| Mechanical English 203 2 | 0 | Analytic Mechanics Drawing 108 Mechanical | 0 | 2 | | | |
| Composition and Literature Horticulture 201 | 2 | English 204 Composition and Literature | 2 | 0 | | | |
| Orcharding Mathematics 203 5 | 0 | Mathematics 204 | 5 | 0 | | | |
| Calculus | 2 | Military Science Physics 204 | 1 | 2 | | | |
| Military Science 1 Physics 203 | -3 | General |) | 2 | | | |
| _ | - / | | 16 | 11 | | | |
| . 15 | 1120 | 12 | - | ···· [•··· | | | |
| · . | JUNIOR | YEAR | | | | | |
| Agronomy 301 3 Soils | 2 | Agricultural Engineering 201 Farm Machinery | 2 | 2 | | | |
| Civil Engineering 201 3 Plane Surveying | 4 | Agronomy 308 Forage Crops | 2 | 2. | | | |
| Electrical Engineering 305 3 Electrical Machinery | 3 | Civil Engineering 305 Mechanics of Materials | 3 | 0 | | | |
| Geology 201 3 | 2 | Civil Engineering 315 | 0 | 2 | | | |
| *Elective | | Materials Laboratory Dairy Husbandry 202 | 2 | 2 | | | |
| 15 | īL | Dairying Economics 403 | 3 | 0 | | | |
| | 1.00 | Principles English 303 | 2 | 0 | | | |
| | ' | Argumentation *Elective | | | | | |
| | | | | | | | |
| . s | UMMER | | 17 | | | | |
| - | Civil Engineering 300, Field Practice, three weeks | | | | | | |

| SENIOR YEAR | | | | | |
|--|---------------------|---|--|--|--|
| Hours per First Term Week Second Term Th. Pr. | Hours Wee Th. | | | | |
| Agricultural Economics 411 2 2 Agricultural Engineering Agricultural Economics Automobiles and Trucks | | 4 | | | |
| Agricultural Engineering 413 2 3 Agricultural Engineering Farm Buildings Irrigation | 410 2 | 4 | | | |
| Civil Engineering 311 3 2 Agricultural Engineering Hydraulics | 416 2 | 4 | | | |
| English 401 | 418 2 | 4 | | | |
| Civil Engineering 334 18 7 Contracts and Specifical | 2 | 0 | | | |
| $\lambda = \frac{10}{2} \frac{10}{$ | 3 | | | | |
| *Junior and Senior Electives | | | | | |
| Iunior electives must bear course numbers above 200 and senior | | | | | |

Junior electives must bear course numbers above 200, and senior electives must bear course numbers above 300.

SCHOOL OF AGRICULTURE

XX.—COURSE IN LANDSCAPE ART

FRESHMAN YEAR Hours per Hours per First Term Week Th. Pr. Second Term Week Th. Pr. Architecture 102 0 Agronomy 105 3 2 4 Crop Production Architectural Drawing Architecture 101 0 4 Biology 102 2 4 Architectural Drawing Biology 101 2 4 3 General Botany Inorganic Chemistry 101 3 3 0 Inorganic English 103 0 0 Rhetoric and Composition Trigonometry Military Science 1 Military Science 1 2 2 12 15 12 13 SOPHOMORE YEAR Architecture 109 0 3 Agricultural Education 207. 3 0 Freehand Drawing Psychology Drawing 103a 2 Architecture 104 2 0 0 Shades and Shadows Descriptive Geometry English 203 2 0 Architecture 110 0 3 Composition and Literature Freehand Drawing Entomology 201 2 2 English 204 2 0 Composition and Literature Horticulture 208 2 2 2 Ornamentals Landscape Art 302 2 General 2 0 Plant Propagation Military Science 1 2 2 Elective 4 15 11 16 7 JUNIOR YEAR Agricultural Engineering 305 3 4 4 Surveying and Drainage Agronomy 301 3 2 0 Soils Principles Architecture 205 0 4 English 303 2 0 Freehand Drawing Argumentation Horticulture 314 2 Landscape Art 301 2 4 2 Introduction to Land-Floriculture Landscape Art 304 0 scape Art 8 13 14 14 13 SENIOR YEAR Economics 316 3 English 401 2 > 00 Business Law Public Speaking Business Law Horticulture 420,..... 0 Horticulture 317 3 2 4 Fruit Growing Experimental Landscape Art 402 3 Horticulture 419 1 ò 8 Landscape Art Experimental Landscape Art 401 3 8 Landscape Art -14 12 · 16 10

*Junior and Senior Electives

Junior electives must bear course numbers above 200 and senior electives must bear course numbers above 300.

| 4 1121 | ,t | | FIRST | YEAR | |
|-------------------|---------------------------------|-----|---------------------|---|----|
|) 4700 | First Term | | s per eek Pr. | Hours Second Term Wee Th. | |
| Agricult | ural Engineering 2 Machinery | 012 | 2 | Agronomy 30 | 2 |
| Agronor | ny 25 | 3 | 2 | Animal Husbandry 24 0 Market Types | 4 |
| | Husbandry 23 et Types | 0 | [.] 4 | English 104 | 0 |
| Dairy H | lusbandry 23 | | 2 | Entomology 22 2 | 2 |
| English | Dairying 103 | | 0 | Elementary Econ, Ent. Military Science 1 | 2 |
| Horticul Plant | Culture and | 2 | 2 | Textile Engineering 102 0 Cotton Classing *Elective | 2 |
| Military | gation Science | | 2 | 15 | 12 |
| | Engineering 101 n Classing | 0 | 2 | | 12 |
| | | 14 | 16 | • | |

C.—TWO-YEAR COURSE IN AGRICULTURE

| *To be choser | n from the following: |
|----------------------------------|----------------------------|
| 1. Agricultural Engineering 2032 | 2 · Poultry Husbandry 1022 |
| Gas Engines | Farm Poultry |
| Horticulture 202 2 | 2 |
| Vegetable Gardening | |

SECOND YEAR

Eighteen term-hours each term from the following in addition to Military Science. ¹-Agricultural Engineering 203 2 2 Agricultural Engineering 214 2 4 **Gas** Engines Tractors Agricultural Engineering 305 3 4 Agricultural Engineering 322 1 4 Surveying and Drainage Agricultural Engineering 321 1 Farm Shop Agricultural Engineering 402 2 Automobiles and Motor 4 4 Farm Shop Agricultural Engineering 409 1 2 Trucks Agricultural Engineering 410 2 Farm Concrete Animal Husbandry 55 2 4 2 Irrigation Animal Husbandry 52 2 2 Breeding 2 2

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- Military Science 1
 - 13

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Animal Husbandry 58 2 Live Stock Management Animal Husbandry 202 2 2 Breed Types Entomology 56 2 2

| Apiculture | - | - |
|---|---|---|
| Horticulture 304 | 1 | 4 |
| Nut Culture Military Science | 1 | 2 |
| Veterinary Anatomy 306 Animal Diseases | 3 | 2 |

THE SCHOOL OF ARTS AND SCIENCES

XIX.—COURSE IN LIBERAL ARTS

(Leading to the Degree of Bachelor of Arts)

The first two years of the Course in Liberal Arts are spent in introductory work in varied fields. The purpose of this plan is to give the student breadth of view, and to enable him to take a more intelligent part in his own education. During the two upper years the student chooses his own field of work under the advice and direction of the Dean of the School of Arts and Sciences.

| FRESH MAN YEAR | | | | | | |
|--|--------|--------|---|--------------|---------------|------|
| *Chemistry 103 | 3 | 4 | *Chemistry 104 | } • | 4 | |
| Inorganic Fnølish 105 | 4 | 0 | Inorganic English 106 4 | - |) L | |
| English 105 Rhetoric and Composition | 2 | 0 | Rhetoric and Composition History 102 | |) | |
| History 101 Western Europe | | | Western Europe | 4 | | |
| Mathematics 101 | 3 | 0 | **Mathematics 103 3 Trigonometry | ; (|) | |
| Military Science | | 2 | Military Science 1 | 2 | 2 | |
| Modern Language French, German or Spanish | 3 1 | 0 | Modern Language | |) | |
| | 17 . | 6 | 17 | | - 1 | 80 |
| · · · | ., , | * | *Or Mathematics 104 | | ð | |
| *Or Physics 201, 202 (3-2 | 2), Co | llege | Physics. | | | |
| | SOPHO | MOR | E YEAR | | | |
| **Biology 211 General Biology | 2 | 4 | **Biology 212 2 General Biology | , , 4 | 1 | |
| Economics 203 | 3 (| Ó | Economics 204 3 | ; (|) | |
| Principles English 231 | 3 (| 0 | Principles English 232 | | л | |
| English Literature Military Science | 1 | 2 | English Literature | | 1 | |
| Modern Language | 3 (| õ | Military Science 1 Modern Language | | 2 | |
| French, German or Spanish *Elective | | | French, German or Spanish *Elective | | | |
| . – | | - | | | - | |
| • 1 | 5 | б | 15 | i (| 5 | 36 |
| | | | YEAR | | | |
| English 321 Nineteenth Century Literature | 3 (| 0 | English 322 |) (|) | |
| *Elective 1 | | | *Elective | i | | |
| · | 8 | 0 | | 5 7 | 5 | 2.10 |
| | | • | YEAR | , i | , | Jac |
| English 401 | |)) | English 414 2 | | . . | |
| Public Speaking | | - | Contemporary Literature | |)' | |
| English 413 Contemporary Literature | 2 (| 0 | *Elective16 | j – | | |
| *Elective 1 | 14 | | 18 | 3 0 | 5 | • |
| | 8 0 | ñ | | | | |
| **Or Biology 103, 104, o | | ogy | 203, 204. | | | |

SPECIAL REQUIREMENTS

1. By April 15 of his Sophomore year, the student must designate the department in which he will take his major study and the department in which he will take his minor study.

2. Before graduation he must complete in his major study at least 18 term hours, and in his minor study at least 12 term hours, not including the prescribed subjects of the freshman and sophomore years. The remainder of the elective work may be chosen from any of the departments listed below.

3. The foreign language taken in the Freshman year must be continued in the Sophomore year.

4. Students who do not present a foreign language for admission must take a minimum of 18 term hours in one foreign language; others will take a minimum of 12 term hours.

DEPARTMENTS IN WHICH MAJOR AND MINOR STUDIES, AND ELECTIVES MAY BE CHOSEN

Group 1, Social Sciences.—Economics, Agricultural Economics, History (including Government), Rural Sociology, Agricultural Education, Physical Education, Rural Education.

Group 2, Natural Sciences and Mathematics.—Biology (Botany, Bacteriology, Zoology), Entomology, Genetics, Chemistry, Geology, Mathematics, Physics.

Group 3, Languages.—English, Modern Languages (French German, Spanish).

Note.—For sufficient reason, electives may be chosen from other departments of the College, subject to the approval of the Dean of the School of Arts and Sciences.

X.—COURSE IN SCIENCE

| FRESHMAN YEAR | | | | | | |
|--|-----------------|--|-----------------|--|--|--|
| | ırs per Week | | rs per eek | | | |
| Th | . Pr. | Th. | Pr. | | | |
| Biology 103 2 Botany | 4 | Biology 104 2 Botany | 4 | | | |
| Chemistry 103 3 | 4 | Chemistry 104 | 4 | | | |
| Inorganic English 103 | 0. | English 104 | 0 | | | |
| Mathematics 101 | 0 | *Mathematics 103 | 0 | | | |
| Military Science 1 | 2 | Military Science 1 | 2 | | | |
| Modern Language | 0 | Modern Language | 0 | | | |
| ∠ <u>1</u> 5 | 10 | 15 | $\overline{10}$ | | | |
| | 10 | *Or Mathmeatics 104 | 0 | | | |
| St | OPHOMOR | E YEAR | | | | |
| Biology 203 2 | 4 | Biology 204 2 | 4 | | | |
| Zoology English 231 | 0 | Zoology English 232 3 | • 0 | | | |
| English Literautre Military Science 1- | 2.2 | English Literature Milita ry Science 1 | 2 : | | | |
| Modern Language | ō | Modern Langoage 3 | 0 | | | |
| French, German or Spanish Physics 201 | 2 | French, German or Spanish Physics 202 | 2 | | | |
| College Physics *Elective | | College Physics *Elective 4 | , | | | |
| 16 | 8 | 16. | 8 | | | |
| | JUNIOR | YEAR | | | | |
| Economics 203 3 Principles | 0 | Economics 204 3 | 0 | | | |
| English 321 3 | 0 | Principles English 322 3 | 0 | | | |
| Nineteenth Century Literature *Elective | | Nineteenth Century Literature *Elective | | | | |
| It | _ | H | | | | |
| 20 | 0 | 20 | 0 | | | |
| | SENIOR | YEAR | | | | |
| English 401 2 | 0 | English 414 2 | 0 | | | |
| Public Speaking English 413 | 0 | Contemporary Literature *Elective | | | | |
| Contemporary Literature *Elective | | $\overline{20}$ | 0 | | | |
| $\frac{1}{20}$ | 0 | | | | | |
| 20 | v | | | | | |

SPECIAL REQUIREMENTS

1. By April 15 of his sophomore year, the student must designate as his major department one of the following: Biology (botany, zoology, bacteriology), Chemistry, Entomology, Geology, Physics.

2. Before graduation the student must complete in his major department at least twenty-four hours, not including prescribed subjects.

3. The student who chooses Physics as his major department must include in his electives Mathematics 104, 203, 204.

4. The foreign language taken in the freshman year must be continued in the sophomore year.

5. Students who do not present a foreign language for admission must take a minimum of 18 term hours in one foreign language; others will take a minimum of 12 term hours.

ELECTIVE SUBJECTS FOR THE SOPHOMORE YEAR

The following elective subjects are open to sophomores in the Science Course:

Chemistry 205, Qualitative Analysis, Chemical Engineering 202, Qualitative and Quantitave Analysis.

Chemistry 207, 208; Quantitative Analysis, Technical Analysis.

Chemistry 301, 302, Organic Chemistry.

Entomology 201, 202, 312, Systematic, Economic, Medical Entomology. Geology 201, 202, Physical and Historical Geology.

Agricultural Education 207, Psychology.

Drawing 219, 220, Freehand Drawing.

Mathematics 104, 203, 204, Analytic Geometry, Calculus.

For the junior and senior years the electives are to be chosen in the Departments listed under groups 1, 2 and 3, page 108, subject to the special requirements noted above.

THE SCHOOL OF ENGINEERING

IX.—COURSES IN ARCHITECTURE GROUP I. GENERAL COURSE

FRESHMAN YEAR

| | FRESHMA | N YEAR | | |
|--|----------------|--|-----------|-----------|
| | urs per | | Hours | |
| First Term | Week h. Pr. | Second Term | We Th. | ek Pr. |
| Architecture 101 | 1. 17. | Architecture 102, | | 4 |
| Architectural Drawing | | Architectural Drawing | . • | |
| Architecture 109 |) 3 | Architecture 104, | . 2. | 0 |
| Freehand Drawing | | Shades and Shadows | | |
| Chemistry 101 | 33 | Architecture 110 | 0 | 3 |
| Inorganic | | Freehand Drawing | 2 | 2 |
| Drawing 103a | 20 | Chemistry 102 | . 3 | 3 |
| Descriptive Geometry | 4 0 | Inorganic English 106 | 4 | 0 |
| English 105 | t U | Rhetoric and Composition | 4. | U |
| Mathematics 101 | 0 | Mathematics 102 | 3 | 0 |
| Algebra | • | Algebra | | v |
| Mathematics 103 | 30 | Mathematics 104 | 3 | 0 |
| Trigonometry | | Analytics | | |
| Military Science | 12 | Military Science | . 1 | 2 |
| | | | <u> </u> | |
| 16 | 5 12 | • | 16 | 12 |
| | SOPHOMOR | E YEAR | | |
| Architecture 201 (|) 10 | Architecture 202 [*] | 0 | 14 |
| Design | | Design | | ••• |
| Architecture 203 | 10. | Architecture 206 | . 0 | 4 |
| Principles of Perspective | | Freehand Drawing | | - |
| Architecture 205 0 |) 4 | Architecture 208 | . 2 | 0 |
| Freehand Drawing | · · | History | - | • |
| Architecture 207 2 | 20 | Architecture 218 | | 0 |
| History Architecture 217 | 30 | Mechanics of Materials | 2 | 0 |
| Elements of Mechanics |) 0 | English 204 Composition and Literatur | 4 | U |
| English 203 | 2 0 | Physics 204 | ິຊ | 3 |
| Composition and Literature | . 0 | General | . , | |
| Physics 203 | 3 3 | Military Science | 1 | 2 |
| General | | | | _ |
| Military Science 1 | 2 | | 11 | 23 |
| | · | | •• | |
| 12 | 19 | | | |
| • | SUMMER | WORK | | |
| | | Drawings, three weeks | | |
| Menteeture 500, | | | | • |
| | JUNIOR | | | |
| Architecture 301 0 | 15 | Architecture 302 | 0 | 15 |
| Design | | Design | • | |
| Architecture 305 0 | 4 | Architecture 306 | . 0 | 4 |
| Freehand Drawing Architecture 309 2 | 0 | Freehand Drawing | 2 | 0 |
| History | 0 | Architecture 316 Mechanical Equipment | . > | U |
| Architecture 317 | 3 | Architecture 318 | 3 | 3 |
| Framed Construction | , | Reinforced Concrete | • • | |
| English 303 2 | 0 | Modern Language 102 | . 3 | 0 |
| Argumentation | - | French | | - |

12 22 *To be chosen from List A, page 124. Or History 305, Citizenship. (Second Term).

Argumentation

French

Modern Language 101 3

0

12 22 .

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SUMMER WORK .

Architecture 400, Working Drawings, three weeks

| | 6 | SENIOR | YEAR | | |
|---------------------|-------|--------|---|----------|--------------------|
| | Hour | s per | | Hours | |
| First Term | | eek | Second Term | Wee | |
| | Th. | Pr. | A 1 1 4 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Th. | Р г . 20 |
| Architecture 401 | 0 | 18 | Architecture 402 | . 0 | 20 |
| Design | 2 | 0 | Design | 2 | 0 |
| Architecture 407 | - 2 | 0 | Architecture 406 | . 4 | 0 |
| History of Art | 0 | Å | Professional Practice | Δ | 4 |
| Architecture 409 | 0 | 4 | Architecture 410 | . 0 | 4 |
| Freehand Drawing | 2 | 0 | Freehand Drawing | 1 | 0 |
| Economics 403 | . 🤊 . | 0 | Architecture 414 | 1 | 0 |
| Principles | 2 | 0 | Modern Architecture | 2 | 0 |
| Modern Language 201 | . > | 0 | English 401 | 2 | 0 |
| French | 2 | | Public Speaking | 3 | 0 |
| *Elective | 2 | | Modern Language 202 | .) | 0 |
| | | | French * Elective | 2 | |
| | 11 | 22 | · Elective | .) | |
| | | | | <u> </u> | |
| | | | | 11 | 24 |

*To be chosen from List A, page 124.

GROUP 2. STRUCTURAL COURSE ·

FRESHMAN YEAR

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. . . .

- **N**

Same as in Group 1

| | SOP | HOMOR | E YEAR | |
|---|----------|-------|---|----|
| Architecture 201a | 0 | 8 | Architecture 202a 0. | 4 |
| Architecture 203 Principles of Perspective | 1 | 0 | Architecture 206 0 | 4 |
| Architecture 205 | 0 | 4. | Freehand Drawing Architecture 208 2 | 0 |
| Freehand Drawing Architecture 207 | 2 | `0 | History Civil Engineering 204 3 | 0 |
| History English 203 | 2 | 0 | Analytic Mechanics English 204 2 | 0 |
| Composition and Literature Mathematics 203 | 5 | 0 | Composition and Literature Mathematics 204 5 | 0 |
| Calculus Military Science | 1 | 2 | Calculus Military Science 1 | 2 |
| Physics 203 | 3 | 3 | Physics 204 3 General | 3 |
| _ | <u> </u> | | | |
| I | 4 | 17 | 16 | 13 |
| | SUI | MMER | WORK. | |

Architecture 300, Working Drawings, three weeks

SCHOOL OF ENGINEERING

| 4 | | | | | |
|--|------|-------|------------------------|-------------|-----|
| | | UNIOR | YEAR | | |
| First Term | | eek | Second Term | Hours We | ek |
| | Th. | Pr. | | Th. | Pr. |
| Architecture 305 | 0 | 4 | Architecture 306 | 0 | 4 |
| Freehand Drawing | | | Freehand Drawing | | |
| Architecture 309 | 2 | 0 | Architecture 312 | . 0 | 12 |
| History of Architecture | , | - | Design | | |
| Architecture 311 | 0 | 12 | Architecture 316 | 3 | 0 |
| Design | ••• | | Mechanical Equipment | | ů |
| Civil Engineering 305 | . 3 | 0 | Civil Engineering 206 | . 1 | 3 |
| Mechanics of Materials | | v | Surveying | | 2 |
| Civil Engineering 315 | 0 | 2 | Civil Engineering 330a | 3 | 3 |
| Materials Laboratory | 0 | 4 | Framed Structures | | , |
| English 303 | 2 | 0 | *Elective | 2 | |
| | . 2 | 0 | · Elective | 9 | |
| Argumentation | - 0 | 0 | | | |
| Mechanical Engineering 20 | | Û | | 10 | 22 |
| Elementary Steam Enginee | ring | | | | |
| *Elective | 3 | | | | |
| · ···································· | | | | | |

*To be chosen from List A, page 124, or History 305

SUMMER WORK

Architecture 400, Working Drawings, three weeks

SENIOR YEAR

| Architecture 407 2 | 0 | Architecture 406 2 | 0 |
|---|---------|---|----|
| History of Art | 17 | Professional Practice | |
| Architecture 411 0 Structural Design | 14 | Architecture 412 2 Structural Design | 17 |
| Civil Engineering 413 2 | . 0 | Architecture 414 1 | 0 |
| Elements of Reinf. Concrete | 0 | Modern Architecture | 0 |
| Economics 403 | 0 | Electrical Engineering 436 3 | 0 |
| Principles | | Wiring and Lighting | |
| Geology 201 3 | 2 | English 401 2 | 0 |
| General | | Public Speaking | |
| *Elective | / | *Elective | |
| | | | |
| . 13 | 16 | 13 - | 17 |
| *To be chosen from | List A, | page 124, or Economics 408 | |

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COURSES IN ENGINEERING

(The Curricula for all engineering courses are identical in the Freshman Year.)

FRESHMAN YEAR

| | Hour | | | rs per |
|----------------------------|------|-----|-------------------------------|-------------|
| First Term | | eek | | /eek |
| | | Pr. | | . Pr. |
| Chemistry 101 | 3 | 3 | Chemistry 102 3 | - 3 |
| Inorganic | | | Inorganic | |
| Drawing 101 | 0 | 2 | Drawing 104 2 | 2 |
| Mechanical | U | - | Descriptive Geometry | - |
| Drawing 103 | 3 | 0 | Drawing 108 0 | 2 |
| | J. | U | | 4 |
| Descriptive Geometry | | | Mechanical | • |
| English 105 | 4 | 0 | English 106 4 | . 0 |
| Rhetoric and Composition | | | Rhetoric and Composition | |
| Mathematics 101 | .3 | 0 | Mathematics 102 | 0 |
| Algebra | | | Algebra | - |
| Mathematics 103 | 3 | 0 | Mathematics 104 | 0 |
| Trigonometry | | U | Analytics | U |
| | 0 | 2 | | 2 |
| Mechanical Engineering 103 | 0 | 3 | Mechanical Engineering 104 0 | 3 |
| Woodwork | | | Forging | |
| Military Science | 1 | 2 | Military Science 1 | 2 |
| • | | | | _ |
| | 17 | 10 | 16 | 12 |
| | 17 | 10 | •10 | 12 |
| | | | 2 | |

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VIII.—COURSE IN CHEMICAL ENGINEERING

FRESHMAN YEAR See page 114.

| | | SO | PHOMORE | YEAR | | |
|---|--|------|----------|---|----------------|----|
| , | Chemistry 205 | | 8 | Chemical Engineering 202 | 2 | 8 |
| | Qualitative Analysis Drawing 201 | | 2 | Quantitative Analysis Drawing 202 | | 2 |
| | Mechanical English 203 | 2 | 0 | Mechanical English 204 | 2 | 0 |
| | Composition and Literature Mathematics 203 | 5 | 0 | Composition and Literature Mathematics 204 | 5 | 0 |
| | Calculus Military Science | 1 | 2 | Calculus Military Science | 1 | 2 |
| | Physics 203 General | 3 | 3 | Physics 204 General | 3 | 3 |
| , | · | 3 | 15 | - | <u>.</u> 13 | 15 |
| | • | | JUNIOR | | | |
| | Chemical Engineering 301 | .2 | 8 | Chemistry 302 | 3 | 4 |
| | Quantitative Analysis Chemistry 301 | 3 | 4 | Chemistry 302 Organie Chemistry 312 Organie Analysis Organie Analysis Organie Analysis Organie Analysis | +3 | 3 |
| 1 | English 303 | 2) | 0 | Electrical Engineering 505. | 3 | 3 |
| | Argumentation History 305 | 3 | 0 | Electrical Machinery Mechanical Engineering 320 | 4 . | Ő |
| | Citizenship Mechanical Engineering 319 | 4 | 0 | Thermodynamics *Elective | 3 | |
| | Engines and Boilers *Elective | 3 | • | 18- | 14- | |
| | · | | 12 | List a" Brand | | - |
| | *To be | cho | sen fron | the following: | | |
| | Givil Engincering 311 | 3 | 2 | One Subject from List A | 3 | 0 |
| | Hydraulics One Subject from List A | 3 | 0 | | | |
| | · · | 3 | SENIOR Y | (EAR | | |
| | Chemical Engineering 411 - Physical Chemistry | ٢ | 84 | Chemical Engineering 416 Chemical Technology | 3 | 4 |
| | Chemical Engineering 415 Industrial Chemistry | 3 | 6 | Chemical Engineering 418 Physical Chemistry | 3 | 4 |
| • | Economics 403 | 3 | 0 | Chemistry 438 | 1 | 0 |
| | English 401 | 2 | 0 | Seminar Economics 316 | 3 | 0 |
| | Public Speaking Mechanical Engineering 403 | 0 | 4 | Business Law Mechanical Engineering 404 | 0 | 4 |
| | Laboratory *Elective | 3 | | Laboratory *Elective | 3 | |
| | | | -18-14 | - | 13 | 12 |
| • | *To be ch | nose | en from | List A, page 124. | | |
| | | | | | | |

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IV.—COURSE IN CIVIL ENGINEERING

FRESHMAN YEAR See page 114.

| sc | рномо | RE YEAR | | |
|------------------------------|--------|--------------------------|-------|-----|
| Hou | rs per | | Hours | ner |
| | Veek | Second Term | We | |
| Th. | Pr. | | Th. | Pr. |
| Civil Engineering 201 | 4 | Civil Engineering 202 | 3 | 3 |
| Surveying | | Railroad Engineering | | |
| Drawing 201 0 | 2 | Civil Engineering 204 | 3 | 0 |
| Mechanical | | Analytic Mechanics | | |
| English 203 2 | 0 | Drawing 202 | 0 | 2 |
| Composition and Literature | | Mechanical | | |
| Mathematics 203 5 | 0 | English 204 | 2 | 0 |
| Calculus | | Composition and Literatu | | |
| Mechanical Engineering 205 2 | 0 | Mathematics 204 | | 0 |
| Elementary Steam Engineering | | Calculus | | |
| Military Science I | 2 | Military Science | 1 | 2. |
| Physics 203 3 | 23 | Physics 204 | 3 | 3 |
| General | - | General | | - |
| | | contra la | | |
| 16 | 11 | | 17 | 10 |
| 10 | 11 | | 17 | 10. |
| • | | | | ~ |

SUMMER WORK

Civil Engineering 300, Field Practice, three weeks.

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| Ň | J | UNIOR | YEAR | | |
|--|----------|-------|--|---|-----|
| Civil Engineering 305 | 3 | 0 | Civil Engineering 306 | 2 | 0 |
| Mechanics of Materials | 2 | 2 | Masonry Civil Engineering 320. | Λ | 22 |
| Civil Engineering 311 | , | 2 | Topographic Drawing | 0 | 2 - |
| Civil Engineering 315 | Ó | 2 | Civil Engineering 334 | 2 | 0 |
| Materials Laboratory Civil Engineering 331 | 2 | 0 | Contracts and Specifications | 2 | ۰. |
| Analytic Mechanics | 2 | 0 | Civil Engineering 340 Elem. Structural Analysis | 2 | 0 |
| Civil Engineering 333 (| 0 | 3 | Civil Engineering 342 | 0 | . 6 |
| Railroad Surveying | 2 | 3 | Structural Drafting | 2 | 2 |
| Electrical Engineering 305 3 Electrical Machinery |) |) | Geology 201 | 2 | 2 |
| English 303 2 | 2 | 0 | History 305 | 3 | 0 |
| Argumentation | 2 | | Citizenship | 2 | |
| *Elective | 2 | | *Elective | 2 | |
| | - | 10 | | - | 10 |
| 10 |) | 10 | 1 | 6 | 10 |

*To be chosen from List A, page 124.

SUMMER WORK

Civil Engineering 400, Field Practice, three weeks.

| | | | • | | |
|---|----------------------------|---------|--------------------------------|--------|-------|
| | | SENIOR | YEAR | | |
| | Hour | rs per | | Hours | |
| | First Term V | Veek | Second Term | Wee | |
| | Th. | | | | Pr. |
| | Civil Engineering 401 0 | 3 | Civil Engineering 414 | . 1 | 7 T |
| | Railroad Drafting | | Reinforced Concrete Design | 1 | - |
| | Civil Engineering 407 3. | 0. | Civil Engineering 448 | . 2 | 2 |
| | Roads and Pavements | | Engineering Economics | | |
| | Civil Engineering 413 2. | 0 | Civil Engineering 454 | . 0 | 4. |
| | El. of Reinforced Concrete | - | Structural Design . | | |
| | Civil Engineering 443 1 | 3 | English 401 | . 2 | 0 |
| | Materials of Construction | - | English 401 Public Speaking | | |
| | Civil Engineering 451 | 0 | Municipal and Sanitary | | |
| | Analysis of Structures | U | Engineering 410 | 4 | 2 |
| ^ | Civil Engineering 453 | - 6 | Sanitary Engineering | · · · | 4 |
| | Structural Design | | Sanitary Engineering "" | a3 | |
| | Economics 403 | 0 | A. SA | - 10 - | |
| | Principles | 0 | Lu, Lieu | 15 | 30 10 |
| | *Elective | | | 17 | 1212 |
| | Liective | | | | - |
| | | | | | |
| | 15 | 12 | | | |
| | *To be cho | sen fro | m the following: | | |
| | Geology 401 2 | 3 | Civil Engineering 434 | 3 | 0 |
| | Engineering Geology | | Irrigation and Drainage | | U |
| | One subject from List A 3 | | Civil Engineering 446 | 3 | 0 |
| | | | Highway Administration | | 0 |
| | | | Civil Engineering 452 | 3 | 0 |
| | | | Structural Engineering | | 0 |
| | | | Municipal and Sanitary | | |
| | | | Engineering 406 | 3 | 0 |
| | | | Sanitation and Public Hea | | U |
| | | | | | |
| | | | One subject from List A | | |
| | | | | | |

GROUP 1. GENERAL CIVIL ENGINEERING

GROUP 2. HIGHWAY ENGINEERING

SENIOR YEAR

| | | SEN. |
|---|----|------|
| Civil Engineering 401 | 0 | 3 |
| Railroad Drafting Civil Engineering 407 | 3 | 0 |
| Roads and Pavements Civil Engineering 413 | 2 | 0 |
| El. of Reinforced Concrete Civil Engineering 417 | 2 | 3 |
| Highway Materials Civil Engineering 423 | 2 | 4 |
| Bridge Design Economics 403 | 3 | 0 |
| Principles *Elective | 3 | Ŭ |
| | _ | |
| | 15 | 10 |

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Υ.

| ι. | YEAK | | |
|----|---|----------|-------|
| | Civil Engineering 414 | 1^{-1} | 34 |
| | Reinforced Concrete Design | | |
| | Civil Engineering 418 | 1 | 3 |
| | Highway Materials | | |
| | Civil Engineering 448 | 2 | 2 |
| | Engineering Economics | - | - |
| | English 401- | 2 | 0 |
| | Public Speaking | - | v |
| | Municipal and Sanitary | | |
| | Engineering 410 | 1 | 2 |
| | Conitore Engineering | 4 | 4 |
| | Sanitary Engineering *Elective Tren Kut "//" | 12 | |
| | *Elective men kut | 9 | |
| | Les Tim | | |
| | | 6 | 12-11 |
| | | | 11 |

*To be chosen from the following:

| First Term | Hours We Th. | per eek Pr. | Second Term | Hours We Th. | |
|--|--------------------|-------------------|---|--------------------|---|
| Geology 401 | 2 | 3 | Civil Engineering 434 | 3 | 0 |
| Engineering Geology One subject from List A | 3 | | Irrigation and Drainage Civil Engineering 446 | 3 | 0 |
| | | | Highway Administration Civil Engineering 452 | 3 | 0 |
| | | | Structural Engineering Economics 408 | .) | Ŷ |
| | | | Conportation Finance Municipal and Sanitary Engineering 406 | 3 | 0 |
| *To be | chosen | from | Sanitation and Public Hea One Subject from List A List A, page 124. | | |

GROUP 3. MUNICIPAL AND SANITARY ENGINEERING

SENIOR YEAR

| Chemistry 441 1 | 4 |
|------------------------------|-----|
| Chemical Testing Water & Sew | age |
| Civil Engineering 407 3 | 0 |
| Roads and Pavements | • |
| Civil Engineering 413 2 | U |
| El. of Reinforced Concrete | ~ |
| Civil Engineering 443 1 | 3 |
| Materials of Construction | |
| Economics 403 3 | 0 |
| Principles | |
| Municipal and Sanitary | |
| Engineering 401 | 0 |
| Sewerage and Sewage Disposal | |
| Municipal and Sanitary | |
| Engineering 403 0 | 4 |
| Sanitary Design | - |
| *Elective | |
| | |
| | |
| 16 | 11 |

| IEAK | |
|--|-------|
| Biology 418 1 | 4 |
| Water Bacteriology | 1 |
| Water Bacteriology Civil Engineering 450. 4.4. 1 Reinforced Concrete Const. Acc English 401 | . 84 |
| Reinforced Concrete Const. All | linni |
| English 401 2 | 0 |
| Public Speaking | |
| Municipal and Sanitary | |
| Engineering 402 3 | 0 |
| Water Supply and Purification | v |
| | |
| Municipal and Sanitary | |
| Engineering 404 0 | 4 |
| Sanitary Design | |
| Municipal and Sanitary | |
| | ~ |
| Engineering 406 | 0 |
| Sanitation and Public Health | |
| Municipal and Sanitary | |
| | ^ |
| Engineering 408 2 | U |
| Municipal Administration | |
| ◆Elective | |
| | |
| | |
| 15 | #12 |
| | |

V.—COURSE IN ELECTRICAL ENGINEERING

FRESHMAN YEAR See page 114.

SOPHOMORE YEAR

| TT | | Hours | |
|---|----------------|---|-----|
| | rs per Veek | Second Term We | |
| The Term | | Th. | |
| Drawing 201 0 | 2 | Civil Engineering 206 1 | 3 |
| Mechanical Electrical Engineering 201 4 Electricity and Magnetism | 4 | Surveying Drawing 202 0 Mechanical | 2 |
| English 203 2 Composition and Literature | 0 | Electrical Engineering 202 2 | 4 |
| Mathematics 203 | 0 | English 204 2 Composition and Literature | 0 |
| Mechanical Engineering 201a 0 Pattern Making and Foundry | 3 | Mathematics 204 5 Calculus | 0 |
| Military Science 1 Physics 207 | 2 2 | Mechanical Engineering 214 0 Machine Shop | 3 |
| General | 2 | Military Science 1. | 2 |
| 15 | .13 | Physics 208 3 General | 2 |
| | | | |
| | | 14 | 16 |
| | | | 1 |
| | JUNIOR | YEAR | |
| Electrical Engineering 301 4 | 6 | Civil Engineering 305 | 0 |
| Direct Currents English 303 | 0 | Civil Engineering 315 0 Materials Laboratory | 2 |
| Argumentation History 305 | 0 | Electrical Engineering 302 5 Alternating Currents | 6 |
| Mechanical Engineering 207 2 Kinematics | 2 | Mechanical Engineering 302 4 | 0 |
| Mechanical Engineering 317 3 | 0 | Steam Engines and Boilers Mechanical Engineering 318 2 | 0 |
| Engineering Mechanics *Elective | | Engineering Mechanics *Elective | |
| | | | . — |
| 17 | 8 | 17 | 8 |

*To be chosen from List A, page 124.

Note:—If Military Science 305, 306 be chosen, it must be accompanied by Electrical Engineering 309, 310. (2-2) (2-7)

| (2- | -01 | (2-4 | | |
|---|-----|--------|---|---|
| e a | | SENIOR | YEAR | |
| Economics 403 | 3 | 0 | Electrical Engineering 402 4 A. C. Machinery | 6 |
| Electrical Engineering 401 4 A. C. Machinery | | 6 | Electrical Engineering 432 3 Public Utility Problems | 0 |
| Electrical Engineering 431 | 2 | 0 | Mechanical Engineering 416 0 | 3 |
| , Engineering Administration English 401 | 2 | 0 | Laboratory *Elective10 | |
| Mechanical Engineering 415 (Laboratory | 0 | 3 | 17 | 9 |
| *Elective | 6 | | | |
| | - | | | |
| • | 1 | 9 | | |

| * To be chosen from the following. | | | | | | |
|------------------------------------|-----------|-----|-----------------------------|--------|-------|--|
| | Hours per | | | Hour | s per | |
| First Term | | eek | Second Term | We | ek | |
| | Th. | Pr. | | Th. | Pr. | |
| Civil Engineering 411 | . 3 | 0 | Electrical Engineering 406. | 3 | 0 | |
| Hydraulics | | | Elec. Distribution and Tra | nsmiss | sion | |
| Electrical Engineering 405 | . 3 | 0 | Electrical Engineering 414. | 3 | 0 | |
| Elec. Distribution and Tran | smiss | ion | 'Radio Communication | | | |
| Electrical Engineering 425 | . 2 | 2 | Electrical Engineering 416. | 3 | 0 | |
| Illumination Engineering | | | Motor Applications | | | |
| Electrical Engineering 427 | . 2 | 2 | Electrical Engineering 426. | 2 | 2 | |
| Telephone Engineering | | | Illumination Engineering- | | | |
| Mechanical Engineering 40 | 72 | 0 | Electrical Engineering 428. | 2 | 2 | |
| Mechanical Refrigeration | | | Telephone Engineering | | | |
| **List A | . 3 | | Electrical Engineering 438. | 3 | 0 | |
| | | | Theory of Alternating Cur | rent | | |
| | | | **List A | 3 | | |

*To be chosen from the following:

**Electives must include one subject each term from List A, Page 124. If Military Science 405, 406 be chosen, it must be accompanied by Electrical Engineering 409, 410. (2-2) (1 2)

III.—COURSE IN MECHANICAL ENGINEERING

FRESHMAN YEAR See page 114.

SOPHOMORE YEAR

| | | 501 | nomon | | | |
|---|----------------------------|------|--------|------------------------------|---------|----------|
| | · I | Iour | s per | Ho | urs per | |
| | First Term | W | eek | Second Term | Neek | |
| | | Th. | Pr. | | h. Pr. | |
| | Chemistry 207 | 2 | 3 | Chemistry 208 | 3 | |
| | Quanitative Analysis | - | - | Technical Analysis | | |
| - | English 203 | 2 | 0 | English 204 | 2 0 | |
| | Linghish 209 | 4 | U | | , 0 | |
| | Composition and Literature | | 0 | Composition and Literature | | |
| | Mathematics 203 | 2 | 0 | Mathematics 204 | 50 | |
| | Calculus | | 1- | Calculus | | |
| | Mechanical Engineering 201 | 0 | ´3 | Mechanical Engineering 202 (|) 3 | |
| | Pattern Making and Founda | v | | Pattern Making and Foundry | | |
| | Mechanical Engineering 207 | | 2 | Mechanical Engineering 212 | 8 0 | |
| | Kinematics | - | 2 | Engineering Mechanics | ς U | |
| | | 1 | 2 | Military Science | 1 2 | |
| | Military Science | 1 | 23 | Military Science | 1 2 | • |
| | Physics 203 | 3 | 3 | Physics 204 | 33 | |
| | General | | | General | | |
| | | | | | - | |
| | × | 15 | 13 | 15 | 5 11 | |
| | | 17 | 17, | 1. | / 11 | |
| | ÷ | | | WEAD | | |
| | | J | UNIOR | YEAR | | |
| | Civil Engineering 305 | 3 | 0 | Civil Engineering 315 (|) 2 | |
| | Mechanics of Materials | Ĩ., | • | Materials Laboratory | , 2 | |
| | Electrical Engineering 207 | 2. | 0 | Electrical Engineering 200 | 2.3 | |
| | Electrical Engineering 307 | J. | Ģ | Electrical Engineering 308 2 | 2. 2 | |
| | Electrical Machinery | • | 0 | Electrical Machinery | | A |
| | English 303 | · 2 | 0 | History 305 | ; 0 | 12-6 |
| | Argumentation | | | Citizenship | | (1 |
| | Mechanical Engineering 303 | 0 | 3 | Mechanical Engineering 304 (|) 4 | |
| | Machine Design | | | Machine Design | | <u> </u> |
| | Mechanical Engineering 309 | Ω | 3 | Mechanical Engineering 310 (|) 3 | 4 . |
| | Machine Shop | v | · · | Machine Shop | , , | 1 - |
| | Machine Shop | 2 | 0 | Mochanical Engineering 214 | • • | × |
| | Mechanical Engineering 313 | 2 | 0 | Mechanical Engineering 314 3 | 3· 0 | 125. |
| | Engineering Mechanics | | 0 | Engineering Mechanics | | L. |
| | Mechanical Engineering 319 | 4 | 0 | Mechanical Engineering 320 4 | - 0 | |
| | Engines and Boilers | | | Thermodynamics | | |
| | *Elective | 3 | | *Elective | } | |
| | | _ | · | | | |
| | | 18 | 6 | | - 10 | |
| | | | 6 | 15 | 5 12 | · · |
| | * l'o be ch | lose | n from | List A, page 124. | | |
| ' | | | - | | | |
| | | | | | | |

SENIOR YEAR

| . Required | in all groups. |
|--|---|
| Chemical Engineering 407 3 (Industrial Chemistry | Chemical Engineering 408 2 0 Metallurgy |
| Civil Engineering 411 |) English 401 |
| Hydraulics Economics 403 3 | Public Speaking Mechanical Engineering 404 0 4 |
| Principles Mechanical Engineering 403 0 | |
| Engineering Laboratory | - Mechanical Engineering 412 3 0 |
| 9 4 | History and Biography |
| | 10 4 |

. **.** •

GROUP 1. POWER

| | week Week | Second Term | Hours We Th. | ek |
|--|--------------|--|--------------------|------------------|
| Mechanical Engineering 407 2 Refrigeration | 0 | Mechanical Engineering 414 Steam Turbines | ‡ 2 | 0 ^{PF.} |
| Mechanical Engineering 417 2 Power Plants and Equipment *Elective | 4 | Mechanical Engineering 418 Power Plants and Equipme *Elective | ńt | 4 |
| 7 | 4 | | 7 | 4 |
| GROUP 2. INI | DUSTR | IAL ENGINEERING | | |
| Mechanical Engineering 419 3 | 2 | Mechanical Engineering 420 | 3 | 2 |
| Industrial Engineering Mechanical Engineering 421 2 Methods and Management | 0 | Industrial Engineering Mechanical Engineering 422 Methods and Management | 2 2 | 0 |
| *Elective | | *Elective | . 3 | |
| 8 | 2 | | 8 | 2 |
| GROUP 3. | TRAN | SPORTATION | | • |
| Mechanical Engineering 423 2 Transportation | 0 | Mechanical Engineering 424 Transportation | 2 | 0 |
| Mechanical Engineering 425 2 Railway Mech. Engineering | . 4 | Mechanical Engineering 426 | | 4 |
| *Elective | | Railway Mech. Engineering *Elective | 3 | |
| 7 | 4 | | 7 | 4 |

*To be chosen from List A, page 124, or any other approved elective.

VI.—COURSE IN TEXTILE ENGINEERING

FRESHMAN YEAR See page 114.

SOPHOMORE YEAR

| First Term | Hours | eek | | urs pe r Veek | ł |
|---|--------|--------|---|-------------------------|---|
| Flist Telm | Th. | | | n. Pr. | |
| Chemistry 207 | | 3 | Chemistry 208 | | |
| Quantitative Analysis Drawing 201 | 0 | 2 | Technical Analysis Civil Engineering 206 | 3 | |
| Mechanical English 203 | . 2 | 0 | Surveying Drawing 202 (|) 2 | |
| Composition and Literature *Mathematics 203 | | 0 | Mechanical English 204 | , _ , _ | |
| Calculus | | • | Composition and Literature | . 0 | |
| Mechanical Engineering 205 Elem. Steam Engineering | 2 | 0 | Mechanical Engineering 208 2 Kinematics | 2 2 | |
| Military Science | . 1 | 2 | Military Science 1 | 2 | |
| Physics 203 | 3 | 3 | Physics 204 | 3 | |
| Textile Engineering 207 | . 0 | 3 | Textile Engineering 206 (Yarn Manufacture |) 3 | |
| W Caving | | | Tain Manufacture | _ | |
| | 15 | 13 | 10 | 18 | |
| *Or Accounting and S | tatist | ics 20 | 1, Accounting; and Accounting | g and | |

*Or Accounting and Statistics 201, Accounting; and Accounting and Statistics 202, Accounting.

| | JUNIOR | YEAR | |
|---|--------|---|----|
| 3 | 2. | Chemistry 308 2 | 4 |
| 3 | 0 · | Electrical Engineering 308 2 | 3 |
| 0 | 3 | Electrical Machinery English 303 2 | 0 |
| 2 | 3 | Argumentation History 305 3 | 0 |
| 0 | 3 | Citizenship Textile Engineering 302 0 | 2 |
| 3 | 3 | Yarn Manufacture Textile Engineering 304 0 | 3 |
| 3 | | Fabric Design Textile Engineering 306 3 | 3 |
| 4 | 14 | Weaving *Elective | |
| • | •• | | - |
| | | 15 | 15 |

*To be chosen from List A, page 124.

| • | SENIO | YEAR | |
|--|----------------|--|------------------------------|
| | rs per Veek | | urs per Veek |
| Th. Agricultural Education 207 3 | Pr. 0 | Economics 316 | |
| Psychology Economics 403 | 0 | Business Law English 401 2 | 2 0 |
| Principles Textile Engineering 401 3. Yarn Manufacture | 2 | Public Speaking Textile Engineering 402 2 Yarn Manufacture | 2 3 |
| Textile Engineering 413 1 Cotton Classing | 2 | Textile Engineering 404 1 Fabric Analysis | I 0 |
| Textile Engineering 415 0 Fabric Design | 3 | Textile Engineering 412 1 Magazine Review | l - ∙0 |
| Textile Engineering 419 1 Weaving | 2 | Textile Engineering 414 (Cotton Classing |) 2 |
| *Elective | | Textile Engineering 416 (Fabric Design | |
| — | | Textile Engineering 420 (Weaving |) 3 |
| . 17 | 9 | Textile Engineering 422 2 History of Textile Industry | 2 0 |
| | | *Elective | } . } . |
| | | 17 | $\frac{1}{7}$ $\frac{1}{11}$ |
| *To be abasen from annes | word or | biasta baaring course numbers | chovo |

r

*To be chosen from approved subjects bearing course numbers above 200. Subjects in List A, except Military Science may be chosen.

**To be chosen from List A, below.

LIST A

| Junior and Senior electives | comn | non to all engineering courses. |
|--|------|--|
| English 321 3 | 0 | * Economics 408 |
| Nineteenth Century Literature English 403 | 0 | Corporation Finance English 322 |
| Public Speaking Genetics 405 | 0 | Nineteenth Century Literature English 404 3 0 |
| Survey of Eugenics History 311 | - | Public Speaking History 312 3 () |
| Modern and Contemporary Europe | | Modern and Contemporary Europe |
| *Military Science | | *Military Science |
| French, German or Spanish | | French, German or Spanish |

*Notes.—1. If Military Science 305, 306, and Military Science 405, 406, are elected they must be accompanied by Electrical Engineering 309, 310, and Electrical Engineering 409, 410, respectively.

2. Students who desire to substitute English 321 or 322 for English 303 may do so with the consent of the Dean provided they have the requisite grade points.

SCHOOL OF ENGINEERING

XVII.-TWO YEAR COURSE IN TEXTILE ENGINEERING (To be withdrawn after the session 1927-28).

| | S | SECOND | YEAR | |
|---|-------------------|--------|---|----|
| First Term | Hours W Th. | eek | Hours Second Term Weel Th. | |
| Chemistry 206 | 3 | 2 | Chemistry 308 2 | 4 |
| Organic Mechanical Engineering 20 Elem. Steam Engineering |)5 2 | 0 | Dyeing Mechanical Engineering 214 0 Machine Shop | 3 |
| Mechanical Engineering 20 |)7 2 | 2 | Military Science 1 | 23 |
| Kinematics | | • | Textile Engineering 304 0 | 3 |
| Military Science | | . 2 | Fabric Designing | 3 |
| Textile Engineering 303 Fabric Designing | 0 | 2 | Textile Engineering 306 3 Weaving | 2 |
| Textile Engineering 307 | 3 | 3 | Textile Engineering 402 2 | 3 |
| Weaving | | • | Yarn Manufacture | • |
| Textile Engineering 413 Cotton Classing | I | 2 | Textile Engineering 404 1 Fabric Analysis | 0 |
| Textile Engineering 417 Yarn Manufacture | 3 | 0 | Textile Engineering 412 1 Magazine Review | 0 |
| ., | | | Textile Engineering 414 0 | 2 |
| | 15 | 14 | Cotton Classing Textile Engineering 422 2 History of Textile Industry | 0 |

12 20

TWO-YEAR COURSE IN COTTON MARKETING XVIII. AND CLASSING

FIRST . YEAR 0

3 0 0

25 3

| Agricultural Economics 101. | 3 | |
|-----------------------------|---|---|
| Agricultural Resources | | ÷ |
| Chemistry 101 | 3 | |
| Inorganic | | |
| English 105 | 4 | |
| Rhetoric and Composition | | |
| Mathematics 101 | 3 | |
| Algebra | | |
| Military Science | 1 | |
| Textile Engineering 107 | 2 | |
| Cotton Classing | | |
| Textile Engineering 206 | 0 | |
| Yarn Manufacture | | |
| | _ | |

| Agricultural Economics 102 Agricultural Resources | 3 | 0 |
|---|--------|----|
| Chemistry 102 | 3 | 3 |
| Inorganic English 106 | 4 | 0 |
| Rhetoric and Composition Mathematics 102 | 3 | 0 |
| Algebra Military Science Textile Engineering 108 Cotton Classing | 1 2 | 25 |
| • , | 16 | 10 |
| | | |

| i | 13 |
|---|--------|
| | SECOND |

. 16

| Accounting and Statistics 201 2 | . 4 |
|--|-----|
| Accounting Economics 203 | 0 |
| Principles Economics 311 | A |
| Money and Banking · English 203 2 | 0 |
| Composition and Literature Military Science 1 | 2 |
| Textile Engineering 113 3 Cotton Exchanges | 0 |
| Textile Engineering 211 1 | - 5 |
| Cotton Classing | |
| 15 | 11 |

| YEAR | ·. |
|---|-------------|
| Accounting and Statistics 202 ⁻² | - 4 |
| Accounting | 1 L |
| Economics 204 | •0 • |
| Principles | |
| Economics 316 | . 0 |
| Business Law | ч н. 1 |
| English 204 | |
| Composition and Literature | 19 a - |
| Marketing and Finance 202.3. | 0 |
| Cotton Prices | |
| Military Science1 | 2 |
| Textile Engineering 212 1 | 5 |
| Cotton Classing | |
| | · · · · · · |
| 15 | - 11 |

THE SCHOOL OF VETERINARY MEDICINE

XI.-COURSE IN VETERINARY MEDICINE

| FF | RESHMA | N YEAR | | |
|--|----------|--|----------|---|
| Hour | s per | | s per | |
| | Veek | | eek | |
| | Pr. 4 | Biology 102 2 | Pr. 4 | |
| Animal Husbandry 107 2 General Animal Husbandry | т | General Botany | т | |
| Biology 101 2 | 4 | Chemistry 102 | 3 | |
| General Botany | • | Inorganic | - | |
| General Botany Chemistry 101 | 3 | English 104 | 0 | |
| | 2 | Rhetoric and Composition | | |
| English 103 | 0 | Military Science 1 | 2 | - |
| Rhetoric and Composition | • | Poultry Husbandry 102 2 | Ŕ | 2 |
| Military Science 1 | 2 | Farm Poultry | ~ | |
| Veterinary Anatomy 111 3 | .6 | Veterinary Anatomy 112 3 | ,6 | |
| Anatomy of the Domestic Anin | nals | Anatomy of the Domestic Anir | nais | |
| Veterinary Physiology and | 0 | Veterinary Physiology and | 0 | |
| Pharmacology 121 2 | 0 | Pharmacology 122 2 | 0 | |
| Physiology | | Physiology | | |
| 16 | 19. | 16 | 15 | |
| 10 | 19 | 10 | 17 | |
| SO | рномор | RE YEAR | | |
| Biology 207 2 | 4 | Biology 206 1 | 4 | |
| Zoology | | Bacteriology | | |
| English 203 2 | 0 | Chemistry 206 3 | 2 | |
| English 203 | | Organic | | |
| Entomology 201 | 2 | English 204 2 | 0 | |
| General | | Composition and Literature | | |
| Military Science 1 | 2 | Entomology 208 2 | 2 | |
| Veterinary Anatomy 211 3 | 6 | Animal Parasites | 2 | |
| Anatomy of Domestic Animals | 4 | Military Science 1 | 2 | |
| Veterinary Anatomy 213 2 Histology and Embryology | 4 | Veterinary Pathology 242 3 | 2 | |
| Vet. Phys. and Pharm. 221 2 | 0 | General Veterinary Physiology and | | |
| Physiology | U | Pharmacology 222 | 4 | |
| | | Physiology 222 | 4 | |
| . 14 | 18 | 1 | | |
| | 3 | 15 | . 16 | |
| ·. | | •• | | |
| • | JUNIOR | YEAR | | |
| Dairy Husbandry 301 2 | 2 | English 303 2 | 0 | |
| Market Milk | | Argumentation | | |
| Veterinary Medicine 351 3 | 0 | Genetics 301 3 | 2 | |
| Non-infectious Diseases | | Genetics | 0 | |
| Veterinary Medicine and | -7 | Veterinary Medicine 352 3 | 0 | |
| Surgery 371 0 Clinic | 7 | Non-infectious Diseases Veterinary Medicine and | | |
| Veterinary Pathology 341 2 | 0 | Surgery 372 0 | 12 | |
| Special Special | U | Clinic | 12 | |
| Veterinary Pathology 343 2 | 4 | Veterinary Pathology 342 2 | 4 | |
| Special Bacteriology | - | Special | | |
| Vet. Pharmacology 333 3 | 4 | Vet. Pharmacology 334 3 | 0 | |
| Pharmacology | 0 | Pharmacology | - | |
| Veterinary Surgery 361 3 | 0 | Veterinary Surgery 362 3 | 0 | |
| General Elective 2 | | General Elective | | |
| Elective | | Elective | | |
| 18 | 17 | | 10 | 4 |
| 18 | 17 | 19 | 18 | |

FRESHMAN YEAR

| | | SENIOR |
|---|-----|------------------|
| First Term | | rs per Veek |
| | Th. | Pr. |
| Animal Husbandry 409 | | 2 |
| Veterinary Medicine 451 Diseases of Small Animals | . 3 | 0 |
| and Fowls Veterinary Medicine 453 Infectious Diseases | . 3 | 0 |
| Veterinary Medicine and Surgery 471 | . 0 | 7 |
| Veterinary Pathology 441 Immunology and Serum | . 2 | 2 |
| Therapy Veterinary Pathology 443 Parasitology | . 2 | 2 |
| Veterinary Surgery 461 | . 2 | 0. |
| Elective | . 3 | |
| | 18 | 13 |
| • | | 2 ^{L.‡} |

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| ENIOR | YEAR |
|-------|------|
|-------|------|

| YEAK | | |
|---|---------------------|----|
| Second Term | Hours Wee Th. | |
| English 401 | | 0 |
| Public Speaking Veterinary Medicince 452. | | 0 |
| Practice of Medicine and Jurisprudence | | |
| Veterinary Medicine and | ٥ | |
| Surgery 472 | 0 | 1 |
| Veterinary Pathology 442. | 2 | 2 |
| Meat Hygiene Veterinary Pathology 444. | 2 | 2 |
| Laboratory Diagnosis Vet. Pharmacology 432 | 1 | 2 |
| Toxicology | | |
| Veterinary Surgery 462 | 3 | 4 |
| Elective | 3 | • |
| | 16 | 17 |
| | | 17 |
| | 2 1 | |

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

XXI.—COURSE IN AGRICULTURE AND VETERINARY MEDICINE

(Leading to the degrees of Bachelor of Science in Agriculture and of Doctor of Veterinary Medicine.)

| | FIRST | YEAR | |
|--|-----------------|---|-----------------|
| | rs per | Hour Second Term We | |
| Th | Week . Pr. | Second Term We Th. | Pr. |
| Agricultural Economics 101 3 | 0 | Agricultural Economics 102 3 | 0 |
| Agricultural Resources Agronomy 105 | 2 | Agricultural Resources Animal Husbandry 107 2 | 4 |
| Crop Production Biology 101 2 | 4 | General Animal Husbandry Biology 102 2 | 4 |
| General Biology | - | General Biology | |
| Chemistry 101 3 Inorganic | 3 | Chemistry 102 3 Inorganie | 3 |
| English 103 3 | 0 | English 104 3 | 0 |
| Rhetoric and Composition Military Science 1 | 2 | Rhetoric and Composition Military Science 1 | 2 |
| - | <u> </u> | | |
| 15 | 11 | 14 | 13 |
| | SECOND | YEAR | |
| Biology 207 2 | 4 | Agricultural Engineering 201 2 | 2 |
| Zoology English 203 2 | 0 | Farm Machinery Biology 206 1 | 4 |
| Composition and Literature Entomology 201 2 | 2 | Bacteriology Chemistry 206 3 | 2 |
| General | | Organic | |
| Geology 201 3 General | 2 | Dairy Husbandry 202 2 Dairying | 2 |
| Horticulture 201 2 | 2 | English 204 2 | 0 |
| Plant Prop. and Orcharding Military Science 1 | 2 | Composition and Literature Military Science 1 | 2 |
| Elective | | Elective | |
| 15 | $\overline{12}$ | $\overline{14}$ | $\overline{12}$ |
| | | | 12 |
| | | YEAR | |
| Animal Husbandry 303 3 Principles of Nutrition | 2 | Agronomy 308 | 2 |
| Genetics 301 | 2 | Forage Crops Economics 403 | 0 |
| Principles of Genetics Veterinary Anatomy 111 3 | 6 | Principles English 303 2 | 0 |
| Anatomy of Domestic Animals Veterinary Physiology and | | Argumentation Entomology 208 | 2 |
| Pharmacology 121 2 | 0 | Animal Parasites | _ |
| Physiology *Elective | | Veterinary Anatomy 112 3 Anatomy of Domestic Animals | 6 |
| - Elective | | Veterinary Physiology and | |
| 17 | 10 | Pharmacology 122 2 Physiology | 0 |
| | | *Elective 4 | |
| | | | |
| | | . 18 | 10 |

*A minimum of twelve hours must be elected in Animal Husbandry during the course.

SCHOOL OF VETERINARY MEDICINE

| | FOURTH | YEAR | | |
|---|----------------|--|-------------|-----|
| | rs per Veek | Second Term | Hours We | |
| Th. | Pr. | | Th | Pr. |
| Veterinary Anatomy 211 3 Anatomy of Domestic Animals | 6 | English 401 Public Speaking | 2 | 0 |
| Veterinary Anatomy 213 2 Histology and Embryology | 4 | Veterinary Pathology 242. | 3 | 2 |
| Histology and Embryology Veterinary Physiology and Pharmacology 221 | 0 | General Veterinary Physiology and Pharmacology 222 Physiology Elective | | 4 |
| Elective | _ | Elective | | |
| . 16 | 10 | | 18 | 6 |
| 2 | FIFTH ' | YEAR | | |
| Veterinary Medicine 351 3 | 0 | Veterinary Medicine 352 | 3 | 0 |
| Non-infectious Diseases Veterinary Medicine and | • | Non-infectious Diseases Veterinary Medicine and | | |
| Surgery 371 0 Clinic | 7 | Surgery 372 | 0 | 12 |
| Veterinary Pathology 341 2 | 0 | Veterinary Pathology 342 Special | 2 | 4 |
| Special Veterinary Pathology 343 2 Special Bacteriology | 4 | Vet. Pharmacology 334 | 3 | 0 |
| Vet. Pharmacology 333 3 | 4 | Pharmacology Veterinary Surgery 362 | . 3 | 0 |
| Pharmacology Veterinary Surgery 361 3 | 0 · | Veterinary Surgery 362 General Elective | 5 | |
| General Elective 4 | | | 16 | 16 |
| · · · · · · · · · · · · · · · · · · · | 15 | | 10 | 10 |
| 17 | 15 | | | |
| | SIXTH | | | |
| Veterinary Medicine 451 3 Diseases of Small Animals and Fowls | . 0 | Veterinary Medicine 452 Prac. of Med. and Jurispre Veterinary Medicine and | 3 1dence | 0 |
| Veterinary Medicine 453 3 | 0 | Surgery 472 | . 0 | 7 |
| Infectious Diseases Veterinary Medicine and Surgery 471 0 | 7 | Veterinary Pathology 442 Meat Hygiene | . 2 | 2 |
| Clinic Veterinary Pathology 441 2 | 2 | Veterinary Pathology 444 | . 2 | . 2 |
| Immunology and Serum Therapy | | Laboratory Diagnosis Veterinary Physiology and | | |
| Veterinary Pathology 443 2 Parasitology | 2 | Pharmacology 432 | . 1 | 2 |
| Veterinary Surgery 461 2 Obstetrics | 0 | Veterinary Surgery 462 | . 3 | 4 |
| Elective | | Elective | . 4 | |
| 19 | īī | | 15 | 17 |
| * | | | ., | ., |

THE SCHOOL OF VOCATIONAL TEACHING XII.—COURSE IN AGRICULTURAL EDUCATION

| FRESHMAN YEAR | | | | | |
|--|------------------------|---|----------|--|--|
| | rs pe r Veek | Hours Second Term Wee | | | |
| Animal Husbandry 107 2 | Pr. 4 | | Pr. 2 | | |
| General Animal Husbandry Biology 101 | 4 | Crop Production Biology 102 2 | 4 | | |
| General Botany English 103 | 0 | General Botany English 104 | 0 | | |
| Rhetoric and Composition | • | Rhetoric and Composition | č | | |
| Military Science 1 Poultry Husbandry 102 2 Farm Poultry Elective 3 | 2 2 | Military Science 1 Elective | 2 | | |
| Farm Poultry Elective 3 | | 16 | 8 | | |
| 13 | 12 | | ۰. | | |
| sc | PHOMOR | E YEAR | | | |
| Biology 207 2 | 4 | Chemistry 102 3 | 3 | | |
| Zoology Chemistry 101 3 | 3 | Dairy Husbandry 202 2 | 2 | | |
| Inorganic English 231 3 | 0 | Dairying English 232 | 0 | | |
| English Literature Horticulture 201 | 2 | English Literature Entomology 202 | 2 · | | |
| Military Science | 2 | Economic Entomology Military Science 1 | 2 | | |
| Elective 3 | | Elective | | | |
| 14 | 11 | 14 | 9 | | |
| | JUNIOR | YEAR | | | |
| Agricultural Education 305 3 | 0: | Agricultural Education 308 3 | 0 | | |
| Principles of Education Agricultural Engineering 321 1 | 4 | Educational Psychology Agricultural Engineering 322 1 | 4 | | |
| Farm Shop Agronomy 301 3 | 2 | Chemistry 206 | 2 | | |
| Soils Genetics 301 | 2 | Organic Economics 403 | Û | | |
| Genetics Elective | | Principles Veterinary Anatomy 306 3 Animal Diseases | 2 | | |
| 16 | 8 | Elective 4 | • | | |
| | | 17 | 8 | | |
| | SENIOR | YEAR | | | |
| Agricultural Economics 411 3 | 2 | Agricultural Education 402 3 | 2. | | |
| Agricultural Economics Agricultural Education 401 3 | 2 | Teaching Vocational Agriculture Agricultural Education 404 3 | -0 | | |
| Teaching Vocational Agricultur Animal Husbandry 409 3 Animal Nutrition and Feeding | e 2 | Extension Methods Animal Husbandry 416 3 | 2 | | |
| English 401 2 | 0 | Live Stock Management Farm and Ranch Manage- | ~ | | |
| Public Speaking Rural Sociology 407 2 Rural Sociology | 2 | ment 401 3 Farm Management 9 | . 2 | | |
| Rural Sociology Elective | | Elective | | | |
| | 6 <u>8</u> | 16 | 6 | | |
| 10 | U O | | | | |

XIII.—COURSE IN INDUSTRIAL EDUCATION

FRESHMAN YEAR

| | FRESHMA | N YEAK | | |
|--------------------------------------|---------|---|------------|----|
| | urs per | | rs per | |
| | Week | | eek | |
| | h. Pr. | Chamistru 102 Th. | . Pr. 3 | |
| Chemistry 101 3 | 3 | Chemistry 102 3 |) | |
| Inorganic | 2 | Inorganic Drawing 108 0 | 2 | |
| Drawing 101 0 | 2 | Mechanical | 2 | |
| Mechanical | 0 | English 104 | 0 | |
| English 103 | U | Rhetoric and Composition | 0 | |
| Mathematics 101 | 0 | Industrial Education 102 2 | 0 | |
| Algebra | | Theory and Principles of Voca | | |
| Military Science 1 | 2 | tional Education | | |
| * Election | , 4 | Mathematics 103 3 | 0 | |
| *Elective | | Trigonometry | v | |
| | | Military Science 1 | 2 | |
| 17 | '·7 | *Elective | - | |
| | | | | |
| | | . 17 | 7 | 1 |
| | | 17 | 1 | |
| | | | | |
| 9 | OPHOMOR | E YEAR | | |
| - | - | | 2 | |
| Drawing 201 0 | 2 | Drawing 202 0 | 2 | |
| Mechanical | 2 | Mechanical | 2 | |
| Drawing 219 0 | 2 | Drawing 220 0 | 2 | |
| Freehand | 0 | Freehand | 0 | |
| Economics 203 3 | 0 | Economics 204 3 | U | |
| Principles | 0 | Principles | 0 | |
| Industrial Education 203 2 | 2 0 | Industrial Education 202 2 | 0 | |
| Trade Analysis Military Science 1 | 2 | Job Analysis Military Science 1 | 2 | |
| District 202 | | | 3 | |
| Physics 203 | 2 | Physics 204 | 3 | |
| General | | General Dural Sociale and 204 | 0 | |
| *Elective6 | | Rural Sociology 204 3 Introductory Rural Sociology | 0 | |
| | | * The stress | | |
| 15 | 9 | *Elective 4 | | 1 |
| Ŧ | | · · · · · · · · · · · · · · · · · · · | | |
| | | 16 | 9 | |
| | | | | |
| | TUNUOR | WE (D | | |
| | JUNIOR | | | |
| History 305 3 | 0 | Industrial Education 308 3 | 0 | |
| Citizenship | | A Study of Modern Industries | | |
| Industrial Education 301 2 | 0 | Industrial Education 310 2 | 0 | |
| Methods and Management | 2 | Course Making | • | |
| Industrial Education 307 3 | 0 | Industrial Education 312 2 | 0 | |
| Psychology of Adolescence | • | Psychology Applied to Industry | | |
| *Elective12 | | Industrial Education 314 1 | 2 | |
| | _ | Observation and Criticism | | |
| 20 | 0 | *Elective11 | | Lo |
| ×~ | - | | | |
| | | 19 | 2 | |
| | | 12 | - | |

1

-- 5

| • | SENIOR | YEAR | |
|---|--------|--|---|
| Industrial Education 407 2 Special Methods of Teaching | 0 | English 401 2 Public Speaking | 0 |
| Industrial Subjects Industrial Education 409 2 | 0 | Industrial Education 406 2 Vocational Guidance | 0 |
| Organization and Management in Industrial Schools | | **Industrial Education 416. 0 Practice Teaching | 6 |
| Industrial Education 411 2 Lesson Planning | 0 | Rural Education 422 3 | 0 |
| **Industrial Education 415 0 Practice Teaching | б | History of Education *Elective10 | |
| *Elective11 | | 17 | 6 |
| 17 | 6 | | |

V)

*For students with industrial experience approved by the head of the Department of Industrial Education and by the Dean of the School of Vocational Teaching, the total number of elective hours will be reduced by four term hours for each year of certified industrial experience up to a maximum of 20 term hours.

**Approved teaching experience with written reports may be substituted for these courses on the basis of two term hours for each year of such experience.

XVI.—COURSE IN RURAL EDUCATION

| F | RESHMAN | I YEAR | |
|---|-------------|--|---------------|
| Hou | rs per | Hou | ırs per |
| | Veek Pr. | | leek . Pr. |
| Animal Husbandry 107 2 | 4 | Agronomy 105 | |
| General Animal Husbandry Biology 101 2 | 4 | Crop Production Biology 102 | 4 |
| General Botany | | General Botany | |
| English 103 | 0 | English 104 | 0 |
| Military Science 1 | 2 | Military Science 1 | ż |
| Rural Education 121 | t 0 | Poultry Husbandry 102 | 2 |
| _ | | Rural Education 122 | 10 |
| | 12 | Elementary School Methods | |
| | | 14 | 12 |
| | PHOMOR | E VEAD | |
| Chemistry 101 3 | 3 | Chemistry 102 3 | 3 |
| Inorganic | | Inorganic | |
| English 231 | 0 | Dairy Husbandry 202 2 Dairying | 2 |
| Entomology 201 2 | 2 | Englisn 232 3 | 0 |
| General Military Science 1 | 2 | English Literature Military Science 1 | 2 |
| Rural Education 221 | õ | Rural Education 222 | i õ |
| Rural School Administration Elective | | Rural School Administration Elective | |
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| | JUNIOR | YEAR | |
| Biology 207 2 | 4 | Economics 403 3 | 8 0 |
| Zoology History 305 | 0 | Principles English 303/ 2 | 2°0 |
| Citizenship Rural Education 321 | 2 | Argumentation | |
| Secondary School Methods and | Z. | Rural Education 322 | |
| Management Elective | | Management Rural Sociology 407 2 | 2 2 |
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| Public Speaking Rural Education 421 | 0 | History of Education Elective | 5 |
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| Farm Shop Architecture 101 0 | 4 | Farm Shop Architecture 102 0 | 4 |
| Architectural Drawing Drawing 103 | 0 | Architectural Drawing Drawing 104 2 | 2 |
| Descriptive Geometry Drawing 123 0 | 4 | Descriptive Geometry Drawing 124 0 | 4 |
| Mechanical Drawing English 103 | 0 | Mechanical Drawing English 104 | 0 |
| Rhetoric and Composition | | Rhetoric and Composition | , č |
| Mathematics 101 | 0 | Mathematics 104 | • 0 |
| Mathematics 103 | 0 | Mechanical Engineering 104 0 Forging | 3 |
| Mechanical Enginereing 105 0 Bench Woodwork | 6 | Mechanical Engineering 106 0 Cabinet Making & Mill Work | 6 |
| Military Science 1 | 2 | Military Science 1 | 2 |
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| Agricultural Engineering 203 2 | 2 | Agricultural Engineering 402 2 | 4 |
| Gas Engines Architecture 201a0 | 8 | Automobiles and Trucks Agricultural Education 308 3 | 0 |
| Design Economics 203 | 0 | Educational Psychology Architecture 202a 0 | 4 |
| Principles Electrical Engineering 201 4 | .4 | Design Economics 204 | 0 |
| Electricity & Magnetism | | Principles | 6 |
| English 203 2 Composition and Literature | 0 | Electrical Engineering 204 0 Electric Wiring and Repair | , in the second s |
| Industrial Education 102 2 Theory and Principles | 0 | English 204 | 0 |
| Military Science 1 | 2 | Industrial Education 202 2 Job Analysis | 0 |
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| Industrial Education 301 2 | 0 | Industrial Education 310 12/ | 0 |
| Methods of Teaching and Manage ment | | Course Making Mechanical Engineering | 2 |
| Mechanical Engineering 201 0 Pattern Making and Foundry | 3 | Kinematics | - 3 |
| Mechanical Engineering 309 0 | 3 | Mechanical Engineering 310 0 Machine Shop | - |
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XXII.-COURSE IN INDUSTRIAL ARTS

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SCHOOL OF VOCATIONAL TEACHING

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shop work or drawing.

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COURSES OF INSTRUCTION BY DEPARTMENTS

The courses of instruction are described on the following pages under the departments in which they are offered. Courses from 101 to 199 are primarily for freshmen, 201 to 299 for sophomores, 301 to 399 for juniors, 401 to 499 for seniors, 501 to 599 for graduate students; courses 571 to 599 are offered by members of the Agricultural Experiment Station Staff; 1 to 49 for first-year students in short courses; 51 to 99 for second year students in short courses. First-term courses are as a rule given odd numbers, second-term courses, even numbers.

The figures in parenthesis following the name of a course indicate the number of hours per week, theory and practice, respectively, devoted to the course.

For convenience of reference, the departments are listed here in alphabetical order:

| Department | Page | Department | Page |
|----------------------------|------|------------------------------|-----------|
| Accounting and Statistics. | 137 | Horticulture | |
| Agricultural Economics | 139 | Industrial Education | |
| Agricultural Education | 141 | Landscape Art | 202 |
| Agricultural Engineering . | 142 | Marketing and Finance | |
| Agronomy | | Mathematics | 205 |
| Animal Husbandry | | Mechanical Engineering | 206 |
| Architecture | | Military Science and Tactics | |
| Biology | | Modern Languages | 218 |
| Chemistry and Chemical H | | Municipal and Sanitary En | - |
| gineering | 161 | g neering | 220 |
| Civil Engineering | | Physical Education | |
| Dairy Husbandry | 1/3 | Physics | |
| Drawing | 1/5 | Poultry Husbandry | |
| Economics | | Rural Education | |
| Electrical Engineering | | Rural Sociology | 229 |
| English | 104 | Textile Engineering | |
| Entomology | | Veterinary Anatomy | |
| Farm and Ranch Manageme | 100 | Veterinary Medicine and Sur | g- 234 |
| Forestry Genetics | 100 | ery Veterinary Pathology | |
| | | Veterinary Physiology and | |
| Geology | | Pharmacology | 238 |
| History | | i narmacology | |

DEPARTMENT OF ACCOUNTING AND STATISTICS

Professor Leland, Mr. Weinke, Mr. Hosking, Mr. Luebke

201. Principles of Accounting. (2-4).

Development and application of the fundamental principles of accounting. Analysis and recording of transactions, use of the journal, ledger, and trial balance, location of errors, columnar journals, controlling accounts, working sheets, financial statements, adjusting and closing entries, business procedure and forms.

Text: Introductory Accounting, Powelson. Laboratory fee, 50 cents. (Required in XIV, XVIII, elective in VI).

202. Prinicples of Accounting. (2-4).

A continuation of course 201. Accrued and deferred items, depreciation, corporation accounting, accounting for manufacturing concerns, voucher systems, classification and interpretation of accounts, and financial statements.

Text: Introductory Accounting, Powelson. Laboratory fee, 50 cents. (Required in XIV, XVIII, elective in VI).

301. Theory and Practice of Accounting. (2-4).

Further development of fundamental principles and application to specific subjects, such as: statement preparation and analysis, partnerships, corporations, installment sales, agencies and branches, consignments, joint ventures, insolvent concerns, inventories, receivables and cash.

Text: Principles of Accounting, Volume 1, Finney.

Prerequisite: Accounting and Statistics 201, 202.

Laboratory fee, 50 cents.

(Required in XIV group 1).

302. Advanced Problems. (1-4).

Further study of accounting theory and practice; estate accounting, actuarial accounting, appraisals, depletion, good will, investments, reserves, funds, consolidations, foreign exchange, insurance, fixed liabilities, current and contingent liabilities.

Text: Principles of Accounting, Volume II, Finney.

Prerequisite: Accounting and Statistics 301.

Laboratory fee, 50 cents.

(Required in XIV group 1).

303. Statistical Method. (2-4).

Application of statistical method to agricultural subjects: collection, tabulation, presentation, and analysis of data. A study of sampling, graphics, averages, ratios and coefficients, dispersion, skewness. probability and error, index numbers, seasonal and long-time trends, barometers, and linear correlation.

Text: Statistical Method, Jerome.

Laboratory fee, 50 cents.

(Required in I group 12, XIV groups 1, 2, 3, 4).

304. Auditing. (1-4).

Theory and practice of auditing; types of audits; audit procedure for individual assets, liabilities, and nominal accounts; working papers and reports; case studies.

Texts: Auditing, Bell and Powelson; Illustrative Audit I, Kohler and Pettingill.

Prerequisite: Accounting and Statistics 301, Laboratory fee, 50 cents.

401. Cost Accounting. (1-4).

Development of cost accounting principles, cost elements, methods of control, order and process systems, estimated and standard costs, debatable points of theory, uniform methods, cost accounting for agricultural enterprises.

Text: Cost Accounting, Lawrence. Prerequisite: Accounting and Statistics 301. Laboratory fee, 50 cents. (Required in XIV group 1).

402. Cooperative Accounting. (1-2).

A study of the special features of accounting for various types of cooperatives; an analysis of the accounting systems devised and recommended by government agencies and farmer organizations. Each student is expected to devise a system for some cooperative organization.

Text: To be selected.

Prerequisite: Accounting and Statistics 301. Laboratory fee, 50 cents.

403. Income Tax. (1-2).

A survey of income tax legislation. Study of the present income tax law, regulations, treasury decisions, court decisions and departmental rulings. Emphasis on underlying principles. Income tax problems and returns.

Texts: Regulations, Laws, Tax Problems. Prerequisite: Accounting and Statistics 202. Laboratory fee, 50 cents.

404. Advanced Statistics. (2-4).

A brief review of the first course in statistics: collection, presentation and elementary analysis of agricultural data. Analysis of time series, measurement of relationships: linear, non-linear, multiple linear, multiple n_on -linear correlation; problem of estimation, joint relationships, and ap-

plication of simple and multiple linear and non-linear correlation to time series.

Text: Statistical Method, Mill. Prerequisite: Accounting and Statistics 303. Laboratory fee, 50 cents.

406. Agricultural and Business Cycles. (2-4).

An empirical and statistical study of agricultural data, production, consumption, and price indexes; analysis of seasonal and long-time trends, and factors constituting cyclical fluctuation; theory, causes, effects and control of cycles from an agricultural point of view.

Text: To be selected.

Prerequisite: Accounting and Statistics 303. Laboratory fee, 50 cents.

FOR GRADUATES.

501. Statement Analysis. (2-4).

An analytical study of the different kinds of statements for the guidance of executives, investors and creditors. Considerable time is given to the study of balance sheet and profit and loss ratios.

Prerequisite: Accounting and Statistics 301, 304, 401. Laboratory fee, 50 cents.

DEPARTMENT OF AGRICULTURAL ECONOMICS

Mr. E. H. Johnson, Mr. Mizell

101. Agricultural Resources. (3-0).

A survey of the potentialities and limitations of agricultural production in relation to population pressure: physical bases of production as related to potentialities; effects of population pressure on land supply as manifested in the production of agricultural commodities throughout the world; trade in agricultural products in relation surplus producing and deficit areas.

Text: To be selected.

(Required in I, XIV, XVIII; XXI).

102. Agricultural Resources. (3-0).

A survey of types of land utilization as developed in the various agricultural regions of the world; a study of typical cases such as China and India, the Mediterranean lands, Western Europe and the United States; the Agricultural Revolution as manifested in changes in the agriculture of the old world and in the development of the great surplus producing regions in the interiors of the continents; development of surplus production in the tropics; present trends in centralization in world agriculture.

Text: To be selected.

Prerequisite Agricultural Economics 101. (Required in I, XIV, XVIII; XXI).

301. Agricultural Geography of North America. (3-0).

A survey of the physical bases of production in the different portions of the continent, with especial attention to the factors most influential in determining America's agricultural development; a classification of the lands of North America; past development, present production, trends and possibilities of agriculture in Canada, New England, North Atlantic and Central states.

Text: To be selected.

140

302. Agricultural Geography of North America. (3-0).

A continuation of course 301. Agricultural production in the Pacific Coast States, the Great Plains and inter-mountain regions, and tropical North America; an intensive study of the agricultural geography of the South, with especial attention to Texas; past development and present trends of trade in agricultural commodities with reference to North America; significance of industrial development to the Nation's agriculture.

Text: To be selected.

Prerequisite: Agricultural Economics 301.

312. Agricultural Economics. (2-2).

Application of the principles of economics to agriculture. Description and analysis of the factors in agricultural production; proportioning the factors of production; the use of credit; forces determining rent, interest, wages, and profits; valuation of agricultural products; marketing.

Text: Introduction to Agricultural Economics (Revised Edition), Taylor.

Prerequisite: Economics 203, 204, and Accounting and Statistics 303. (Required in I group 12, XIV groups 1, 2, 3, 4).

402. Property and Contract. (3-0).

The evolution of property rights; private and public property; the influence of property upon the distribution of wealth; social regulation of private property; future development of property; the evolution of contracts; types of contracts; philosophy of the laws of contracts; social control of contracts; the effect of contracts upon the distribution of wealth.

Text: Property and Contract, Ely. Prerequisite: Agricultural Economics 312.

(Required in XIV group 2).

411. Agricultural Economic Problems. (3-2).

The problem of obtaining land, labor, and capital in agricultural production; the entrepreneurial function; the tenancy problem; the problem of adapting production to the market; agricultural credit; the valuation of agricultural products; the evolution of the marketing problem; services performed in the marketing process; the marketing agencies; taxation and the farmer; the tariff and agriculture; methods of price control for farm products; service and regulatory work of the government in relation to farm production and marketing.

Text: To be selected.

Prerequisite: Economics 403, or 203, 204.

(Required in I group 2, 3, 4, 4a, 5, 7, 9, 10, 11; XII, XV).

423. Outlines of Land Economics. (3-0).

Characteristics of land as a factor in production; classification of land; land utilization; social ends of land utilization; property rights in land; land tenure; land valuation; land credit; land taxation; state and national land policies.

Text: Elements of Land Economics, Ely and Morehouse. (Required in XIV group 2).

FOR GRADUATES.

503. Land Problems. (2-4).

An intensive study of such problems as land tenure, land classification, land utilization, land taxation, and land valuation.

504. Historical Development of Agricultural Economics. (2-4).

Agricultural economics defined and described; origin of agricultural economics; historical development of agricultural economics in Rome, England, Germany, and France. This part of the historical work deals very largely with the biographical sketches of the writers concerned and with the history of economic conditions at the time they wrote, especially as related to agriculture. The works of such men as Arthus Young, Albrecht Thaer, and Von Thunen; modern agricultural economics; recent developments in agricultural economics; relation of agricultural economics to farmers' movements; relation of agricultural economics to general economics; essentials of a sound agricultural economics course.

Prerequisite: Agricultural Economics 312.

DEPARTMENT OF AGRICULTURAL EDUCATION

Professor Winkler, Professors McIntosh, Buck, Associate Professor Alexander.

207. Psychology. (3-0).

An introductory course dealing with the elementary principles of Psychology.

(Required in VI, XX; elective in I, X).

305. Principles of Education. (3-0).

An introductory course to the field of general education, designed to acquaint the student with the principles of educational theory; the aim and meaning of education, emphasizing the vocational viewpoint.

(Required in I group 2; XII).

308. Educational Psychology. (3-0).

A course in Psychology with special emphasis on its application to the problems of teaching.

(Required in 1 group 2; XII, XXII).

401, 402. Teaching Vocational Agriculture. (3-2).

Analysis of the Agricultural teacher's job; courses of study; annual plan; lesson plans; project outlines and supervisions; equipment; reports; observation and directed teaching.

(Required in I group 2; XII).

(404. Extension Methods. (3-0).

The agricultural extension movement; organization of extension work; State and county plan of work; the county agent and extension specialists; the Farm Bureau; other extension agencies.

(Required in XII).

423. Educational Tests and Measurements. (3-0).

The teacher of agriculture is constantly being used in the smaller school systems of the State as principal or superintendent. It is, therefore, important that he become acquainted with modern methods of measuring the results of teaching. A study is made of the various tests and measurements employed in measuring school-room instruction.

FOR GRADUATES

501, 502. Agricultural Education. (4-0).

This course involves more extensive study of the problems considered in 401 and 402. Each student selects a special problem for intensive study as a basis for his thesis. Courses 401 and 402 must precede or accompany this study.

505, 506. Administration and Supervision of Vocational Agriculture. (4-0).

A course designed for teachers of Vocational Agriculture preparing for State supervisory positions. It includes a study of the duties of the state supervisor, his relation to teachers of vocational agriculture, teacher training institutions, Federal Boards for Vocational Education, and other agencies engaged in Agricultural Education.

DEPARTMENT OF AGRICULTURAL ENGINEERING

Professor Scoates, Associate Professors H. P. Smith, Assistant Professors F. R. Jones, Thurmond, Mr. De Forest.

 101, 102. Farm Shop. (0-3).
 A modification of course 321, 322.
 Laboratory fee, \$1.25 each term. (Required in XV, XXII).

201. Farm Machinery. (2-2).

Construction, adjustment, operation and repair of all types of farm machinery; tilling, seeding, cultivating, fertilizing and power machinery.

Laboratory fee, 50 cents. (Required in I, XV, XXI, C).

203. Gas Engines. (2-2).
Construction, operation, care and repair of farm gas engines.
Laboratory fee, \$1.00.
(Required in XV, XXII; elective in I, C).

214. · Tractors. (2-4).

Construction, operation, care and repair of farm gas tractors. Prerequisite: Agricultural Engineering 203. Laboratory fee, \$2.00. (Required in I group 3, XV; elective in C).

305. Surveying and Drainage. (3-4).

Surveying with its farm application; principles of farm drainage as applied to open ditches, terraces, tile drains; promotion of drainage districts; use of dynamite, removal of stumps; law with respect to farm waters.

Laboratory fee, 50 cents.

(Required in I groups 3, 10; XX; elective in C).

321, 322. Farm Shop. (Y-4).

A course for vocational school teachers which includes; soldering, belt lacing, rope knots and splices, concrete construction, carpentry, sufficient forging to enable the student to make ordinary farm repairs.

Laboratory fee, \$1.50 each term.

(Required in XII; elective in C; 321 required XIV group 3).

402. Automobiles and Trucks. (2-4).

Construction, operation, care, and repair of the gasoline automobile and truck.

Prerequisite: Agricultural Engineering 203.

Laboratory fee, \$1.50.

(Required in I group 3; XV, XXII; elective in C).

409. Farm Concrete. (1-2).

Selection of material used in concrete; proper mixing, placing and curing; construction of forms; special emphasis laid on application of concrete for farm use.

Laboratory fee, \$1.50.

(Elective in C).

410. Irrigation. (2-4).

Principles of irrigation practice; source of water supply; methods of obtaining water; distribution systems; application of water to crops; measurement and duty of water; control of alkali.

(Required in XV; elective in C).

413. Farm Buildings. (2-3).

Design and location of farm buildings; building materials; construction; arrangement; ventilation, heating, lighting, water supply and sewage disposal.

(Required in I group 3; XV).

416. Drainage. (2-4).

Principles of farm drainage as applied to open ditches, terraces, tile drains; promotion of drainage districts; use of dynamite; removal of stumps; law with respect to farm waters.

Laboratory fee, 50 cents.

(Required in XV).

418. Designing of Farm Structures. (2-4). A continuation of course 413. (Required in XV).

419. Cotton Machinery. (2-2).

Construction, adjustment, operation and repair of the various types of machines necessary in the production and preparation for the marketing of cotton.

Prerequisite: Agricultural Engineering 201. (Required in I group 4a).

421. Advanced Farm Shop. (2-4).

Advanced study of Farm Shop with special emphasis on problems relative to teaching the course, i. e., equipment, methods, supplies and projects.

Prerequisite: Agricultural Engineering 321, 322. Laboratory fee, \$1.50.

422. Irrigation. (2-3).

A modification of course 410 with emphasis on growing crops under irrigated conditions—a course designed for agricultural students without engineering background.

FOR GRADUATES.

501, 502. Advanced Drainage and Irrigation. (2-4).

Advanced study of Farm drainage and irrigation with special emphasis on recent developments.

Prerequisite: Agricultural Engineering 305 or 416 and 410.

503, 504. Advanced Farm Machinery. (2-4).

Advanced study of farm machinery with special emphasis on recent developments.

Prerequisite: Agricultural Engineering 320.

505, 506. Advanced Farm Buildings. (2-4).

Advanced study of farm buildings and farm home utilities. Prerequisite: Agricultural Engineering 413.

507. Cotton Machinery. (1-2).

An advanced course in cotton machinery used for preparation of seed bed, seeding, cultivating, harvesting and ginning—with special emphasis on recent developments.

DEPARTMENT OF AGRONOMY

Professor J. Oscar Morgan, Professor L. G. Jones, Associate Professors Mogford, Stewart, Mr. Styrgis.

105. The Fundamentals of Crop Production. (3-2).

Classification and distribution of farm crops; importance of good varieties and good seed; crop improvement; preparation of the seed bed; commercial fertilizers, manures and lime; seeding practices; crop tillage; harvesting; meadow and pasture management; weeds; crop rotation; diseases and insect enemies.

Text: The Production of Field Crops, Hutcheson and Wolfe. (Required in I, XII, XIV, XV, XVI, XX, XXI).

301. Soils. (3-2).

Soil farming processes; geological classification of soils; organic matter; colloidal matter; soil structure and its modification; forms of soil water; soil water in its relation to plants; control of soil water; soil heat; soil air; absorptive properties of soils; removal of nutrients by cropping and leaching; alkali soils; soil acidity; soil organisms; principles of fertilizer practice; farm manures; green manures; maintenance of soil fertility.

Text: The Nature and Properties of Soils, Lyon and Buckman. Prerequisite: Chemistry 101, 102.

Laboratory fee, 50 cents.

(Required in I groups 2, 3, 4, 4a, 5, 7, 8, 9, 10, 11; XII, XV, XX).

308. Forage Crops. (2-2).

The production, harvesting and preservation of alfalfa, cowpeas, soy beans, vetches, Sudan grass, sorghums, Bermuda grass, Johnson grass, Lespedeza and the other miscellaneous hay and pasture crops adapted to Southern agriculture; problems of meadow and pasture management.

Text: Forage Crops, Piper. Laboratory fee, 50 cents.

(Required in I group 4; XIV group 3, XV, XXI).

314. Field Crops. (3-2).

The production, harvesting and utilization of corn, oats, wheat, barley, rye, rice, the grain sorghums and sugar cane.

Text: Field Crops for the Cotton-Belt, Morgan. Laboratory fee, 50 cents. (Required in I group 4; XIV group 3).

316. Fiber Crops. (2-2).

Cotton production, including species, varieties, improvement, adaptation, fertilization, tillage practices, harvesting, insects and diseases. Flax, hemp, and other miscellaneous fiber crops are treated briefly.

(Required in I group 4a).

406. Soil Mapping. (0-3).

Methods of classifying soils; benefits from soil surveys; a field study of the various soil types found in the surrounding locality, their areas being surveyed and mapped according to the methods employed by the Bureau of Soils of the United States Department of Agriculture.

Prerequisite: Agronomy 301.

411. Soil Fertility. (2-2).

A detailed study of the factors affecting the immediate producing capacity of the soil.

Prerequisite: Agronomy 301.

Laboratory fee, \$1.00.

(Required in I groups 4, 4a).

414. Soil and Crop Problems. (3-0).

Special problems dealing with the management and utilization of distinctive types of soils and soil condition and a detailed consideration of crop management problems under varying soil and climatic conditions.

Prerequisite: Agronomy 301.

415, 416. Soil and Crop Seminar. (1-0).

A review and presentation of the results of especially selected lines of research, dealing with soils and crops.

(Required in I group 4).

417. Range and Pasture Improvement and Maintenance. (2-0).

Problems dealing with the vegetation, improvement and maintenance of ranges and pastures. Weeds and poisonous plants and their eradication receive special attention.

420. Cotton Research Problems. (1-0).

A study of research methods as applied to cotton production and improvement.

(Required in I group 4a).

421. Commercial Hay Grading. (0-3).

Detailed instruction in grading hays according to the Federal Standards, including a study of the grade factors influencing the market value of hay; the kinds of inspections made on the markets in the United States; practice in grading baled hay according to the United States grades; certificate writing.

Laboratory fee, \$1.00.

422. Commercial Grain Grading. (0-3).

Detailed instruction in grading grains according to Federal Standards, including a study of dockage, weight, moisture, heat damage, foreign material and other factors influencing the commercial grade of corn, oats, wheat and the grain sorghums.

Laboratory fee, \$1.00.

FOR GRADUATES

501, 502. Advanced Farm Crops. (2-4).

An advanced study of field crop production and breeding, including a thorough review of the more recent and noteworthy investigations in this field.

505, 506. Advanced Soils. (2-4).

A concise review of our present knowledge of the soil as a medium for plant growth, followed by a detailed study of the more recent and noteworthy investigations pertaining to soils and fertility.

507, 508. Advanced Cotton Production. (2-4).

An advanced study of cotton from the standpoint of species, varieties, breeding, fertilization, tillage practices, and harvesting. In the course extended use is made of the recent cotton literature in scientific journals, experiment station bulletins, and such reference books on cotton as are available.

FOR STUDENTS IN SHORT COURSES.

25. Soils. (3-2).

Soil fertility and its maintenance; manures; fertilizers; cover crops; fallowing; fall and spring plowing; crop rotations.

Text: Productive Soils, Weir. Laboratory fee, 50 cents.

(Required in C).

30. Elementary Crop Production. (3-2).

An elementary study of the leading field and forage crops adapted to Southern agriculture.

Text: Productive Farm Crops, Montgomery. Laboratory fee, 50 cents. (Required in C).

DEPARTMENT OF ANIMAL HUSBANDRY

Professor D. W. Williams, Professor R. H. Williams, Associate Professors Buchanan, Assistant Professors Groth, Mackey.

107. General Animal Husbandry. (2-4).

Farm animals as a source of food, clothing, and labor; the place of livestock in farming; the place of the United States and of Texas in the live stock industry; history of the industry in the United States; heredity the basis for improvement; selection or judging and its importance; pedigrees; methods used in improvement; the importance of proper nutritional development; chemistry and physics the basis for nutrition; factors influencing efficiency in feeding; care and management as factors determining results obtained; the importance of sanitation and disease control to the live stock producer; the place and special advantages of each class of live stock; classifications used in showing of live stock; classification of the breeds, and market types of horses, beef cattle, hogs, sheep and goats; the marketing machinery of the live stock industry.

Text: To be selected.

(Required in I, XI, XII, XIV, XV, XVI).

202. The Breeds of Farm Animals. (2-2).

The origin and native homes of breeds of horses, cattle, sheep, and swine; early development; constructive breeders; adaptibility; distribution; breed type and characteristics; breed organizations; publications; score card and comparative judging of representative animals.

Text: Types and Breeds of Farm Animals, Plumb.

Prerequisite: Animal Husbandry 107.

(Elective in I, C).

203. Market Classes and Grades of Live Stock. (1-4).

Age, type, quality, condition or finish, size and weight, sex, style, dressing percentage, methods of finishing, breeding, uniformity, etc., as factors determining market classification; market classifications for each class of live stock; wholesale and retail meat cuts; by-products; comparative judging; classifying grading and valueing market animals.

Texts: Types and Market Classes of Live Stock, Vaughan; Revised Government Market Classifications.

Prerequisite: Animal Husbandry 107. (Elective in I).

303. Animal Nutrition. (3-2).

Chemical composition of feeding stuffs; composition of farm animals; • digestion; metabolism; functions of nutrients; vitamins; coefficients of digestibility; energy in feeds and its uses; feed requirements of animals; maintenance, growth; fattening; milk production; wool production; work computation of rations; manurial value of feeds; nature and uses of feed stuffs including cereal grains, cereal by-products, legumes and legume seeds, oil bearing seeds and by-products, packing house by-products; hays, fodders, straws; pastures, forage, silage, and miscellaneous feeds.

Prerequisite: Chemistry 206.

(Required in I groups 5, 7; XXI).

307. Farm Meats. (0-4).

Farm meat supply; methods of slaughtering, dressing, cutting, and curing meats; utilization of by-products; factors influencing value of meat and dressing percentage of animals.

Text: Farm Meats, Helser.

403. Advanced Judging. (0-6).

An advanced course in live stock judging. Prerequisite: Animal Husbandry 202.

406. Beef Cattle Production: (3-2).

The world beef cattle situation; historical development; systems of production and determination of place of each; distribution and value in comparison with other meat animals; location of beef enterprise; establishment of the herd; improvement methods; mating and reproduction; calving; feed and care of calf; development of stock for the breeding herd; wintering; summer management; cattle feeding; selection of feeders; value of feeds; financial aspect of beef production; equipment; parasites and diseases; fitting and showing; marketing.

Text: Beef Cattle, Snapp.

Prerequisite: Animal Hnusbandry 303 or 409.

409. Animal Nutrition and Live Stock Feeding. (3-2).

A modification of course 303 together with a study of the practical feeding of horses, dairy cattle, beef cattle, sheep and swine.

Text: Feeds and Feeding, Henry and Morrison.

(Required in I group 4; XI, XII, XIV group 3).

410. Sheep and Angora Goat Production. (3-2).

Present status; history in United States; methods and types of sheep raising; pure bred business; breeding; management and feeding of the breeding flock; growing young lambs; fattening sheep and lambs; marketing sheep and lambs; fitting and showing; parasites and diseases.

Text: Productive Sheep Husbandry, Coffey.

Prerequisite: Animal Husbandry 303 or 409.

412. Swine Production. (3-2).

Historical; feeding and handling the breeding herd during various seasons; culling; records; the sow and the litter; growing and fattening pigs; forage crops; feeding on forage; dry lot feeding; choice and value of feeds; garbage disposal plants; prevention of disease; slaughtering and curing; the pure bred herd; fitting and showing.

Text: Pork Production, Smith.

Prerequisite: Animal Husbandry 303 or 409.

413. Horse and Mule Production. (3-2).

Review of situation; historical development; mechanical vs. horsepower; anatomy; unscundness; ailments and diseases; feeding the brood mare; stallions; growing and developing colts; feeding and handling horses at work; stables and equipment; harness; shoeing; fitting and showing; horse markets; jacks and jennets; mule production.

Prerequisite: Animal Husbandry 303 or 409.

416. Live Stock Management. (3-2).

A modification of courses 406, 410, 412, 413. Prerequisite: Animal Husbandry 409. (Required in XII).

AGRICULTURAL AND MECHANICAL COLLEGE OF THXAS

418. Wool and Moair. (2-4).

Microscopic structure; chemical composition; production; preparation for market; market reports; marketing comparison with other textile materials; measurement; grading; sorting; scouring; pullaries; process of manufacture of fabrics.

421. Advanced Studies of Breeds of Live Stock. (2-0).

Methods used in the development of outstanding animals; popular lines of breeding; breed improvement; characteristics and breeding of show winners. The following breeds will be considered: Hereford cattle, Percheron horses, Rambouillet and Delaine sheep, Duroc-Jersey hogs.

Prerequisite: Animal Husbandry 202.

422. Advanced Studies of Breeds of Live Stock. (2-0).

Same as course 421 except that the following breeds will be considered: Aberdeen-Angus and Shorthorn cattle, Belgian horses, Hampshire and Shropshire sheep, Poland-China hogs.

Prerequisite: Animal Husbandry 202.

423. Seminar. (2-0).

Research methods in animal experimentation; sources of error in experiment work; review of research literature with oral and written presentation.

Prerequisite: Animal Husbandry 303, Genetics 301.

424. Range Live Stock Production. (3-0).

Review of historical development; types of ranges; types and breeds of livestock used; range livestock improvement; handling cattle, sheep and goats during various seasons of the year; culling of herds and flocks; range livestock losses including parasites, deficiency, diseases, droughts, etc.; stocking of the range under various conditions; carrying capacity determination; over and under grazing; water development; salting; feeding both regular and under emergency conditions; finishing on the range; equipment; labor, cost of production; marketing.

Prerequisite: Animal Husbandry 303 or 409.

FOR GRADUATES

501, 502. Advanced Animal Nutrition. (2-4).

A continuation of material covered in course 303; review of more recent investigations; methods of investigations; sources of error.

505, 506. Advanced Live Stock Production. (3-2).

A continuation of courses 406, 410, 412, and 413. The course is varied according to the class of live stock in which the student is most interested. Managerial problems of production will be considered in detail.

571, 572. Wool and Mohair Research. (3-4).

Offered only by individual agreement, to graduate students qualified by previous training to do thesis work on some portion of an organized wool or mohair research project.

ANIMAL HUSBANDRY

Studies under way include a determination of the grades and shrinkages of wool and mohair from registered and unregistered flocks. The wool and mohair grading and scouring laboratory is at the disposal of graduate students taking this course. Mr. Jones.

573, 574. Research in Animal Breeding.

This course is a thesis course only and is designed to furnish to students majoring in genetics, animal husbandry, or dairy husbandry, the opportunity to work out a thesis upon some breeding problem which is of sufficient practical importance to be organized as a regular research project of the Experiment Station. Portions of projects already organized are available as thesis subjects and include problems of inheritance in beef cattle, dairy cattle, sheep and goats. Most of the problems available involve principles both of genetics and either animal husbandry or dairy husbandry, and students electing this course must first be familiar with the fundamentals of those fields. Dr. Lush.

FOR STUDENTS IN SHORT COURSES:

23. Judging Market Types of Beef Cattle and Sheep. (0-4).

Cattle and sheep terms; description and value of beef and mutton types; beef and mutton carcasses; wholesale and retail cuts; factors determining dressing percentage; packing house by-products; score cards and comparative judging; feeder steers and feeder lambs; market classes and grades of cattle and sheep; dual purpose cattle; fine wool sheep; classification of breeds.

Text: Types and Market Classes of Live Stock, Vaughan. (Required in C).

24. Judging Market Types of Horses and Swine. (0-4).

Origin of the horse; anatomical review; conformation with relation to action; classification of breeds; draft type; carriage type; roadster type; saddle type; hunter type; Polo pony; mules; market classification; unsoundness; lard type hogs; bacon type; the hog carcass; wholesale cuts; by-products; market classification; breed classification; score card and comparative judging.

Text: Types and Market Classes of Live Stock, Vaughan. (Required in C).

52. The Breeding of Live Stock and the Study of Pedigrees. (2-2).

Principles of breeding; methods used in the practice of breeding purebred and market horses, cattle, sheep and swine; pedigree study.

Text: The Breeding of Animals, Mumford.

(Elective in C).

55. Live Stock Feeding. (2-2).
A modification of course 409.
Text: Feeds and Feeding (abridged), Henry E. Marisa.
(Elective in C).

 Live Stock Management. (2-2). A modification of course 416. Prerequisite: Animal Husbandry 55. (Elective in C).

DEPARTMENT OF ARCHITECTURE

Professor June, Professors Geist, Langford, McLaughlin, Associate Professor Lindsey, Mr. Finney.

101, 102. Architectural Drawing. (0-4).

Lettering, line drawing, patterns, mouldings, band ornaments, proportion of openings, geometrical constructions, curves and spirals, coordinated projections, elementary stereotomy, india ink, and color washes; elements of architecture, application of cast shadows, the orders, architectural composition.

Text: First term, Architectural Drawing Manual, June. Second Term, Proportional Method for Drawing the Orders, June. (Required in IX, XX, XXII).

104. Shades and Shadows. (2-0).

Review of underlying principles of descriptive geometry; plotting of shades and shadows; first on simple geometrical forms, leading to their application to more difficult architectural elements.

Text: Architectural Shades and Shadows, McGoodwin. Prerequisite: Drawing 103a. (Required in IX, XX).

109, 110. Freehand Drawing. (0-3).

Sketching from geometrical solids, simple objects, plaster casts, still life, elementary color and color wheels.

Adaptation of light and shade in drawing. (Required in IX, XX).

201, 202. Design (Elementary). (0-10, 0-14).

Simple problems in design and composition, presentation, rendering, application of elements of Architecture, analytique, research.

Prerequisite: For course 201, Architecture 102, 104; for course 202, Architecture 102, 104, 203.

(Required in IX group 1).

201a, 202a. Design. (Elementary). (0-8, 0-4).
Similar to course 201, 202.
Prerequisite: Architecture 102, 104; for course 202a, Architecture 203. (Required in IX group 2; XXII).

203. Principles of Perspective. (1-0).

A study of the principles of perspective drawing; their application to various architectural subjects.

Lectures; recitations; problems. Text: Perspective, Lubschez. Prerequisite: Drawing 103a. (Required in IX groups 1, 2).

205, 206. Freehand Drawing. (0-4).

Sketches in charcoal of the full length antique and other subjects; shaded charcoal drawing from the full length figure_and from casts of architectural ornament, water color studies.

Prerequisite: Architecture 110.

(Required in IX,XX).

207, 208. History of Architecture. (2-0).

Egyptian, Western Asiatic, Greek, Roman, Early Christian, Byzantine, Romanesque, and Gothic styles.

Written quizzes; research; lectures.

Text: Outlines of History of Architecture, Newcomb, Part 1, first term, Part II, second term.

(Required in IX groups 1, 2).

217, 218. Mechanics of Materials. (3-0).
Space, force, stress, moment, and shear diagrams. Properties of materials and theory of design.
Text: Technical Mechanics, Maurer.
Prerequisite: Mathematics 101, 102, 103, 104. (Required in IX group 1).

300. Working drawings. Summer following Sophomore year, three weeks. Work in laying out details of building construction such as cornices, window and door frames; stairs, fireplaces, and similar construction for timber and masonry buildings.

Prerequisite: Architecture 202 or 202a. (Required in IX groups 1, 2; XXII).

301, 302. Design (Intermediate). (0-15).

Major and sketch design problems of small ensemble involving composition, planning and presentation. Archaeological problems, library research.

Prerequisite: Architecture 202. (Required in IX group 1).

- 305, 306. Freehand Drawing. (0-4).
 Pen and ink, pencil and water color drawing.
 Prerequisite: Architecture 206.
 (Required in IX groups 1, 2).
- 309. History of Architecture. (2-0). Renaissance and modern architectural styles. Written quizzes; research, lectures. Text: Outlines of History of Architecture, Newcomb. Part III. (Required in IX groups 1, 2).

1.

311, 312. Design (Intermediate). (0-12). Similar to course 301, 302.
Prerequisite: Architecture 202a. (Required in IX group 2).

316. Mechanical Equipment of Buildings. (3-0).

Heating and ventilation; water supply; plumbing and sanitation; electric wiring.

Text: Mechanics of the Household, Keene. Prerequisite: Mathematics 101, 102, 103, 104; Physics 203, 204. (Required in IX groups 1, 2).

317. Framed Construction. (2-3).

Design of wood and steel framing as used in building construction; beams; columns; struts; roof trusses; analytic and graphic method.

Text: Handbook of Building Construction, Hool and Johnson. Prerequisite: Architecture 217, 218.

(Required in IX group 1).

318. Reinforced Concrete. (3-3).

Theory of reinforced concrete; design of walls; columns, beams, and slabs.

Text: Reinforced Concrete Construction, Hool.

Prerequisite: Architecture 217, 218.

(Required in IX group 1).

400. Working Drawings. Summer following Junior year, three weeks. Work in laying out and tracing general working drawings for

buildings.

Prerequisite: Architecture 300.

(Required in IX groups 1, 2).

401, 402. Design (Advanced). (0-18, 0-20).

Major and sketch design problems of large ensemble involving composition, planning and presentation. Archaeological problems, library research. (Required in IX group 1).

406. Professional Practice. (2-0).

A series of lectures on the law of contracts; professional practice; ethics; professional and inter-professional relationships.

Text: Handbook of Architectural Practice, A. I. A.

(Required in IX groups 1, 2).

407. History of Art. (2-0).

Analysis of architectural ornament; history of painting, sculpture and ornament; art appreciation. Lectures and research.

(Required in I group 10; IX groups 1, 2).

409, 410. Freehand Drawing. (0-4).

Studio and out-door sketching; architectural rendering, advanced water color.

Prerequisite: Architecture 305, 306.

(Required in IX group 1).

411, 412. Structural Design. (0-14, 2-17).

Draughting room methods, design of framed timber structures, design of skeleton steel structures, details of trusses, girders and columns in buildings, critical study of reinforced concrete structures, footings, beams, slabs and columns and simple design in concrete, working drawings and details.

Library research.

Prerequisite: Civil Engineering 330 and concurrent with Civil Engineering 413; in first term, Architecture 312.

(Required in IX group 2) .

414. Modern Architecture. (1-0).

An analysis of modern buildings; historic influences; modern developments; tendencies. Lectures; assignments, and reports.

(Required in IX group 1).

FOR GRADUATES

501, 502. Architectural Design. (0-24).

Design of buildings and groups of buildings. Practice; criticisms; consultations; research.

503, 504. Architectural Construction. (4-16).

Theory and practice in advanced constructive design; foundations; walls; frames.

505, 506. Architectural Practice. (1-4).

Contracts; specifications; superintendence; office methods.

507, 508. Architectural Presentation. (0-6).

Sketching; renderings; color harmony and effects.

DEPARTMENT OF BIOLOGY

Professor Ball, Professor Pratt, Associate Professor English, Mr. Gibbons, Mr. Doak, Mr. Lusk, Mr. Berkman.

BOTANY

101, 102, General Botany. (2-4).

The first term begins with an outline of the external and internal form and structure necessary to the more extended study of life processes of plants. In the second term, types of various subdivisions of the plant kingdom are used to illustrate the great fundamental principles of development and adaptation, and serve as a foundation for later work in classification.

In the laboratory work each student is required to keep a notebook in which he records by drawings and notes the results of his work.

Text: Botany with Agricultural Applications, Martin.

Laboratory fee, 50 cents each term.

(Required in I, XI, XII, XIV, XVI, XX, XXI).

103, 104. General Botany. (2-4).

This course differs from the preceding in being more thorough and advanced.

Text: General Botany, Holman and Robbins.

Laboratory fee, \$1.00 each term.

(Required in X; elective in XIX).

211, 212. General Biology. (2-4).

The structure of the animals; elementary vital phenomena; the functions and development of organisms; hygiene and sanitation; the causes and prevention of diseases; discussion of the principal biological theories.

Introduction to the use of the microscope, laboratory technic, and scientific methods of observation and experiment.

The subject matter of this course is so arranged as to allow the terms to be taken separately.

Text: Biology, Scott.

Laboratory fee, \$1.00 each term.

(Elective in XIX).

213. Plant Physiology. (3-2).

A course designed as a preparation for further work in agronomy and horticulture. Emphasis is laid on the study of the physiology of growth, nutrition and reproduction in plants, but not excluding other functions.

Text: To be assigned. Laboratory fee, \$1.00. (Elective in I).

303, 304. Plant Physiology. (2-4).

An advanced course in physiology in which the functions of respiration, assimilation and nutrition receive special attention. The course is designed for those who wish to pursue work of higher character in the field of general agricultural botany and at the same time to give, in the practical work, an introduction to the methods of research.

Text: Physiology of Plants, Green.

Laboratory Manual: Practical Physiology of Plants, Darwin and Acton.

Prerequisite: Biology 103, 104. Laboratory fee, \$1.00 each term.

315. The Cotton Plant. (2-2).

An outline of the botanical relationships, morphology, special physiology and pathology of the cotton plant. The text and lectures are supplemented by bulletins from available sources.

The laboratory work consists of studies in the structure and physiology of the plant.

Text: to be assigned.

Laboratory fee, \$1.50.

(Required in I group 4a.)

BIOLIGY

403, 404. Plant Pathology. (2-4).

An introduction to systematic mycology in the first term, which is followed by a study of the more important diseases of plants.

Text: Fungi Which Cause Plant Diseases, Stevens.

Prerequisite: Biology 103, 104, 311, 312.

Laboratory fee, \$1.00 each term.

416. Plant Diseases. (2-4).

This course begins with a study of the biology and classification of fungi with special reference to pathogenic forms. Types of the more important plant diseases occuring in Texas are selected for study and the student is trained to investigate and indentify the cause of the trouble and is shown appropriate corrective measures. Plant diseases due to other causes receive attention within the limits of time and material.

In the laboratory, the student studies the form, structure, and biology of selected fungi and learns routine methods of cultivation and identification. Diseased plants are placed before him for individual study and he is instructed in the diagnosis of each disease.

Text: Manual of Plant Diseases, Heald.

Prerequisite: Biology 101, 102, 206.

Laboratory fee, \$1.00.

(Required in I group 9).

ZOOLOGY

203, 204. General Zoology. (2-4).

The fundamental principles of classification, morphology and physiology of the various phyla of the animal kingdom, with a discussion of life-histories and habits of representative species. In the laboratory, type specimens are dissected.

Text: College Zoology, Hegner. Laboratory fee, \$1.00 each term. (Required in X; elective in XIX).

207. General Zoology. (2-4).

The essential aims and plan outlined in the work in botany are continued in this course. Especial attention is given to forms of economic importance. Types of the various great groups of animals are considered as illustrating origin, development and distribution. Careful dissection and study of type forms, with notes and drawings are required in the laboratory work.

Text: Economic Zoologý, Reese. Laboratory fee, \$1.00. (Required in I, XI, XII, XVI, XXI).

317, 318. Comparative Vertebrate Zoology. (2-4).

A detailed study of the anatomy of type chordates is undertaken from a comparative viewpoint. The lectures deal with the progressive development and evolution of the organs and organ systems, while in the laboratory the anatomy of the shark, fish, amphibian and mammal is carefully studied.

Text: Comparative Anatomy of Vertebrate, Kingsley. Laboratory Manual for Comparative Vertebrate Anatomy, Hyman. Prerequisite: Biology 203, 204. Laboratory fee, \$1.00 each term.

341, 342. General Physiology. (3-4).

The structure of the human body; the physiology of the cell; nutrition, chemistry of food, digestion, metabolism; physiology of the muscular, nervous and circulating systems, and of the special senses.

Text: General Physiology, Mitchell. Prerequisite: Biology 203, 204 or 211, 212.

Laboratory fee, \$1.50 each term.

419, 420. General Embryology. (2-4).

The development of the frog, pig and chick. In the laboratory a detailed study is made of both preserved and living material.

Text: Text-book of Embryology, Prentiss. Prerequisite: Biology 203, 204, 317, 318. Laboratory fee, \$1.00 each term.

427, 428. Invertebrate Zoology. (3-4).

A specialized study of invertebrate animals (excepting insects) with emphasis upon their economic relations.

Text: Invertebrate Zoology, Van Cleave.

431, 432. Anthropology. (3-2).

A study of man's place in nature; ancient man; classification of living races; society, religious and ethical ideals, and languages of primitive peoples.

Text: Human Origins, McCurdy. Prerequisite: Biology 211, 212. Laboratory fee, \$2.00 each term.

BACTERIOLOGY.

206. Introductory Bacteriology. (1-4).

An introduction to the study of the nature and relations of bacteria. The laboratory work comprises, in part, the preparation of culture media; of pure cultures; staining and microscopic technique; methods of identification, etc.

Text: Bacteriology, Buchanan.

Laboratory Manual: Laboratory Methods for Beginners in Bacteriology.

Prerequisite: Biology 101, 102. Laboratory fee, \$1.50.

(Required in I, XI, XXI).

BIOLIGY

305. Soil Bacteriology. (1-4).

For students desiring more specialized and extended work than is offered in course 206.

Text: To be assigned. Prerequisite: Biology 206. Laboratory fee, \$1.50.

309, 310. General Bacteriology. (2-4).

The general nature and relations of bacteria, as exhibited in the study of selected types.

In the laboratory, routine methods of isolation, preparation, and study of pure cultures; technical microscopy of bacteria, etc., occupy the time allotted.

Text: General Bacteriology, Jordan.

Laboratory Manual: A Manual of Bacteriology, Reed. Laboratory fee, \$1.00 each term. Prerequisite:

331. Dairy Bacteriology. (2-4).

Application of bacteriology to dairy products; physiological activities of bacteria; analysis of dairy products; dairy sanitation; bacteriology of diseases of dairy cattle; pasteurization practice and methods used in public health laboratories.

Text: Milk, Heineman. Prerequisite: Biology 102, 206. Laboratory fee, \$1.50.

409, 410. Advanced Bacteriology. (2-4).

This course is designed for students who elect special work in bacteriology and is adapted to the needs of the groups making the selection.

Laboratory fee, \$1.00 each term.

Prerequisite: Biology 103, 104, 309, 310. Laboratory fee, \$1.00 each term.

418. Water Bacteriology. (2-4).

The relations of bacteria and similar organisms to water, and water supplies, sewage and sewage disposal.

The laboratory work consists of preparation of culture media; qualitative and quantitative analysis of water, sewage and sewage effluents.

Text: To be selected.

Laboratory fee, \$1.50.

(Required in IV group 3).

FOR GRADUATES

501, 502. Vegetable Morphology. (2-4).

The life histories of various types of plants beginning with the lower forms and extending throughout the Angiosperms are studied with reference to structure and reproduction. Special attention is given to the origin and development of sex, the vascular system, the flower, etc., and to the alternation of generations. The laboratory work includes among other things training in the preparation of permanent microscopic slides.

No text is used but numerous references are given to publications available to the student.

Laboratory fee, \$2.00 each term.

503, 504. Advanced Vertebrate Zoology. (2-4).

An advanced course in zoology. The theory deals with the comparative anatomy of vertebrate types. The origin, development and evolution of the organs and organ systems, together with the anatomical evidence of evolution are emphasized. Laboratory work; detailed dissection of selected vertebrate types.

Text: Comparative Anatomy of Vertebrates, Kingsley; and Textbook of Zoology, Parker and Haswell, Vol. 2.

Laboratory fee, \$2.00 each term.

505, 506. Advanced Bacteriology. (2-4).

Advanced methods of bacteriological analysis of water; of milk and foods; of sewage.

Texts: Monographs on the special topics. Laboratory fee, \$2.00 each term.

Laboratory lee, \$2.00 each term.

507. Diseases of Cotton. (2-4).

An outline of the life history of the more important diseases of the cotton plant, together with measures of control.

509, 510. Advanced Plant Physiology. (2-4).

An extended study of the responses made by the plant to various external and internal stimuli, especially of gravitation, light, heat, water, and other chemical bodies. It includes an examination of the physiology of growth, nutrition and reproduction.

Experimental investigation of such responses is made in the laboratory work.

571, 572. Research in the Physiology of the Cotton Plant. (2-4).

This course is designed for students who specialize in cotton. Thorough studies are made of the structure of the cotton plant, its metabolism, its response to various fertilizers and to temperature of ari and soil, its normal requirement for fertilization, and abnormal conditions resulting in the shedding of its blossoms. Dr. Taubenhaus.

DEPARTMENT OF CHEMISTRY AND CHEMICAL ENGINEERING

Professor Hedges, Professors Thornton, Brayton, Burchard, Associate Professors Stone, Jensen, Assistant Professors Koenig, Mr. B. C. Jones, Mr. Harter, Mr. Bauer, Mr. Bishop, Mr. Harrington, Mr. Snuggs, Mr. Tidwell, Mr. Middleton, Mr. Potts.

CHEMISTRY

101, 102. General Inorganic Chemistry. (3-3).

Foundation principles of all chemical activity are fully discussed and demonstrated. Industrial applications of the more important chemical processes are briefly described, and organic chemistry is touched upon. This course must precede all other chemical studies. An elementary course in physics should precede or accompany this course.

Text: General Chemistry, McPherson and Henderson.

Laboratory Manual of Inorganic Chemistry and Elementary Qualitative Analysis, Hedges and Brayton.

General laboratory work, duplication of lecture experiments and simple tests of technical importance. The laboratory work of the last half of the second term deals with elementary qualitative analysis.

Laboratory fee, \$2.00 each term.

103, 104. Inorganic Chemistry. (3-4).

Same as course 101, 102, with the addition of one hour of laboratory practice per week.

Laboratory fee, \$2.00 each term.

(Required in X; elective in XIX).

205. Qualitative Analysis. (2-8).

This course includes both the theory and practice of fundamental analytical operations and is designed to enable the student to make a rapid and accurate analysis of substances of average complexity, and to understand the steps by which his results are obtained.

The laboratory work consists of a study of the properties and reactions of the more common basic and acidic radicals, their separation and identification from mixtures, the methods of getting solids into solution for analysis and the analysis of unknown substances. The number of substances analyzed varies with their nature and complexity.

Text: Qualitative Analysis, Steiglitz, Part 1, and Noyes, A. A.

Prerequisite: Chemistry 101, 102.

Laboratory fee, \$4.00.

(Required in VIII; elective in X).

206. Organic Chemistry. (3-2).

The subject is treated primarily as a pure science. An effort is made to select for illustrations such compounds as are of interest to the student of agriculture. Text: Organic Chemistry, Moore.

In the laboratory a study is made of the properties and typical reactions of the compounds discussed in the lectures.

Prerequisite: Chemistry 101, 102.

Laboratory fee, \$2.50.

(Required in I, VI, XI, XII, XVII, XXI).

207. Quantitative Analysis. (2-3).

A considerable portion of the class-room time is devoted to chemical calculations involved in the practice.

The laboratory work consists of a number of carefully selected experiments in quanitative analysis designed to typify operations of general application.

Prerequisite: Chemistry 101, 102.

Laboratory fee, \$3.00.

(Required in III, VI; elective in X).

208. Technical Analysis. (1-3).

This course is designed to give the student an insight into the methods employed in the analysis of materials connected with his profession and the application of the results obtained to practical problems. The work in the laboratory is discussed and explained, and its application to engineering problems emphasized.

Fuels, steels, cements, waters for industrial purposes, and industrial products commonly met with, are analyzed by rapid technical methods.

Prerequisite: Chemistry 207.

Laboratory fee, \$3.00.

(Required in III, VI; elective in X).

301, 302. Organic Chemistry. (3-4).

An introduction to the chemistry of the compounds of carbon. A study of the general principles, and of their application to various industrial processes.

The laboratory work serves as a basis for the course. The student here familiarizes himself with the reactions, properties and relations of typical organic compounds.

Prerequisite: Chemistry 101, 102.

Text: Organic Chemistry, Norris.

Laboratory fee, \$2.00 each term.

(Required in VIII; elective in X).

308. Dyeing. (2-4).

A study of the physical and chemical properties of textile fibers, dyes, dyestuffs, and mordants, together with the principles and appliances involved in the commercial coloring of textiles, especially of cotton and woolen goods.

Most of the principles discussed in the theory are tested in the laboratory, with especial attention to the production of dyes to meet particular commercial requirements.

Prerequisite: Chemistry 206. Laboratory fee, \$2.00. (Required in VI, XVII).

309. Agricultural Chemistry. (3-3).

A study of the fundamental chemical principles of agriculture; the application of chemistry; the chemical terms used in Experiment Station literature; the chemistry of plant substances, soils, irrigation water, fer-tillizers, insecticides, and fungicides.

The laboratory work consists of the chemical analysis of feeds, fertitilizers, insecticides, and fungicides.

Text: Chemistry of Agriculture, Stoddard. Laboratory Manual of Agricultural Chemistry, Hedges and Bryant. Prerequisite: Chemistry 206. Laboratory fee, \$3.00. (Required in I groups 2, 3, 4, 4a, 5, 7, 9, 11, 12).

312. Organic Analysis. (1-3).

Chemical examination of animal and vegetable oils with special reference to the detection of adulterants.

Text: Food Analysis, Woodman. Prerequisite: Chemistry 301. Laboratory fee, \$2.00. (Required in VIII).

314. Dairy Chemistry. (3-4).

Chemical analysis of milk, butter, cheese and other food products with an interpretation of the results.

Text: Food Analysis, Woodman. Prerequisite: Chemistry 206. Laboratory fee, \$2.00.

- 438. Seminar. (1-0). (Required in VIII).
- 441. Analysis of Water and Sewage. (1-4). Sanitary Analysis of Water and Sewage.
 Laboratory fee, \$2.00. (Required in IV group 3).

FOR GRADUATES.

- 501, 502. Advanced Agricultural Chemistry. (3-4). Same as course 309, with more advanced work. Laboratory fee, \$2.00 each term.
- 503, 504. Advanced Industrial Chemistry. (2-8). A study of industrial processes. Laboratory fee, \$2.00 each term.

- 507, 508. Advanced Organic Chemistry. (2-8). Preparation of organic compounds. Laboratory fee, \$2.00 each term.
- 509, 510. Cotton Seed Oil. (2-4). A study of cotton seed oil production and refining. Laboratory fee, \$2.00 each term.

571, 572. Special Topics in the Chemistry of Animal Nutrition. (2-6).

This course deals with vitamines, amio acids, mineral contents of feeds, productive protein, and productive energy as related to animal nutrition.

The laboratory work is under Agricultural Experiment Station conditions and includes analyses of feeds, experiments, and a thesis in the chemistry of animal nutrition. Dr. Fraps.

573, 574. Special topics in the Chemistry of Animal Nutrition. (2-6). A continuation of course 571, 572. Dr. Fraps.

575, 576. Special Topics in the Chemistry of Soils. (2-4).

This course includes the study of soil acidity, phosphoric acid, potash, and nitrogen related to crops, and similar topics by means of books, bulletins, original articles, and the preparation of the reports. The laboratory work accompanying the course will depend upon experience of the student. Dr. Fraps.

CHEMICAL ENGINEERING

The foundation for the work in chemical engineering is laid in the courses in chemistry already described. Chemistry and chemical engineering cover such a broad field that in the senior year students are advised to specialize in some branch of technical analysis such as its application to the cotton seed oil industry, petroleum technology, problems of sanitation, or the chemical control of a cement plant. All the work is supplemented by laboratory work. The chemical industries most highly developed in this State are inspected from time to time.

202. Elementary Quantitative Analysis. (2-8).

An introduction to the methods of exact analysis, as preliminary training for the more advanced courses. In the class room the practice and theory of the laboratory exercises are dealt with by lectures and recitations. Special attention is given to stoichiometry.

The laboratory work consists of a number of carefully selected experiments in quantitative analysis designed to typify operations of general application. The work is first gravimetric, then volumetric. In the early periods compounds of known composition and purity are analyzed, but later substances of industrial significance, whose percentage composition is known only to the instructor, are undertaken. Near the close of the term an analysis is made of a carbonate or silicate rock for the commonly determined constituents.

Texts: Quantitative Chemical Analysis, Smith; Calculations of Analytical Chemistry, Miller.

Prerequisite: Chemistry 205.

Laboratory fee, \$4.00.

(Required in VIII; elective in X).

301. Quantitative Analysis. (2-8).

Lectures, recitations and conferences dealing with technical methods of analysis, both rapid and exact. Before beginning an analysis the student is required to consult current literature and standard books of reference and present a written outline for criticism and suggestion.

The laboratory work comprises the analysis of limestone, fuels, lubricating oils, gas, boiler water, iron and steel, alloys, ores, paint, soap, sugar, asphalt and other materials of engineering and industrial importance.

Text: Quantitative Analysis, Mahan.

Prerequisite: Chemical Engineering 202.

Laboratory fee, \$4.00.

(Required in VIII) .

407. Industrial Chemistry. (3-0).

The principal applications of chemical process to commercial products, mostly organic in nature, such as gas manufacture, petroleum products, soaps, the starch and sugar industries, and the manufacture of paper, leather, and explosives; the manufacture of fertilizers, cement and ceramics.

Text: Industrial Chemistry, Benson. Prequisite: Chemistry 101, 102. (Required in 111).

408. Metallurgy of Iron and Steel. (2-0).

Metallurgy of iron and the manufacture of steel are considered in detail, with especial attention to the nature and location of valuable iron ore deposits, together with suitable fluxes; the nature and availability of proper fuels, together with the furnaces used; the constitution of the resulting pig iron and the manufacture of steel therefrom; the chemistry of the different kinds of steel and their adaptibility in engineering practice. Lectures and recitations.

Text: The Metallurgy of Iron and Steel, Stoughton.

Prerequisite: Chemistry 101, 102.

(Required in III).

409-3as Oil Port (3-6)

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411. Physical Chemistry. (1-8).

Physical explanation of chemical and allied phenomena, together with a mathematical exposition of the laws involved. Some of the subjects thus developed are the atomic theory, the periodic law, solubility, fusion, vaporization, the phase rule, dissociation in solution, chemical equilibrium and relative chemical activity. The course leads up to the consideration of the best research of today. Most of the theoretical conclusions deduced in the class room are confirmed in the laboratory in the following term. Lectures and recitations. Prerequisite: Chemistry 301, 302. (Required in VIII).

414. Sanitary Chemistry. (3-4).

Sanitary examination of food, milk, and milk products, and the sanitary analysis of water, including water treatment methods. Methods of purification of water, as the use of sand filters, coagulants, and algicides; sources of pollution of water and milk supplies and their relation to public health are discussed; problems common to the sanitary chemist and engineer.

Prerequisite: Chemistry 206 or 301, 302. Laboratory fee, \$4.00.

415. Industrial Chemistry. (3-6).

Lectures and conferences dealing with technical processes and their application to the industries and the construction and operation of industrial chemical plants. As the work of the student diverges individual conferences are arranged with each during which his particular problems are discussed. Reference is made to the library and current technical literature.

Text: Industrial Chemistry, Thorp. Prerequisite: Chemical Engineering 302. Laboratory fee, \$4.00. (Required in VIII).

416. Chemical Technology. (3-4).

The application of chemical theories and laws to industrial processes, organic chemical processes being emphasized, especially those dealing with the refining of petroleum, cotton seed oil, and sugar.

Prerequisite: Chemical Engineering 415. Laboratory fee, \$4.00.

(Required in VIII).

418. Physical Chemistry. (3-4).

Calibration of apparatus, determination of molecular weights, heats of reaction, laws of mass action and other related topics; experiments dealing with electrical phenomena. A few experiments illustrating electrochemical processes of commercial importance are performed.

Prerequisite: Chemistry 301, 302. Laboratory fee, \$4.00.

(Required in VIII).

422 animal and Vegetable Rile (3-4)

DEPARTMENTS OF CIVIL ENGINEERING

Professor Richey, Professors McNew, Munson, Associate Professor Mac-Lean, Assistant Professor Sandstedt, Mr. Wright, Mr. Galbraith, Mr. Morgan, Mr. Parkhill.

201. Plane Surveying. (3-4).

Chaining; the adjustment, use and care of compass, transit, level, plane table and hand instruments; measurement of angles; land surveys and computations; stadia, topographic, city and general surveying; observations for true meridian and latitude; plotting results.

Texts: Principles and Practice of Surveying, Vols. 1 and 2, Breed and Hosmer; Manual of Surveying, R. E. Davis.

Prerequisite: Mathematics 103.

Laboratory fee, 75 cents.

(Required in IV, XV).

202. Railroad Engineering. (3-3).

Outlining reconnoisance, preliminary, and location surveys, computing and staking out simple and compound curves; changes in alignment, and connecting curves; frogs and switches, turnouts, and transition curves.

Text: Field Manual for Railroad Engineers, Nagle.

Laboratory fee, 75 cents.

Prerequisite: Civil Engineering 201.

(Required in IV).

204. Analytical Mechanics. (3-0).

Fundamental principles; coplanar and non-coplanar forces; centroids; friction; moment of inertia.

Text: Applied Mechanics, Poorman.

Prerequisite: Mathematics 203; to be accompanied by Mathematics 204.

(Required in IV, IX group 2; XV).

206. Plane Surveying. (1-3).

Fundamental principles of surveying, use of transit and level in making layouts of buildings, running profile surveys, etc.

Text: Manual of Surveying, R. E. Davis.

Prerequisite: Mathematics 103.

Laboratory fee, 50 cents.

(Required in V, VI, IX group 2).

300. Field Practice. Summer following Sophomore Year; 3 weeks.

Adjustment of instruments: observations on Polaris and on the sun for azimuth; base line measurement; leveling; triangulation; survey of a portion of the College lands by transit and stadia, also by plane table; mapping; boundary survey and computation of area by latitudes and departures.

Full working days are spent in field and office during the entire course.

Reference text: Principles and Practice of Surveying, Vols. 1 and 2, Breed and Hosmer, together with additional notes by the instructors.

Prerequisite: Civil Engineering 201.

Laboratory fee, 75 cents.

(Required in IV, XV).

305. Mechanics of Materials. (3-0).

The resistance of materials and the mechanics of pipes, rivited joints, beams, columns, shafts, etc. Elastic curve and the deflection of beams, combined stresses, resilience, and impact.

Text: Resistance of Materials, Seely.

Prerequisite: Mathematics 204; Civil Engineering 204 or equivalent. (Required in III, IV, V, IX group 2; XV).

306. Masonry. (2-0).

Brick and stone masonry; cement and aggregates; theory of proportioning concrete; methods of mixing, placing, and caring for concrete; foundations; plain concrete structures, including dams, retaining walls, abutments, piers, culverts; forms and falsework.

Text: Design of Masonry Structures and Foundations, Williams. Prerequisite: Civil Engineering 305.

. (Required in IV).

311. Hydraulics. (3-2).

The laws governing the action of water at rest and in motion, as related to engineering problems; the flow of water in pressure mains, sewers, acqueducts, open channels, and in rivers; measurement of the flow of water by nozlzes, orifices, weirs and meters; estimates for water supply and water power; theory and efficiency of water wheels, motors, turbines, rams and pumps.

The practice consists of calibration of nozzles, orifices, water meters, weirs, pressure gauges; efficiency tests on impulse motors, hydraulic ram, and one, two and three-stage centrifugal pumps.

Text: Hydraulics, King and Wisler.

Prerequisite: Civil Engineering 204.

(Required in IV, XV; elective in VIII).

315. Strength of Materials Laboratory. (0-2).

Determination of the strength, ductility, modulus of elasticity, and other properties of engineering materials. Tests of timber, steel, cast iron, cement, etc., and reports showing results.

Prerequisite: Civil Engineering 305 or registration in Civil Engineering 305.

Laboratory fee, \$1.00.

(Required in III, IV, V, IX group 2, XV).

320. Topographic Drawing. (0-2).

Practice in making the common conventional signs in topographic drawing; map drawing; use of contour maps for choosing alignment, computing drainage areas, and making estimates of earthwork.

Prerequisite: Civil Engineering 201, 300. (Required in IV).

330a. Framed Structures. (3-3).

A modification of courses 340 and 342 with greater emphasis on graphical methods; stresses in beams, roof trusses, and mill building bents.

Practice, graphical and algebraic solutions for reactions and stresses. Text: Graphical Analysis, Wolfe. Prerequisite: Civil Engineering 305.

(Required in IX group 2).

331. Analytical Mechanics. (2-0).

A continuation of course 204; rectilinear and curvilinear motion; work and energy; power, momentum and impulse.

Text: Applied Mechanics, Poorman. Prerequisite: Civil Engineering 204. (Required in IV).

333. Railroad Surveying. (0-3).

Field and office work covering transition curves, turnouts, vertical curves, earthwork, overhaul, estimates conforming to I. C. C. regulations, track facilities for industrial plants.

Text: Field Manual for Railroad Engineers, Nagle.

Prerequisite: Civil Engineering 202.

Laboratory fee, 75 cents.

(Required in IV).

334. Contracts and Specifications. (2-0).

A brief study of the law of contracts as applied to engineering operations; the relation of the engineer to the owner and to the contractor; the necessity for, and preparation of, engineering specifications and the accompanying documents; general and specific clauses in specifications; illustrative examples.

Text: Elements of Specification Writing, Kirby; Contracts in Engineering, Tucker.

Prerequisite: Junior classification.

(Required in IV, XV).

340. Elementary Structural Analysis. (3-0).

Loads and reactions for simple structures; review of moment and shear in beams; influence lines for beams and trusses; algebraic and graphical methods for determining stresses in trusses; analysis of the rivited plate girder.

Text: Theory of Structures, Spofford.

Prerequisite: Civil Engineering 305. (Required in IV).

342. Structural Drafting. (0-6).

Application of graphical methods in solving reactions and stresses in simple structures; designing and detailing of a simple roof truss.

Prerequisite: Civil Engineering 340 or registration in that course. (Required in IV).

400. Field Practice. Summer Following Junior Year; 3 weeks.

Reconnoisance, preliminary, and location surveys for proposed railroad; survey for proposed highway. Full working days in the field, with rotation of duties in all the usual operations such as running out the preliminary line with transit, leveling, making land line surveys, drainage area surveys, taking topography, plotting preliminary notes, making paper location, running the located line, cross sectioning.

Reference texts: Design of Railway Location, Williams, Field Manual for Railroad Engineers, Nagle.

Laboratory fee, \$1.00. Prerequisite: Civil Engineering 333. (Required in IV).

401. Railroad and Highway Drafting. (0-3).

Office work, consisting in making a map, a profile, and an estimate for the line located in course 400.

(Required in IV groups 1, 2).

407. Roads and Pavements. (3-0).

A brief study of country roads and city pavements. Highway location, design, construction and maintenance; road laws, finances, organization and supervision briefly considered.

The text is supplemented by lectures, the use of bulletins, models and samples of materials.

Text: Construction of Roads and Pavements, Agg. Prerequisite: Civil Engineering 201, 204. (Required in IV groups 1, 2, 3).

411. Hydraulics. (3-0).

Same as course 311, except that no practice is given. (Required in III; elective in V).

413. Elements of Reinforced Concrete. (2-0).

Theory of stress distribution in plain and reinforced concrete beams; derivation of working formulas for rectangular reinforced beams and Tbeams; stress determination and elementary design of beams; theory, investigation, and design of reinforced columns; beams with double reinforcement.

Text: Design of Concrete Structures, Urquhart and O'Rourke. Prerequisite: Civil Engineering 305.

(Required in IV, IX group 2).

CIVIL ENGINEERING

414. Reinforced Concrete Design. (1-5).

A study of the design of various types of reinforced concrete structures, such as buildings, bridges, retaining walls, culverts. Practice is had in the making of simple designs and working drawings.

Text: Same as in course 413.

Prerequisite: Civil Engineering 413.

(Required in IV groups 1, 2).

417, 418. Highway Materials. (2-3, 1-3).

Origin, production, specifications, and tests of bituminous and nonbituminous materials and mixtures used in the construction and maintenance of roads and pavements. Bituminous materials in the first term and non-bituminous materials in the second term.

Text: Laboratory Manual of Bituminous Materials, Hubbard; Sampling and Testing of Highway Materials, Barton and Doane.

Prerequisite: Senior classification in engineering.

Laboratory fee, \$2.00 each term.

(Required in IV group 2).

423. Bridge Design. (2-4).

Types of highway bridges; calculation of stresses; design of bridge floors; beam bridges; plate girders; high and low truss bridges; bridge details.

The practice consists chiefly in making design computations and general drawings for a low rivited truss bridge in accordance with a given set of specifications.

Text: Design of Highway Bridges, Ketchum.

Prerequisite: Civil Engineering 340, 342.

(Required in IV group 2).

434. Irrigating and Drainage. (3-0).

Determination of the quanity of water available collection and storage works; design, loca is n and construction of distribution systems; economic use and duty of water in irrigation; water rights. Drainage of overflowed lands and flood control measures are presented briefly by lectures.

Text: Irrigation Engineering, Wilson and Davis.

Prerequisite: Civil Engineering 311.

(Elective in IV groups 1, 2).

443. Materials of Construction. (1-3).

A laboratory study of the suitability of various materials of engineering, including brick, stone, sand gravel, cement, mortars, concrete, and bituminous paving materials.

Prerequisite: Civil Engineering 407 or registration in that course.

Laboratory fee, \$2.00.

(Required in IV groups 1, 3).

446. Highway Administration. (3-0).

Study of highway laws, the administration of street and highway

improvements, and the procedure followed in planning and executing municipal street improvements.

Text: To be assigned.

Prerequisite: Civil Engineering 407.

(Elective in IV groups 1, 2).

448. Engineering Economics. (2-2).

Study of first cost and operating costs, business units and business statistics; valuation; cost estimating; engineering reports.

Text: Engineering Economics, Fish.

Prerequisite: Senior classification, engineering courses. (Required in IV groups 1, 2).

450. Reinforced Concrete Construction. (1-3) An abbreviation of course 414. Text: Same as in course 414. Prerequisite: Civil Engineering 413. (Required in IV group 3).

451. Analysis of Structures. (3-0).

Continuation of the work begun in course 340; stresses in trusses with inclined chords and subdivided panels; study of working stresses, tension and compression members, rivited joints; deflection of trusses; continuous frames.

Text: Modern Framed Structures, Vol. III, Johnson, Bryan, and Turneaure.

Prerequisite: Civil Engineering 340. (Required in IV group 1).

452. Indeterminate Structures. (3-0).

An introduction to the various methods of analyzing indeterminate structures.

Text: To be assigned.

Prerequisite: Civil Engineering 451 or 423, with grade not less than B. (Elective in IV groups 1, 2).

453, 454. Structural Design. (0-6, 0-4).

Practice in the design and detailing of steel structures, including a railway plate girder, a mill building bent, and a rivited highway bridge.

Text: Structural Engineers' Handbook, Ketchum.

Prerequisite: Civil Engineering 451, or registration in that course. (Required in IV group 1).

FOR GRADUATES.

521, 522. Advanced Stress Analysis. (3-2).

Stresses in statically indeterminate frames; deflections; secondary stresses; elastic arches; cantilever, continous, and swing bridges.

523, 524. Structural Design. (1-6).

Reinforced concrete arch bridges; concrete buildings; steel buildings.

DAIRY HUSBANDRY

525, 526. Highway Construction and Materials. (2-4).

Highway design and construction, including location, drainage, foundations, types, costs. Laboratory and field investigations of highway materials and pavement mixtures.

527, 528. Hydraulic Engineering. (4-0).

Hydrology, water power development, flood control.

529, 530. Railway Engineering. (2-4).

Railway expenditures; valuation; operating costs; locomotive performance; speed-distance and time-distance curves; virtual profile; betterment surveys including grade revision, change of alignment, etc.

541-542 Recearch _ (0-8)

DEPARTMENT OF DAIRY HUSBANDRY

Professor Grout, Professors Clutter, Darnell.

202. Dairying. (2-2).

The secretion of milk; composition of milk and its products; use and application of the lactometer; methods of cream raising and separation; system of making farm butter and ice cream.

Text: Milk and Its Products, Wing.

Laboratory fee, 75 cents.

(Required in I, XII, XIV group 3; XV, XVI, XXI; elective in XIV).

69

301. Market Milk. (2-2).

Food value of milk; handling and sale of sanitary milk; city milk inspection.

Text: Market Milk, Kelly and Clement. Prerequisite: Dairy Husbandry 202. Laboratory fee, \$1.00. (Required in I group 7; XI).

303. Advanced Dairy Cattle Judging. (0-2). A study of comparative judging of dairy cattle. References assigned.
Prerequisite: Dairy Husbandry 202. (Required in I group 7).

306. Butter Making and Factory Management. (3-2).

Types of creameries; raw product; grading; pasteurization; use of commercial starters; ripening; churning; salting and working butter; explanation of various physical phenomena in making, packing, and storing butter. Creamery location and plans; business accounting as applied to management in various types of creameries.

Text: The Butter Industry, Hunziker. Prerequisite: Dairy Husbandry 202. Laboratory fee, \$1.00.

(Required in I group 7).

404. Seminar. (2-0).

Review of dairy literature; oral and written reports on selected research bulletins.

Prerequisite: Dairy Husbandry 202, 301.

406. Dairy Cattle Feeding and Management. (3-2). Breeding, feeding, care and management of dairy cattle. Text: Dairy Cattle and Milk Production, Eckles. Prerequisite: Animal Husbandry 303, Genetics 301. Laboratory fee, 75 cents.

407. Ice Cream Making and Refrigeration. (2-2).

Mixing and freezing ice cream; sherberts and other frozen products, and the physical principles involved; types of freezers; flavoring materials; fillers; binders; ice cream standards; the theory and practice of artificial refrigeration and its use in the ice cream plant.

Lectures: references assigned.

Prerequisite: Dairy Husbandry 202.

409. Advanced Study of Dairy Breeds. (1-4).

Historical study of prominent families and individuals of the major dairy breeds.

Prerequisite: Dairy Husbandry 202, Genetics 301.

(Required in I group 7),

501, 502. Advanced Dairy Production. (2-4). An advanced study of general production problems.

503, 504. Advanced Dairy Manufactures. (2-4).

An advanced study of general manufacturing problems.

FOR STUDENTS IN SHORT COURSES.

23. Farm Dairying. (3-2).

An elementary course in selecting and handling dairy cattle, rearing dairy calves; methods of milking; testing milk; care and handling milk and dairy products on the farm.

Text: Farm Dairying, C. Larsen.

Laboratory fee, \$1.00.

(Required in C).

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DEPARTMENT OF DRAWING

Professor A. Mitchell, Assistant Professor Watt, Mr. Simonds, Mr. De Beaumont, Mr. Davis, Mr. Baccus.

101. Mechanical Drawing. (0-2).

Care and use of drawing instruments, simple exercises in the use of drawing instruments, free-hand lettering, geometrical construction, construction of plane curves, orthographic and axonometric projections.

Text: Mechanical Drawing, Giesecke and Mitchell.

(Required in III, IV, V, VI, VIII, XIII, XV).

 103. Descriptive Geometry. (3-0).
 Problems relating to points, lines, planes and solids.
 Text: Descriptive Geometry, Giesecke and Mitchell. (Required in III, IV, V, VI, VIII, XXII).

103a. Descriptive Geometry. (2-0). A modification of course 103. (Required in IX, XX).

104. Descriptive Geometry. (2-2).

Problems relating to the intersection of planes and solids, intersections of solids, development of surfaces, shades and shadows, linear perspective; representation of objects in the first and third angles.

Text: Theory, Descriptive Geometry, Giesecke and Mitchell. Practice, Instrumental Exercises, Descriptive Geometry, Mitchell.

Prerequisite: Drawing 103.

(Required in III, IV, V, VI, VIII, XXII).

108. Mechanical Drawing. (0-2).

Freehand lettering, conventions, section lining, threads, bolts, rivets, helixes, dimensioning drawings, principles of working drawings.

Text: Mechanical Drawing, Giesecke and Mitchell. Prerequisite: Drawing 101. (Required in III, IV, V, VI, VIII, XIII, XV).

123, 124. Mechanical Drawing. (0-4).

Drawing 123 is a combination of courses 101 and 108. Drawing 124 is a combination of courses 201 and 202.

Text: Mechanical Drawing, Giesecke and Mitchell. Reference Text: Engineering Drawing, French. (Required in XXII).

201, 202. Mechanical Drawing. (0-2).

A continuation of course 108 including elementary parts of machines and engineering structures; details and assemblages; Patent Office drawings, tracing, blue printing.

The course is varied to meet the practical needs of students in the different engineering departments.

Text: Mechanical Drawing, Giesecke and Mitchell. Reference Text: Engineering Drawing, French. Prerequisite: Drawing 108. (Required in IV, V, VI, VIII, XIII).

219, 220. Freehand Drawing. (0-2).

Drawing from specimens of plants and animal life and from apparatus used in scientific work.

(Required in VIII; elective in X).

DEPARTMENT OF ECONOMICS

Professor Clark, Professor Davison, Mr. Vaughn.

203, 204. Principles of Economics. (3-0).

A general course in the fundamental principles of economics, including the theory of economic activities concerning production, distribution and consumption; the practical economic problems of money, credit and banking, foreign exchange, tariff, transportation, trusts, insurance, taxation.

Text: Elementary Economics, Fairchild, Furniss and Buck.

(Required in X, XIII, XIV, XVIII, XIX, XXII).

سر 309. Labor Problems. (3-0).

This course deals with theories of wages, development of trade unions and labor unions, proposals for the solution of labor problems, labor legislation, and other problems growing out of modern industrial development.

Prerequisite: Economics 203, 204 or its equivalent. Text: To be selected.

311. Money and Banking. (3-0).

The evolution of money, the various forms of credit, the history of banking institutions, banking in other countries, the Federal Reserve System, and current monetary and banking problems.

Text: Westerfield's Banking Principles and Practice. Prerequisite: Economics 204, 305, 306, or 403. (Required in XIV group 4; XVIII).

315. Economics of Insurance. (3-0).

An introductory course dealing with the historical development and general economic aspects of the insurance business. Special attention is given to property and life insurance.

ECONOMICS

316. Business Law. (3-0).

Such subjects as the following are studied; the nature and scope of law, contracts, sales agency, negotiable instruments, employment, personal property, real property, wills and inheritances, surety, bankruptcy. Supplementary studies of Texas laws, and of court decisions.

Text: Business Law, Conynton and Bergh; Clark's Outlines.

(Required in VI, VIII, XIV, XVIII, XX).

403. Principles of Economics. (3-0).

This is a general course in the fundamental principles of economics. It deals with the theory of economic activities concerning production, distribution and consumption, and the practical economic problems of money, credit and banking, foreign exchange, tariff, transportation, taxation, trusts, insurance. The same ground is covered as in course 203, 204, but in a more compact way.

Texts: Principles of Economics, Seager.

Questions on the Principles of Economics, Day and Davis.

(Required in I groups 2, 3, 4, 4a, 5, 7, 9, 10, 11, 12; 111, 1V groups 1, 2, 3; V, VI, VIII, IX groups 1, 2; XII, XV, XVI, XX, XXI).

408. Corporation Finance. (3-0).

The common forms of business organization, with special attention to corporations; advantages and disadvantages of incorporation, formation and organization of corporations, capital stock and bonds, legal status of corporations, bankruptcy and reorganization.

Text: The Financial Policy of Corporations, Dewing: (Elective in III, IV group 2; V, VI, VIII, IX groups 1, 2).

410. Foreign Trade and Exchange. (3-0).

This course treats of the principles of international commerce, methods of conducting foreign trade, and the theory and practice of foreign exchange.

Prerequisite: Economics 403 or the equivalent. Text to be selected.

413, 414. Advanced Economic Theory. (3-0).

This course is based on two assumptions, namely, (1) the nature of economic theory is such that maturity of judgment is essential to its comprehension, and (2) contact with practical economic problems is highly valuable in grasping economic concepts. The advanced course in economic theory, therefore, covers the same ground as that covered in other courses in economic principles but covers it more exhaustively. The course is open only to students who have had Economics 203, 204 or its equivalent, and in addition at least one course in applied economics.

Text: To be selected.

(Required in XIV group 2).

FOR GRADUATES.

501, 502. History of Economic Doctrines. (3-0).

The purpose of this course is to study in detail, beginning with the Physiocrats, the growth of the science of economics. A careful study is made of the various schools of economists, and an analysis is made of such fundamental concepts as production, value, capital, interest, profits, etc., as they have appeared from time to time in the writings of the leading economists. Gide and Rist's History of Economic Doctrines serves as a guide into these authorities.

503, 504. Advanced Economic Theory. (3-0).

This is a comparative study of the doctrines as they appear in modern economic literature. The purpose is, so far as possible, to associate the modern economists with any of the older schools to which they may logically belong or to give them distinctive positions to which their writings may entitle them. A critical study is made of Gide's Political Economy with the view of forming a back ground in accepted doctrines as a basis of the comparative estimates made.

DEPARTMENT OF ELECTRICAL ENGINEERING

Professor Bolton, Professor M. C. Hughes, Associate Professors Yates, Markle, Assistant Professors Fouraker, Rode, Krausnick, Mr. Ward, Mr. Kerns, Mr. Palmer.

201. Electricity and Magnetism. (4-4).

Lectures, recitations and problems in electricity and magnetism. A laboratory investigation of the phenomena studied in the text-book. Prerequisite: Mathematics 102, 103, 104. Laboratory fee, 75 cents. (Required in V, XXII).

202. Elementary Electrical Engineering. (2-4).

Simple electric circuits, primary and secondary batteries, battery charging, simple telephone cricuits, the magnetic circuit, inductance, and capacity.

A short time is devoted to the study of the National Electric Code, and of methods of wiring.

The practice includes the accurate measurement of various electrical quantities, such as resistance, inductance, capacity, and the effect of temperature, position, etc., on these quantities; a study of the various types of batteries to determine their adaptability to different uses; calibration and repair of instruments, such as ammeters, voltmeters, and watt-meters; tests of the magnetic properties of iron.

Prerequisite: Electrical Engineering 201, Mathematics 104. Laboratory fee, 75 cents. (Required in V). 204. Electric Wiring and General Repair. (0-6).

Practice in electric wiring and the repair of simple electric appliances. Laboratory fee, \$1.50. Prerequisite: Electrical Engineering 201. (Required in XXII).

301. Direct Currents. (4-6).

A study of the theory, design, and applications of direct current machinery.

The practice includes the operation of dynamos and motors, the determination of characteristics and the measurement and calculation of losses, efficiencies and regulation.

Prerequisite: Electrical Engineering 202, Mathematics 204. Laboratory fee, \$1.50. (Required in V).

302. Alternating Currents. (5-6).

The principles of alternating currents, including the relations of voltage, current, resistance, inductance and capacity.

An experimental study of the effect of resistance, reactance, and capacity on alternating current circuits; the determination of wave shapes; and tests of some of the simpler types of alternating current machines.

Prerequisite: Electrical Engineering 301, Mathematics 204. Laboratory fee, \$1.50. (Required in V).

305. Electrical Machinery. (3-3).

A general study of dynamos, motors and transformers of the types most commonly met with in general engineering practice. The course is abbreviated so that only the more fundamental principles are studied.

The practice is designed to give the general engineering student a slight degree of familarity with the operation and the more important characteristics of both direct current and alternating current machines.

Prerequisite: Physics 204, Mathematics 204.

Laboratory fee, \$1.00.

(Required in IV, VIII, XV).

307, 308. Electrical Machinery. (3-0, 2-3).

The fundamental principles of direct and alternating current machinery, and the operating characteristics of electrical machinery usually installed in power plants and electrically operated industrial enterprises.

The practice includes the operation of the principal types of electric motors, generators and transformers and the study of their operating characteristics.

Prerequisite: Physics 204, Mathematics 204.

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Laboratory fee, \$1.00, second term.

(Required in III, VI).

309, 310. Communication Engineering. (2-0, 2-2).

The principles of electric communication engineering, including the study of telegraph circuits, repeaters, multiplex and printing telegraphy; the principles of automatic telephony; and basic principles of radio engineering, including the vacuum tube.

The practice includes an experimental study of circuits and instruments covered in the course, emphasizing fundamental principles rather than mechanical details of modern practice.

Prerequisite: Electrical Engineering 202. Must be accompanied by Electrical Engineering 301, 302.

Laboratory fee, \$1.00, second term. (Elective in V).

401, 402. Alternating Current Machinery. (4-6).

A graphical and mathematical study of alternating current machinery, including generators, transformers, motors and converters.

The experimental determination of the characteristics of various types of alternating current machines.

Text: Principles of Alternating Current Machinery, Lawrence.

Laboratory fee, \$1.50, each term.

Prerequisite: Electrical Engineering 302 or 308.

(Required in V).

405, 406. Electric Distribution and Transmission. (3-0).

Lectures and recitations on the transmission and distribution of power by electrical methods, including the design and cost estimate of several transmission and distribution systems.

Prerequisite: Electrical Engineering 401. (Elective in V).

409, 410. Advanced Communication Engineering. (2-7, 1-3).

Advanced telephone, telegraph and radio engineering including a more advanced study of vacuum tubes and their application in radio receiving and transmitting circuits, and in carrier current telegraphy and telephony.

The laboratory study of circuits and instruments studied in the course emphasizes fundamental principles rather than the mechanical details of modern practice.

Prerequisite: Electrical Engineering 309, 310.

Laboratory fee, 75 cents each term.

(Elective in V).

414. Radio Communication. (3-0).

A study of radio receiving and sending equipment, and of vacuum tubes as applied to radio circuits and other uses.

Prerequisite: Electrical Engineering 302. (Elective in V).

416. Motor Applications. (3-0).

The determination of the proper sizes and types of motors to be applied to various industrial loads. Special emphasis is laid on the prelim-

inary study of duty cycle and numerical calculation of starting duty and motor ratings. The study of industrial controllers.

Prerequisite: Electrical Engineering 401.

(Elective in V).

425, 426. Illumination Engineering. (2-2).

The principles of illumination; the design of lighting systems for buildings of various types.

Tests of lighting units and of complete systems both for interior and exterior use.

Prerequisite: Electrical Engineering 302.

Laboratory fee, 50 cents each term.

(Elective in V).

427, 428. Telephone Engineering. (2-2).

A study of the engineering principles used in telephone communication including transmission problems, inductive interference, transpositions, phantom circuits, repeaters and other modern developments in telephone engineering.

Prerequisite: Electrical Engineering 301, 305, or 307. (Elective in V).

431. Engineering Administration. (2-0).

A brief study of problems of engineering administration, including the law of contracts, the preparation of engineering specifications, records to be kept in engineering construction and operation, systems of organizations required.

Must be accompanied or preceded by Economics 403.

(Required in V).

432. Public Utility Problems. (3-0).

Lectures and recitations on the problems of operation of public utilities, with particular attention to methods of organization, the fixing of rates, and the economic features of new lines and extensions.

Prerequisite: Electrical Engineering 401, 431.

(Required in V).

436. Wiring and Lighting. (3-0).

(a) A study of the fundamentals of interior wiring.

(b) The principles of artificial illumination with a study of modern types of illuminants.

(Required in IX group 2).

438. Theory of Alternating Currents. (3-0).

A mathematical treatment of the theory of alternating currents. Use is made of both calculus and differential equations, and the course includes a study of such differential equations and hyberbolic functions as have greatest application in electrical engineering.

Prerequisite: Electrical Engineering 401.

(Elective in V).

п 4

FOR GRADUATES.

501, 502. Advanced Alternating Currents. (2-4).

The theory of transient phenomena; polyphase circuits; the study of transients with the oscillograph.

Laboratory fee, \$2.50, each term.

503. Electrical Machine Design. (1-4).

The design of electrical machines and the predetermination of their characteristics.

504. Electrical Plant Design. (2-4).

The design of power plants with especial emphasis on the electrical machinery.

505, 506. General Electrical Engineering. (3-0).

The application of electrical machinery to various industrial uses;

other problems met in the electrical field. 507-508 Advanced Altimating Current Machinsry (2.4)

DEPARTMENT OF ENGLISH

Professor Summey, Professors W. H. Thomas, Cofer, Associate Professors Gunter, Mayo, Spriggs, Assistant Professors S. S. Morgan, Spahr, Mr. Key, Mr. Stephenson, Mr. Abbott, Mr. Chapman, Mr. Plunkett.

103, 104. Rhetoric and Composition. (3-0).

Composition both oral and written, and reading from standard and current literature.

105, 106. English Composition and Contemporary Civilization. (4-0).

The same as courses 103 and 104, except for the addition of lectures on Contemporary Civilization, the material of which is used as subject matter for composition.

(Required in III, IV, V, VI, VIII, IX, XVIII, XIX).

105a, 106a. Lectures on Contemporary Civilization. (1-0). Lectures on various phases of modern civilization; parallel readings.

203, 204. Composition and Literature. (2-0).

Composition oral and written; readings from standard and current literature, especially the essay and the novel.

Prerequisite: English 103, 104, or 105, 106.

(Required in I, III, IV, V, VI, VIII, IX groups 1, 2; XI, XIV, XV, XVIII, XX, XXI, XXII).

231, 232, English Literature. (3-0).

A survey of English literature from Chaucer to the late eighteenth century, with parallel readings and written reports; special attention given

ENGLISH

to the main currents of English thought as reflected in the literature. Prerequisite: English 103, 104, or 105, 106.

(Required in X, XII, XVI, XIX).

303. Argumentation. (2-0).

A study of the logical and rhetorical essentials of argument, with practice in outlining, writing, discussion, and parliamentary procedure; parallel readings.

Prerequisite: English 203, 204, or 231, 232.

(Required, first term, in III, IV, V, IX groups 1, 2; second term, in I groups 2, 3, 4, 4a, 5, 7, 8, 9, 10, 11, 12; VI, VIII, XI, XIV groups 1 2, 3, 4; XV, XVI, XX, XXI).

309, 310. The English Language. (2-0).

A study of the history, vocabulary, syntax, and sounds of the English language, with a view to better understanding and command of the mother tongue.

Prerequisite: English 203, 204, or 231, 232.

321, 322. Nineteenth Century Literature. (3-0).

A study of the intellectual tendencies of the last century in England, as reflected in the poetry, essays, and novels of the period, including the work of Wordsworth, Shelley, Byron, Keats, Tennyson, Browning, Arnold, and Swinburne among the poets, Carlyle and Ruskin among the essayists, and the novels of Scott, Austen, Dickens, Thackeray, Eliot, and Hardy.

Prerequisite: English 231, 232.

(Required in X, XIX; elective in III, IV, V, VI, VIII, IX groups 1, 2).

401. Public Speaking. (2-0).

Practice in the use of the voice, in public discussion, in the planning and delivery of speeches for special occasions; conferences with the instructor required.

Prerequisite: English 203, 204, or 231, 232.

(Required, first term, in V, VIII, X, XII, XIII, XIV groups 1, 2, 3, 4; XV, XVI, XIX, XX; second term, in I groups 2, 3, 4, 4a, 5, 7, 8, 9, 10, 11, 12; III groups 1, 2, 3; IV groups 1, 2, 3; VI, IX groups 1, 2; XI, XXI, XXII.)

403, 404. Public Speaking and Lecturing. (3-0).

Practice in the use of the voice, in discussion, and in the preparation and delivery of speeches, on a somewhat larger scale than is possible in the two-hour course 401; composition and delivery of speeches on popular scientific and industrial topics; practice in the management of public gatherings; conferences with the instructor required.

Prerequisite: English 203, 204, or 231, 232.

(Elective in III, IV, V, VI, VIII, IX groups 1, 2).

413, 414. Contemporary Literature. (2-0).

A study of the most significant British and American novelists, poets, and dramatists from about 1890 to the present, with lectures on the social, political, economic, and intellectual background. Among the authors studied are Bernard Shaw, Samuel Butler, John Galsworthy, Rudyard Kipling, H. G. Wells, Sinclair Lewis, Joseph Conrad, Eugene O'Neill, and Edna St. Vincent Millay.

Prerequisite: English 231, 232, or 203, 204. (Required in X, XIX).

ENTOMOLOGY

Professor Bilsing, Associate Professor Fletcher, Assistant Professor Little.

201. General Entomology. (2-2).

The systematic position of the various insects; the relation of the anatomy of insects to control measures; the life histories of the more common insects; methods of control for injurious forms.

Text: Applied Entomology, Fernald.

Laboratory fee, 75 cents.

(Required in I, XI, XVI, XX, XXI; elective inX).

202. Economic Entomology. (2-2).

The life histories, habits and control methods of the common injurious insects are considered in this course. The control of insect outbreaks by the use of parasites and entomogenous fungi is considered. Special emphasis is given to insecticides, spraying and dusting machinery.

Text: Pests of Farm, Garden and Orchard, Sanderson and Peairs. Laboratory fee, 50 cents.

(Required in X11; elective in X).

208. Animal Parasites. (2-2).

This course consists of a study of insects and other anthropods which are parasitic upon domestic animals or which are concerned in the transmission of diseases of live stock. Methods of eradication and control are given due emphasis.

Text: Medical and Veterinary Entomology, Herms. Prerequisite: Entomology 201. Laboratory fee, 75 cents. (Required in XI, XXI).

301, 302. Systematic Entomology. (2-4).

A thorough, systematic study of the various orders of insects is made in this course. The student has free access to the entomological library, which contains bound volumes of standard publications on entomology, keys, etc. The student also has access to a considerable insect collection for identification purposes.

Text: An Introduction to Entomology, Comstock.

(Required in I group 8).

ENTOMOLOGY

304. Apiculture (Elementary.) (2-2).

This is an elementary course in beekeeping open to all four-year students. The course is arranged so as to give the student a working knowledge of beekeeping which will prepare him for conducting a small apiary in connection with general farm work or for entering commercial beekeeping as a vocation. The course includes a study of the life history of the honey bee, methods of making hives and equipment, and the control of bee diseases. The department is equipped with an apiary, hives, tools, wax presses, automatic extractors, and the standard equipment used in beekeeping.

Text: Productive Beekeeping, Pellet. Laboratory fee, 50 cents. i

307, 308. Apiculture. (3-2).

This course is intended for those who wish to make a special study of beekeeping and should be followed by Entomology 408. A study is made of the biology of the honey bee. Working over out-of-date equipment, extracting honey and the preparation of wax are given due attention. Some time is given to studying the various methods of wintering, and swarm control. Special attention is given to the honey plants and the areas most suited to beekeeping.

Text: Beekeeping, Philips.

Laboratory fee, 75 cents each term.

312. Medical Entomology. (3-2).

A study of the life histories, habits, and control methods of insects which are directly concerned in the transmission of human diseases such as yellow fever, malarial fever, typhus fever, bubonic plague, etc.

Text: Medical Entomology, Johannsen and Riley.

Laboratory fee, \$1.00.

Prerequisite: Entomology 201.

(Elective in X).

401. Advanced Economic Entomology. (2-4).

This course is arranged for students intending to follow entomoligical work. Particular attention is given to economic problems, methods of entomological research, and field methods of insect investigation and control. This course also embraces insectary methods of breeding insects and studies of insect parasitism.

Prerequisite: Entomology 201.

Laboratory fee, \$1.00.

(Required in I group 8).

402. Advanced Economic Entomology. (2-4).

A continuation of Entomology 401. In addition to a field and laboratory study of life histories which has been carried on in cours 301, the student takes up a detailed study of insecticides. Various types of spraying machinery, dusting machines, and fumigating apparatus are discussed.

Laboratory fee, \$1.00.

(Required in I group 8).

403. Entomological Literature. (3-2).

The most important works on the classification of insects; publications of various entomologists; a review of the most important bulletins published by the United States Department of Agriculture and the various State Experiment Stations.

405. Fruit Insects. (2-2).

A detailed study of the life history, habits and control of the insect pests of fruit and truck crops with special attention to control methods adapted to Texas conditions, and to the value of parasites and orchard management in the control of insect pests.

Text: Fruit Insects, Slugerland and Crosby.

Laboratory fee, 75 cents.

408. Apiculture, Queen Rearing. (1-4).

The theory of the various methods of queen rearing; the methods of shipping combless packages of bees; the management of apiaries.

Texts: Practical Queen Rearing, Pellet, Queen Rearing Simplified, Smith.

411. Cotton Insects. (2-2).

A study of the insects affecting the cotton plant. Life histories, structural characteristics and classification are stressed. Some time is devoted to dusting and spraying machinery and control by sterilization.

Laboratory fee, 75 cents.

(Required in I group 4a).

FOR GRADUATES.

501, 502. Systematic Entomology. (2-4).

A taxonomic study is made of the orders, families and sub groups of the class Hexopoda. The student is required to make a special study of some particular group.

Laboratory fee, \$2.00 each term.

503, 504. Cotton Insects. (2-4).

A detailed study of the life histories of the most important insects affecting cotton, together with a thorough survey of the literature on this subject. The use of cultural methods, dusting and sterlizing machinery and insecticides will be considered.

Laboratory fee, \$2.00 each term.

505, 506. Advanced Apiculture. (2-4).

A problem in apiary management or in the study of one or more of the diseases affecting bees; grading and marketing honey, foul brood laws, and methods of eradicating bee diseases.

507, 508. Economic Entomology. (2-4).

In this course a detailed study is made of the most important economic pests. A comparison is made of the structure of insects belonging to the same group which attack our more important crops. Cultural

methods, trap crops, insecticides, and fumigation are discussed in connection with these insects.

Laboratory fee, \$2.00 each term.

509, 510. Microtechnique. (2-4).

In this course a study is made of insect tissue; methods of making microscopic slides, making sections and staining tissues.

511, 512. Research Entomology. (2-4).

A study of the distribution of insects and the ecological relationship to their environment.

Prerequisite: Taxonomic work. Laboratory fee, \$2.00 each term.

FOR STUDENTS IN SHORT COURSES.

22. Elementary Economic Entomology. (2-2).

The control of our most common pests; the commoner insecticides; the most common pests of cotton. wheat, oats, corn, fruits, and live stock. Laboratory fee, 50 cents.

(Required in C).

56. Elementary Apiculture. (2-2).

A study of the habits of the honey bee, behavior in swarming and methods of increase; a study of the methods of manipulation, transfer and swarm control.

Laboratory fee, 50 cents. (Elective in C).

DEPARTMENT OF FARM AND RANCH MANAGEMENT

Professor McMillan

301. Farm Records and Cost Analysis. (1-4).

Objectives of farm record keeping; desirable and useless types of farm records, taking farm inventories; property valuation; preparation of financial statements; farm inventory analysis; measures of farm profits; labor records; live stock and crop accounts; cost of production studies with intensive and extensive types of enterprises; complete farm cost system; the use of complete cost data in planning the farm business.

Text: To be selected.

Prerequisite: Twelve hours of credit in technical Agriculture. (Required in XIV group 3).

401, 402. Farm Management. (3-2).

The relation of farm management to agricultural and economic sciences; farming as a business; farm profits; factors limiting farm profits; types of farming; agricultural regions; farm organization; safe farming and live stock; the soil factor; labor distribution; farm capital; choice of equipment; size and shape of fields; farm buildings and improvements; cropping systems; farm labor; getting started in farming; choosing a farm; leases and tenants; duties and responsibilities of a farm manager.

Lectures, recitations, and assigned readings; laboratory work on farm problems; two or more field trips to near-by farms.

Text: To be selected.

Prerequisite: Twenty hours of credit in technical Agriculture. (Required in I groups 2, 3, 4, 4a, 5, 7; XII, XIV group 3).

404. Field Studies in Farm Management. (1-6).

Methods of analyzing the agriculture of a farming region; finding the facts as to its most outstanding advantages and deficiencies; building a constructive long-time program that will fit the needs of selected farms within the area.

Detailed studies are made of the farm resources, farm organization and practice of one or more important agricultural regions of Texas. Students who take this course should be prepared to spend several consecutive days doing field survey work.

Prerequisite: Farm and Ranch Management 301, 401.

DEPARTMENT OF FORESTRY

Professor Siecke

302. Farm Forestry. (2-2).

Economic factors affecting farm forestry; kinds of farm forestry needed; tree physiology; kinds of trees, proper planting methods for windbreaks and shelterbelts in West Texas; management of farm forests for timber production in East Texas; including proper cutting methods, natural and artificial regeneration, utilization and marketing of forest products, scaling, estimating standing timber, forest bookkeeping, protection from pest enemies.

Text: The Farm Woodlot, Cheney and Wentling.

304. Economic Forestry. (2-0).

Brief history of forestry from its European beginning to the present time; economics of forestry; relation of forests to local and general soil, moisture, light, climatic conditions; forest regions of North America, their past, present and probable future status; forest land utilization; forest fires and other forest enemies; extent of forestry practice in the United States today, federal, State, and private; probable future of forestry.

Text: Elements of Forestry, Moon and Brown.

DEPARTMENT OF GENETICS

Professor Humbert, Assistant Professor Godby, Mr. Chisholm.

301. Genetics. (3-2).

Variation; measurement of variation; heritable differences; inheritance of acquired characters; mendelism; the pure line and selection; factor hypothesis; blending inheritance; carriers of heritage; architecture of germplasm; somatogenesis; determination of sex.

Text: Principles of Genetics, Sinnott and Dunn. Prerequisite: Biology 101, 102. Laboratory fee, \$1.00. (Required in I groups 4, 4a, 5, 7, 9, 11; XI, XII, XXI). (To be repeated in second term).

302. Genetics. (3-2).

A continuation of course 301 for students who do not take Animal Breeding or Plant Breeding.

Texts: Inbreeding and Outbreeding, East and Jones; Genetics and Eugenics, Castle.

Prerequisite: Genetics 301.

Laboratory fee, 50 cents.

304. Plant Breeding. (3-2).

Improvement of field, forage and horticultural crops. Text: Breeding Crop Plants, Hayes and Garber. Prerequisite: Genetics 301. Laboratory fee, 50 cents. (Required in I groups 4, 4a, 9).

306. Animal Breeding. (2-2).

Genetics as applied to the problems of the animal breeder; reproduction; fertility; sterility; inbreeding; outbreeding; selection.

Text: Animal Breeding and Improvement, Rice.

Prerequisite: Genetics 301. Laboratory fee, 50 cents. (Required in I group 5).

308. Poultry Breeding. (2-0).

Principles of genetics applied to the problems of the poultry breeder. Fecundity, plumage color, sex-linked inheritance, form.

Text: Heredity in Poultry, Punnett. Prerequisite: Genetics 301. (Required in I group II).

402. Origin, Classification and Breeding of Cotton. (2-2).

History and botany of cotton; methods of improvement and study of varieties. Lectures and outside reading.

Prerequisite: Genetics 301, 304. (Required in I group 4a).

403. Eugenics. (2-0).

Variation and heredity applied to human beings. Text: The Trend of the Race, Holmes. Prerequisite: Genetics 301, Senior classification. (To be repeated in the second term).

405. Survey of Eugenics. (3-0).

A general study of Eugenics and Eugenic Reform, and certain genetic principles underlying human heredity. Lectures and outside reading.

Prerequisite: Senior classification.

(Elective in III, IV, V, VI, VIII, IX groups 1, 2).

(Open only to seniors in four-year courses who have had no previous courses in genetics.)

(To be repeated in second term).

FOR GRADUATES.

501, 502. Advanced Plant Genetics. (2-4).

Specialized study of plant genetics. Opportunity to specialize in some commercial crop. Standard text books and current scientific literature used.

503, 504. Advanced Animal Genetics. (2-4).

Specialized study of animal genetics. Opportunity to specialize on some breed of farm animal or Drosophila. Standard text books and current scientific literature used.

505, 506. Advanced Biometry. (2-4).

The application of certain biometric principles to the interpretation of genetic data.

507, 508. Genetic Studies in Cotton. (2-4).

This course is designed for graduate students especially interested in cotton and in it a detailed study of the cotton plant is made.

571, 572. Research in Cotton Breeding.

This is a thesis course only and is designed for students who are majoring in Genetics or Agronomy and who desire to become famaliar with the methods of commercial cotton breeding. The problem given to the student will cover. in its completion, in relation to cotton breeding, the biometrical methods; progeny analysis; germination, seedling and maturity tests procedure; stapling; ginning; etc. Students electing this course must first be familiar with the fundamentals of Genetics and Agronomy. Mr. Kil^r, ugh.

GEOLOGY

DEPARTMENT OF GEOLOGY

Professor Hance, Associate Professor Burt, Mr. Stenzel.

201. General Geology. (3-2).

The agents and processes which have produced the surface features of the earth, and their influence upon human affairs. Elements of weather and climate.

The laboratory work consists of detailed study of topographic maps, minerals, and rock types. Some field trips.

Text: To be selected.

Prerequisite: Chemistry 102.

Laboratory fee: \$1.50.

(Required in I, IV, IX group 2, XV, XX, XXI; elective in X).

202. Historical Geology. (3-3).

Hypotheses of the earth's origin. Principles of stratigraphy and paleontology. The physical and organic record of the earth's history.

The laboratory work consists of detailed study of geologic maps and folios. Some field trips.

Text: to be selected. Prerequisite: Geology 201. Laboratory fee, \$2.00. (Elective in X).

203. Mineral Resources of the United States. (3-0).

A general survey of our mineral resource assets, their diversity, magnitude and national importance.

Text: Lectures and assigned readings.

Prerequisite: Chemistry 101, 102 or the equivalent.

210. Agricultural Geology. (2-2).

The common rock-making minerals and rock types. Rock weathering. Relations of soils to bed-rock and physiography. Geologic phases of water supply and drainage.

Text: to be chosen. Prerequisite: Geology 201. Laboratory fee, \$1.50. (Elective in 1).

301. Crystallography and Mineralogy. (2-4).

An elementary course in crystallography and determinative mineralogy. Occurrence and uses of some of the more common minerals.

The laboratory work includes a study of crystal models, followed by the use of the blowpipe and other methods of rapid mineral indentification.

Text: Mineralogy, Crystallography and Blowpipe Analysis, Moses and Parsons.

Prerequisite: Chemistry 102.

Laboratory fee, \$2.00.

192 AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

302. Petrology. (2-2).

Rocks, their texture, mineral composition and classification. Physical and chemical characteristics. Origin and modes of occurrence.

The laboratory work includes a study of hand specimens for the identification of rock types. Preparation and study of thin sections of rocks under the polarizing microscope.

Text: to be chosen. Prerequisite: Geology 301. Laboratory fee, \$2.00.

305. Paleontology. (3-3).

An introductory study of the chief characteristics, successions, and environmental conditions of the animal life recorded in the rocks.

The laboratory work includes field trips and the preparation and study of specimens.

Text: to be selected.

Prerequisite: Geology 202; Biology 212 and 213, or equivalent. Laboratory fee, \$1.00.

311. Metamorphic Geology. (2-2).

A critical study of rock metamorphism, both destructive or disintegrating, and constructive or integrating changes. Development of the theme; adaptation to environment.

Laboratory work to illustrate graphical studies of mineral and rock changes, and microscopic work on thin sections of various rock types.

Text: Metamorphic Geology, Leith and Mead.

Prerequisite: Geology 202, 302. Laboratory fee, \$2.00.

312. Structural Geology. (2-0).

The interpretation of rock structures caused by earth movements. The relations of rock structures to stratigraphic, physiographic and economic problems.

Text: Structural Geology, Leith.

Prerequisite: Geology 202; must be preceded or accompanied by Geology 302.

401. Geology for Engineers. ((2-3).

A consideration of various geological factors which are involved in engineering problems. The relations of soils and rock to underground water supply and drainage, excavation and foundation problems, highway construction, building materials, fuels, etc. The efficient utilization of government maps and other pertinent material of value.

Text: Engineering Geology, Ries and Watson.

Prerequisite: Geology 201.

Laboratory fee, \$1.50.

(Elective in IV groups 1, 2).

HISTORY

404. Geology of Petroleum. (3-3).

A detailed study of the observed factors involved in the occurrence of oil and gas. Theories as to the origin, migration and accumulation of these hydrocarbons. Detailed studies of certain productive areas. A brief consideration of future problems related to this important mineral resource.

Laboratory work on maps and other graphic methods of study of field problems.

Text: Geology of Petroleum, Emmons. Prerequisite: Geology 312. Laboratory fee, \$2.00.

405. Economic Geology. (3-0).

A study of the general nature of the application of geology to practical affairs.

Text: Economic Aspects of Geology, Leith or the equivalent. Prerequisite: Geology 202, 302.

406. Ore Deposits. (3-3).

A study of the principles involved in the formation of ore deposits. Characteristic mineralogic, petrographic and physiographic features of various types of known deposits. Detailed analyses of some of the more typical mineral districts.

Laboratory work on rock and mineral specimens, and the application of the microscope to a study of ore minerals.

Text: Mineral Deposits, Lindgren, or the equivalent.

Prerequisite: Geology 311, 312, 405.

Laboratory fee, \$2.00.

410. Field methods (1-4)

DEPARTMENT OF HISTORY

Professor Gammon, Associate Professor Sugareff.

101, 102. The Development of Western Europe. (3-0).

A general survey of the political, religious, social and economic development of Western Europe from the decline of the Roman Empire in the West to date.

(Required in XIX).

211, 212. Comparative Government. (3-0).

An introduction to the nature of political science, followed by a comparative study of the governments of England, France, Germany and Switzerland.

213, 214. History of England. (3-0).

British, Saxon and Norman origins; national development; struggles between church and state, crown and nobles, nobles and commons; Agrarian and Industrial Revolutions; relations with Ireland; evolution of democracy; growth of the Empire before, during and since the World War.

215, 216. History of United States. (3-0).

Discovery and colonization; colonial governmental, economic and social institutions; the Revolution; adoption of the Constitution; growth of nationalism; cotton and the slavery problem; war for Southern independence; reconstruction; new social and industrial problems; recent international relations.

305. Citizenship. (3-0).

194

The nature, organization and functions of the federal system; the rights privileges and obligations of citizenship; immigration; naturalization; law enforcement; party politics and public opinion. Seeks to give the student an adequate knowledge of his national government and to enable him to function worthily as a citizen.

The course is repeated in the second term.

(Required in I group 12; 111, IV, V, VI, VIII, XIII, XVI, XXII; elective in IX groups 1, 2).

307, 308. Industrial History of England and United States. (3-0).

Traces industrial growth of England, emphasizing agricultural changes, the evolution of trade and town life; the transition to modern industrial conditions produced by the Industrial Revolution. In the second term; economic expansion of United States including growth of its industries and commerce, rise of labor and capital organizations, the tariff and banking. In this course, the work of the second term may be taken without that of the first term.

(Required in XIV group 2).

311, 312. Modern and Contemporary Europe. (3-0).

French Revolution; Napoleon; Restoration; Industrial Revolution; Revolutions of 1830 and 1848; struggle for democratic government; new nationalism; expansion and imperialism; alliances and ententes; causes and results of World War.

(Elective in III, IV, V, VI, VIII, IX groups 1, 2).

341, 342. Beginnings of Modern Europe. (3-0).

The sources of the Renaissance; its development in Italy; its extension into northern and western Europe; its political, intellectual and artistic aspects. The reformation; causes, growth and doctrinal phases; the spread of the movement; the Counter-Reformation; the Thirty Year's War.

Prerequisite: History 101, 102.

421, 422. Contemporary United States. (3-0).

A course in American History since the Civil War for seniors. The political, economic and social development of the United States; the nation's territorial advance into the Caribbean area; its participation in world politics; its diplomatic relations with other American republics constitute the central topics.

(Open to all seniors who have had one college course in history.)

DEPARTMENT OF HORTICULTURE

Professor Kyle, Associate Professor Adriance, Assistant Professor Brison, Mr. Jamison.

201. Plant Propagation and Orcharding. (2-2).

Lectures and recitations on the fundamental principles and methods of plant propagation, including vegetables, fruits, and ornamentals; methods of planting and managing the home orchard.

Practice: Propagation of plants from seed and bud; planning, planting, pruning, spraying, and general care of the home orchard.

Text: Plant Propagation, Kains, Lectures. ? Prerequisite: Biology 101, 102.

Laboratory fee, 75 cents.

(Required in I, XII, XV, XX, XXI).

202. Vegetable Gardening. (2-2).

Planning, planting, equipping and operating vegetable gardens, with special reference to the needs of the home; also canning and storage of vegetable crops for home use.

Text: Garden Farming, Corbett. Lectures and reference work.

Practice in planning, planting and cultivating a small garden, equipping, fertilizing, spraying, harvesting, erection of hot-beds and cold frames.

Laboratory fee, 75 cents.

(Elective in I, XIV, C).

208. Ornamentals. (2-2).

A study of those indigenous and exotic trees, shrubs and vines of landscape value found growing in this section.

Prerequisite: Horticulture 201.

Laboratory fee, \$1.00.

(Required in XX).

304. Nut Culture. (1-4).

Early history; distribution of native nuts; development of native groves to improved varieties.

Text: Pecan Growing, Stuckey and Kyle.

Lectures and recitations.

Practice: Budding and grafting pecans in the nursery row; top-working native pecans to improved varieties by means of the patch, chip and crown bud and by grafting. A systematic study is made of the standard varieties of nuts.

Prerequisite: Horticulture 201.

Laboratory fee, \$1.50.

(Elective in C).

310. Commercial Vegetable Production. (2-2).

The production of vegetables for market. Consideration is given climate, soil, equipment and storage, as affecting production and marketing in Texas and other states. Lectures and recitations.

Practice: The production, harvesting and marketnig of vegetable crops.

Prerequisite: Horticulture 202.

Laboratory fee, \$1.50.

(Required in I group 9).

314. Floriculture. (2-2).

A course designed to give a working knowledge of the culture and use of the annuals, perennials, and bulbous plants especially adapted to our climate conditions.

Text: To be assigned. Lectures.

Practice: The growing, transplanting and care of the commoner annuals and perennials.

Lectures and recitations.

Prerequisite: Horticulture 201.

Laboratory fee, \$1.00.

(Required in XX).

317, 318. Principles of Fruit Production. (2-4).

Orchard management, including problems of location, soils, planting, cultivating, protection from insects and diseases, pruning, harvesting and marketing.

Practice: Practical orchard work from planting to marketing.

Text: Fundamentals of Fruit Production, Gardner, Bradford, and Hooker. Lectures and recitations.

Prerequisite: Horticulture 201.

Laboratory fee, \$1.00.

(Required in I group 9; XX).

401. Systematic Pomology. (3-2).

A technical course covering deciduous fruits, their identification, classification, distribution, importance, and history, and a detailed study of the more important species and varieties.

Practice is given with such fruits as can be obtained during the season. Laboratory fee, \$2.50.

Prerequisite: Horticulture 303.

(Required in I group 9).

419, 420. Experimental Horticulture. (1-0, 0-4).

Research methods in the planning and execution of horticultural projects. The student is expected to become thoroughly familiar with all phases of his problem and to carry same to satisfactory conclusion. Project statement to be submitted by December 15. Project reports due week preceding Commencement.

Lectures and asignments.

Laboratory fee, \$2.00, second term.

(Required in I group 9; XX).

HORTICULTURE

421. Commercial Horticulture. (2-2).

A study of the methods of harvesting, grading, packing, shipping, storage and selling of fruits and vegetables.

Lectures and recitations.

29

Prerequisite: Horticulture 202, 303.

Laboratory fee, 75 cents.

(Required in I group 9).

422. Subtropical Fruits. (3-2).

A study of subtropical fruits, with special attention to citrus fruits, figs, olives, and dates.

Lectures and recitations.

Practice: A comprehensive collection of the varoius subtropical fruits is available for practice. Orchard heating is given attention.

(Prerequisite: Horticulture 317, 318.

Laboratory fee, \$2.50.

FOR GRADUATES.

501, 502. Advanced Fruit Growing. (2-4).

An advanced course in fruit production. Special attention is given to the problems of cultivation, fertilization, pruning, thinning of fruit and protection from frost and insect pests and diseases; the improvment of fruit by means of bud selection and breeding.

Prerequisite: Horticulture 317, 318, or equivalent work.

503, 504. Advanced Vegetable Gardening. (2-4).

The latest methods used in the production of vegetables for market and truck gardening purposes; irrigation; forcing plants for early market, and the development of plants by breeding and selection.

Prerequisite: Biology 101, 102; Horticulture 202, 301, 404, 420, or equivalent work.

507, 508. Horticultural Problems. (1-6).

Various problems concerning recent developments in horticulture are considered, both in theory and in laboratory. Recent work at other stations will be reviewed.

FOR STUDENTS IN SHORT COURSES.

21. Plant Culture and Propagation. (2-2).

Similar to course 201, except that orcharding is omitted. Lectures and recitations.

Practice work in the propagation of seedlings and the different forms of budding and grafting, layering, etc.

Text: Principles of Plant Culture, Goff. Laboratory fee, 75 cents. (Required in C).

53. Tree and Vine Fruits. (3-2).

A practical study is made of fruit growing. This includes the problems of planting, cultivating, pruning, harvesting and marketing. Lectures and recitations.

Text: Principles of Fruit Growing, Bailey.

Practice is given in laying out orchards, planting, spraying, pruning, etc. etc .

Prerequisite: Horticulture 21. Laboratory fee, \$1.00. (Elective inC).

DEPARTMENT OF INDUSTRIAL EDUCATION

Professor E. L. Williams

102. Theory and Principles of Vocational Education. (2-0).

A brief history of the principles of education leading up to the needs of vocational education. A review of the Federal and State laws pertaining to schools. The relation of the general education, manual training and industrial arts to vocational education. Attention is given to the problems of organization and administration of various types of vocational schools.

(Required in XIII, XXII).

202. Job Analysis. (2-2).

Several particular jobs of the various trades will be analyzed, listing all the necessary tools, operations and related informatoin connected with the job. This course is designed to help teachers to plan and route jobs through their shops making sure that none of the important instructional material is omitted.

(Required in XIII, XXII).

203. Trade Analysis. (2-0).

The student must know a trade; it will be divided into its several parts as: units, operations, jobs, sciences and mathematical content, etc. The material will then be organized into teachable form.

Prerequisite: At least two years of trade experience. (Required inXIII).

301. Methods of Teaching and Class Management. (2-0).

Most effective organization of equipment and economic ways of securing materials as teaching aids, planning of daily programs; discipline and individual adjustment; grading, records and reports.

(Required in XIII, XXII).

307. Psychology of Adolescence. (3-0).

A psychological study of the youth and his development and relation to modern methods of education and industry.

(Required in XIII).

308. A Study of Modern Industries. (3-0).

The political, historical and geographical factors which have a direct influence upon the development and distribution of industries. Specific studies of individual industries are made, such as: iron and steel, paper, automobiles, petroleum cement, leather, textiles, etc. Essential features of these industries are considered: location, machinery, power, raw materials, market, labor, etc.

(Required in XIII, XXII).

310. Course Making. (2-0).

A course designed especially for teachers who desire to study the basis of selecting subjects for industrial courses and methods of outlining courses of study to meet the various needs of the different types of classes. Each student will make a complete course for some particular subject he is teaching or interested in.

(Required in XIII, XXII).

312. Psychology Applied to Industry. (3-0).

A direct application of the fundamental principles of psychology to industry. The relation of the worker's nervous system to his mind, the cultivation of right habits in workers; instincts, imitation, memory, and imagination; interest factors and power of suggestion aid in increasing the quantity and quality of production; "association of ideas" as an aid in giving orders; development of initative, reasoning and judgment in workers, psychology as an aid in reducing turnover.

(Required in XIII).

314. Observation and Criticism. (1-2).

Opportunity for observation of industrial teaching is provided. There are assigned observations in the various factors that should be taken into account, as, equipment, safety, records, discipline, methods of instruction and the handling of stock. These asignments and written reports are turned in and followed by discussion and conferences.

(Required in XIII).

318. Methods of Teaching Related Subjects. (2-0).

A course designed especially for those teaching or preparing to teach the related work in trade and industrial schools. It covers such topics as related matter in the shop and the cooperation of class room and shop in related work.

320. Aims and Objectives of Part-Time Schools. (2-0).

Part-time laws; organization and administration of classes to meet the needs of junior workers; trade preparatory, trade extension, and general continuation classes under compulsory and elective systems.

322. Occupational Analysis and Organization of Industrial Material. (2-0). Analysis of occupations and the organization of the teachable content.

406. Vocational Guidance. (2-0).

A survey of the recent development of educational and vocational guidance within and outside of the schools, information on the common occupations and their requirements, an analysis of personal characteristics; try-out methods; value of cumulative school records; methods of keeping records; optional guidance through literature; needs for following up work in vocational counselling: a study of the psychological, industrial and commercial tests.

(Required in XIII, XXII).

407. Special Methods of Teaching Industrial Subjects. (2-0).

A course to emphasize the importance of using charts, models, advertising material, catalogues, sketches, blackboard illustrations, etc., in teaching industrial subjects.

(Required in XIII).

408. Educational and Achievement Measurements. (3-0).

This course aims to help the teacher make up and use tests and rating sheets, gather data, diagnose problems and use this material for better promotion of his work.

409. Methods of Introducing Industrial Organization and Management into Industrial Schools. (2-0).

A study of the history and development of industrial organizations and managements up to the present most efficient methods and how these systems can best be adapted in industrial schools to make them more practical.

(Required in XIII, XXII).

411. Lesson Planning. (2-0).

The emphasis is upon methods of presentation. Some of the topics taken up are: the lesson, its purpose and aim; the steps in lesson presentation; testing the effectiveness of instruction.

In this course each student is required to apply the principles taken up to specific lessons in the course he is teaching; such as shop subjects; related drawing; related mathematics; related science.

(Required in XIII, XXII).

413. Science Related to Trades. (3-0).

Study of the sciences of the production of materials used in industries, as: producing, drying and manufacturing of lumber products, and the making, heating and treating of steel.

414. Methods of Training Foremen and Workers in Industrial Plants. (3-0).

The aims of the course are to help teachers, supervisors and directors organize material and make out course outlines for training foremen and workers in plants.

415, 416. Practice Teaching. (0-6).

Arrangement will be made for the student to do practice teaching in the Bryan High School Manual Training Department. The Consolidated School, and some of the departments of the College.

(Required in XIII, XXII).

4

INDUSTRIAL EDUCATION

420. Follow-up, Visitation, and Coordination in Part-Time Schools (2-0). Coordination between instruction given to the junior employee and the job, and the procedure in follow-up and promotional advancement.

422. Social, Economical and Educational Influences Affecting the Junior Workers. (2-0).

A study of the supply and demand of workers in various occupations; pay and opportunities for advancement and their relation to society as a whole.

FOR GRADUATES.

505. Philosophy of Industrial Education. (4-0).

The social, economic, and political necessities back of the movement for industrial education; the relating of industrial education to general education; types of courses to meet the demands of the community; the relations of industrial education to capital, labor, Americanization, and world competition in industry.

Available in the Summer Session only.

506. Baisc Principles of Teaching. (4-0).

The fundamental psychological principles, underlying the teaching processes, applied especially to industrial education.

Available in the Summer Session only.

507. 508. Organization and Management in Industrial Education. (4-0).

Problems in organizing and managing industrial schools and departments; making surveys; arranging courses; planning and purchasing of equipment and supplies; selecting instructors; making up efficient forms and records; types of shop jobs; placement of students; cooperation with employers.

EXTENSION COURSES.

Under the Federal Vocational Education Act, the College offers extension of courses in Industrial Education in centers where a sufficient number of persons are interested in one subject to make such an arrangement possible. The time devoted to each course is thirty clock hours.

These extension courses are planned to meet the requirements of the State Board for Vocational Education for certification of teachers of all types of trades and industrial work. Students takeng these courses must meet the qualifications set up by the State Board for Vocational Education.

A student completing satisfactorily any of these courses will be given ('ollege credit if he should later register as a resident student. Extension courses are offered at the present time in Galveston and Houston. Applications from other centers will be considered.

The list of extension courses now includes the following:

FOR SHOP AND RELATED SUBJECTS TEACHERS

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102. Theory and Principels of Vocational Education.

202. Job Analysis.

203. Trade Analysis.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

- 301. Methods of Teaching and Class Management.
- 310. Course Making.
- 314. Observation and Criticism.
- 406. Vocational Guidance.
- 411. Lesson Planning and Practice Teaching.

FOR PART-TIME GENERAL EDUCATION TEACHIRS

- 301. Methods of Teaching and Class Management.
- 307. Psychology of Adolescence.
- 314. Observation and Criticism.
- 320. Aims and Objectives of Part-Time Schools.
- 322. Occupational Analysis and Organization of Instructional Maleruat
- 412. Lesson Planning and Practice Teaching.
- 420. Follow-up, Visitation, and Coordination in Part-Time Schools
- 422. Social, Economic and Educational Influences Affecting the Junior Worker.

DEPARTMENT OF LANDSCAPE ART

Professor Hensel

301. Introduction to Landscape Art. (2-4).

Designed for students specializing in Landscape Art; sufficiently comprehensive for others wanting an elementary working knowledges of this subject. Elementary landscape design; the application of the principles of landscape design to simple garden problems; the development of plans of arrangement and planting plans for small home and school grounds.

Text: To be assigned.

(Required in I, group 10, XX).

302. History of Landscape Art. (2-0).

The development of gardening; Egyptian, Western Asiatic, Greek, Italian, French, English, and American.

Illustrated lectures; recitations.

(Required in I group 10, XX).

304. Landscape Design. (0-8).

Plans of arrangement, sketch plans, planting plans; a continuation of course 301.

Prerequisite: Landscape Art 301. (Required in XX).

401, 402. Advanced Landscape Art. (3-8).

The development of large areas; private estates, parks, subdivisions, cemeteries, and other private, semi-private, and public properties. Major problems; landscape construction; detailed plans; professional practice; lectures; recitations.

(Required in I group 10; XX).

Text: An Introduction to Landscape Design, Hubbard and Kimball. Prerequisite: Landscape Art 301, 304. (Required in I group 10; XX).

FOR GRADUATES.

505, 506. Landscape Design. (2-12).

Theory and practice in advanced landscape problems; research consultations; criticism.

DEPARTMENT OF MARKETING AND FINANCE

Professor Lee, Mr. Weaver

202. Cotton Prices. (3-0).

Historical survey of cotton prices; the potential demand for cotton and cotton goods; the potential supply of cotton in relation to price and the cost of production; analysis of factors determining cotton prices in the central markets; analysis of factors determining prices in the local markets; relation of quality production to prices; service and regulatory functions of the Federal Government in relation to cotton prices in central and local markets; farmers' cooperative marketing associations and cotton prices.

Text: To be selected.

(Required in XVIII).

502. Marketing. (3-0).

Description of the various services performed in marketing, agricultural products, such as grading, standardizing, packaging, transportation, storage, financing, and risk-taking; marketing methods; marketing agencies; analysis of the operations of produce exchanges; price making; future trading; demand creation; adapting production to market conditions; government authority in relation to marketing.

Text: To be selected.

Prerequisite: Economics 203 and 204, or Economics 403.

(Required in XIV group 4).

401. Cooperative Marketing of Farm Products. (3-0).

An intensive study of farmer cooperative selling organizations. A careful analysis of the organization, method, and underlying philosophy of the two prevailing types of cooperative enterprises, viz., the centralized type and the local federated type.

Text: To be selected.

Prerequisite: Marketing and Finance 302.

(Required in XIV group 4).

402. Agricultural Finance. (3-0).

Analysis of credit requirements of farmers; investors and depositors as sources of credit; description of financial institutions which serve agriculture, such as farm mortgage companies, insurance companies, federal and joint stock and banks, intermediate credit banks, livestock loan com-

403 CATLAN- 7110. (3-0)

panies, national and state banks, and the federal reserve banks; principles upon which credit is extended; credit forms; the cost of credit.

Text: To be selected.

Prerequisite: Agricultural Economics 312 or 411. (Required in XIV group 4).

404. Transportation. (3-0).

The factors affecting the transportation of agricultural products; the American railway system and its development; the various services performed by the railways; the economics of the railway enterprises; the regulation of railways; plans for the solution of the railway problem; the rate situation as it relates to agriculture.

Text: Principles of Railway Transportation, Jones.

Prerequisite: Economics 203 and 204, or Economics 403.

406. Public Finance and Taxtaion. (3-0).

The purpose of the course is to give a working knowledge of public financial institutions and practices. A model system of taxation is discussed; and taxes particularly affecting the agriculturalist are studied in detail. Among the topics considered are: the amount and growth of public expenditures; the sources of revenue; budgetary methods; principles which should govern appropriations; public industries and price making; the principles of taxation; the important kinds of taxes; the principles of borrowing; the management of public debts.

Text: Public Finance, Lutz.

Prerequisite: Economics 203, 204, Agricultural Economics 312.

FOR GRADUATES

501, 502. Advanced Marketing Problems. (2-4).

Price making; economics of future trading; adjustment of production to the market; the collection and dissemination of demand and supply information; the margin between local and central market prices; costs of marketing; individual versus cooperative method of price making and marketing.

Prerequisite: Agricultural Economics 312 and Marketing and Finance 302.

504. Economies of Cotton Marketing. (2-4). Detailed analysis of the function Detailed analysis of the functions' performed in marketing cotton; possible economics in selling cotton; the work of the cotton exchanges; future trading; relation of spot and futures prices; the economics of cotton standardization; analysis of the Cotton Futures Act from an economic point of view; cooperative versus individual sale of cotton.

Text: To be selected.

Prerequisite: Marketing and Finance 302.

Open to undergraduates who have made a grade of B or A in course 302. enne. Real and an air ann an a

MATHEMATICS

DEPARTMENT OF MATHEMATICS

Professor Puryear, Professors R. F. Smith, J. W. Mitchell, Halperin, Associate Professors D. C. Jones, Porter, Martin, Assistant Professors Binney, Nelson, Mr. Stevens, Mr. McKee, Mr. Rees, Mr. Ross, Mr. E. H. Thomas, Mr. H. Johnson

101, 102. Algebra. (3-0).

A rapid review of elementary topics, followed by the study of quadratic equations, the binomial theorem, variation, the progressions, complex numbers; elementary theory of equations, logarithms, limits, undetermined co-efficients.

Review of certain topics of preceding courses.

Text: College Algebra, Hart. Supplementary exercises.

(Required in III, IV, V, VI, VIII, IX, XIV, XV, XVIII; course 101 in X, XIII, XIX, XXII).

103. Plane Trigonometry. (3-0).

Measurement of angles, review of logarithms, solution of right triangles, problems of heights and distances, properties of triangles, solution of oblique triangles, geometrical applications.

Text: Plane and Spherical Trigonometry, Taylor and Puryear.

(Required in III, IV, V, VI, VIII, IX, XIII, XV, XX, XXII; elective in X, XIX).

104. Analytics. (3-0).

The straight line, transformation of co-ordinates, circle, ellipse, parabla, hyperbola, graphs of trigonometric, logarithmic and exponential functions.

Review of certain topics of preceding courses.

Text: Analytic Geometry, Ford. Supplementary exercises.

Prerequisite: Mathematics 101, 103.

(Required in III, IV, V, VI, VIII, IX, XV, XXII; elective in X, XIX).

118. Solid Geometry. (3-0).

Definitions, lines and planes in space, dihedral angles, polyhedral angles, polyhedrons, the cylinder, cone and sphere.

Text: Solid Geometry, Wentworth-Smith.

(Required as an extra study of freshmen in the School of Engineering who do not present solid geometry for admission).

203, 204. Calculus. (5-0).

Differentiation, limits, infinitesimal, integration, maxima, and minima, areas, volumes, water pressure, work, introduction to solid geometry, moment of inertia, center of gravity, radius of curvature, Taylor's theorem, elementary examples of different equations.

Review of certain topics of preceding courses.

Text: Differential and Integral Calculus, Granville. Supplementary exercises.

Prerequisite: Mathematics 104.

(Required in III, IV, V, VIII, IX group 2; XV, elective in X, course 203 elective in VI).

207, 208. Mathematical Theory of Investment. (3-0).

Review, of progressions, limits, series, logarithms; graphs, interest, annuities, amortization, bonds, sinking funds and depreciation, probability, life insurance.

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Text: The Mathematics of Investment, Hart. Prerequisite: Mathematics 102.

301, 302. Mathematical Analysis of Statistics. (3-0).

Frequency distributions, averages, measures of dispersion, interpolation, summation, graduation, curve fitting, random sampling, frequency curves, correlation, index numbers.

Text: Mathematical Analysis of Statistics, Forsyth.

Prerequisite: Mathematics 101, 102.

FOR GRADUATES.

501. Advanced Calculus. (3-0).

502. Differential Equations. (3-0). 505 Vector analysis (3-0)

DEPARTMENT OF MECHANICAL ENGINEERING

Professor Fermier, Professor Flagg, Associate Professors Brewer, Crawford, Assistant Professors Fern, Faires, Mr. Chappelle, Mr. Downard, Mr. Olsen, Mr. Noster, Mr. Gill, Mr. Oncken.

103. Woodwork. (0-3).

Shop practice in the use of common bench tools and power machinery for working in wood, as applied to joinery, elements of construction, and cabinet making. Practice in the use of shop records, systems, etc., from the viewpoint of production methods and factory operation.

Laboratory fee, \$1.50.

(Required in III, IV, V, VI, VIII).

104. Forging. (0-3).

Shop practice in the use of blacksmith and general forge tools in the working of iron and steel; tempering, annealing, welding, case-hardening, etc.

(Laboratory fee, \$1.50).

(Required in III, IV, V, VI, VIII, XXII).

NOTE.—Courses 103 and 104 together constitute a year's work, three hours a week. Students taking this work will be divided into two groups at the beginning of the first term; one group will begin with course 103 and the other with course 104. At the beginning of the second term the groups will each change to the other work.

105. Bench Work in Wood. (0-6).

A modification of course 103, planned to give the student a greater amount of practice in the use of the ordinary hand tools for working in wood. Intended for students who expect to teach manual training.

Laboratory fee, \$2.50.

(Required in XXII).

106. Cabinet Making. (0-6).

Practice in the design, construction, and finishing of cabinets, including some study of lumber, its manufacture, seasoning, etc.; glues, varnishes, and other finishing materials. Mill work, the preparation of mill bills or cutting details, and the care of power wood-working machinery is also included.

Prerequisite: Mechanical Engineering 105 or the equivalent.

Laboratory fee, \$4.00.

(Required in XXII).

201. Pattern Making and Foundry Work. (0-3).

Shop practice in pattern making, moulding, and casting in iron and in non ferrous metals.

Laboratory fee, \$2.00.

Prerequisite: Mechanical Engineering 103.

(Required in III, XXII).

See note after course 214.

 201a. Pattern Making and Foundry Work. (0-3).
 A modification of course 201, with the same prerequisite. Laboratory fee, \$2.00.

(Required in V).

202. Pattern Making and Foundry Work. (0-3).

A continuation of course 201, including advanced methods of foundry production.

Laboratory fee, \$2.00.

(Required in III).

205. Elementary Steam Engineering. (2-0).

This course aims to give 'the student such a knowledge of steam power plant equipment as will enable him to understand the operation of the same, and serve as a foundation for subsequent study and calculation along these lines. Valve gears, valve diagrams, and indicator practice are also included.

Text: Elementary Steam Power Engineering, MacNaughton. Prerequisite: Mathematics 103.

(Required in IV, VI, IX group 2; XVII).

207. Kinematics. (2-2).

Without taking account of the strength of the structure, this course takes up the study of motion, velocity ratios, comparative forces, etc., in machines and their elemental parts, cams. linkage, etc.
Text: Mechanism, Keown.
Prerequisite: Mathematics 104.
(Required in III, V, XVII, XXII).

208. Kinematics. (2-2). The same as course 207 with specially chosen problems. (Required in VI).

212. Engineering Mechanics. (3-0).

A study of pure mechanics as the foundation principles involved in the analytical solution of problems concerning the statics of a material point and of a rigid body; with numerous numerical examples from practical engineering problems.

Must be preceded or accompanied by Mathematics 204. Prerequisite: Mathematics 203. (Required in III).

214. Machine Shop Practice. (0-3).

A modification of course 309, 310.

Laboratory fee, \$1.50.

(Required in V, XVII).

NOTE.—For Sophomore electrical engineering students, courses 201a and 214 constitute a year's work in the shops. These students will be divided into two groups at the beginning of the first term. One group will begin with course 201a, the other with course 214. At the beginning of the second term the groups will each change to the other work.

302. Steam Engines and Boilers. (4-0).

A study of fuels; combustion; the generation of steam; the construction, operation, care, design and testing of boilers of various types, together with the design of chimneys and other means of producing draft. Also a study of the basic thermodynamics of heat engines, the mechanics, construction, design, operation and testing of the steam engine, the steam turbine and the oil engine.

Text: Heat Engines, Allen and Bursley.

Prerequisite: Mathematics 204, Chemistry 102, Physics 204. (Required in V).

303, 304. Machine Design. (0-3, 0-4).

Practice in the design of machine elements, and their proper representation by finished shop drawings.

Text: Each student is required to have a Mark's Handbook, or an approved substitute, also a text to be elected.

Prerequisite: Mathematics 204, Mechanical Engineering 212; must also be preceded or accompanied by Civil Engineering 305 and Mechanical Engineering 313.

(Required in III).

309. Machine Shop. (0-3).

Practice in bench and machine tool work in metals. This includes chipping, scraping, filing, babbiting, pipe fitting, drilling, turning, boring, grinding, milling machine work, etc.

Prerequisite: Mechanical Engineering 104.

Laboratory fee, \$1.50.

(Required in III, VI, XXII).

310. Machine Shop. (0-3).

A continuation of course 309, including also tool making and heat treatment of steel; with application of factory production methods.

Laboratory fee, \$1.50.

(Required in III, XXII).

313, 314. Engineering Mechanics. (3-0).

A continuation of course 212, including also dynamics of rotation, work, energy, friction, impact, etc.

(Required in III).

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- 317, 318. Engineering Mechanics. (3-0, 2-0): A modification of courses 212, 313, 314, with the same prerequisites. (Required in V).
- 319. Engines and Boilers. (4-0). A modification of course 302, with the same prerequisites and text. (Required in III, VIII).

320. Thermodynamics. (4-0).

A study of the effects of heat on gases, and the application of thermodynamic laws and principles to the steam engine, gas engine, hot-air engine, injectors, calorimeters, air compressors, etc., together with a study of heat efficiencies of these machines and instruments.

Text: Thermodynamics Abridged, Ennis. Prerequisite: Mechanical Engineering 319. (Required in III, VIII).

403, 404. Engineering Laboratory. (0-4).

Instruction and practice in testing gauges, indicators, fans, pumps, boliers, engines, etc.; also a study of the actual mechanical operation of various machines.

In addition to the work with the apparatus, the student is expected to make calculations and written reports on the investigations and the results obtained.

Laboratory fee, \$1.00 each term.

Prerequisite: Mechanical Engineering 319, 320. (Required in III, VIII).

407. Mechanical Refrigeration. (2-0).

The application of the principles of thermodynamics to mechanical

refrigeration. Also a study of different kinds of equipment and methods of practical production or refrigeration and ice making.

Text: Elements of Refrigeration, Greene.

Prerequisite: Mechanical Engineering 320.

(Required in III group 1; elective in V).

410. Gas Engines. (3-0).

The application of the principles of thermodynamics to the design of gas engines. Also a study of the different cycles, methods of governing, and some details of design construction, operation and care of various types of gas engines and other internal combustion motors, with especial reference to the Diesel engine.

Text: Internal Combustion Engines, Streeter.

Prerequisite: Mechanical Engineering 320.

(Required in III).

412. History and Biography. (3-0).

A study of the lives of men who have been contributors to engineering development. Also a study of the history of the development of appliances and inventions in mechanical engineering.

Lectures and reference reading are the sources of material for this course, for which no text-book is required.

Prerequisite: Candidacy for graduation from the Course in Mechanical Engineering.

(Required in III).

414. Steam Turbines. (2-0).

A study of the types and designs of steam turbines, their efficiencies and their operation.

Text: Steam Turbines, Moyer. Prerequisite: Mechanical Engineering 320. (Required in III group 1).

415, 416. Engineering Laboratory. (0-3).
A modification of course 403, 404.
Laboratory fee, \$1.00 each term.
(Required in V).

417, 418. Power Plants and Equipment. (2-4).

A study of the design of power plants, and their equipment is taken up in this course. Choice and arrangement of equipment are studied from the standpoint of economy of material and labor, as well as from the standpoint of general efficiency.

Text: Engineering of Power Plants, Fernald and Orrok. Prerequisite: Mechanical Engineering 320. (Required in III group 1).

419, 420. Industrial Engineering. (3-2). A study of the industrial plant, including building and equipment:

from the standpoint of health of workers as well as from the standpoint of suitability for the industrial processes involved.

Lectures and collateral reading are the chief sources in this course. The practice includes reports, also detailed sketches and drawings covering problems with definitely chosen conditions.

Prerequisite: Senior classification. This course must be taken concurrently with 421, 422.

(Required in III group 2).

421, 422. Methods and Management. (2-0).

A study of the general principles of shop management and shop methods as used in plants and factories whose output is largely the product of machine tools and similar equipment.

Prerequisite: Must be taken concurrently with 419, 420. (Required in III group 2).

423, 424. Transportation. (2-0).

A study of general means of transportation from the standpoint of commerce as well as the conveying of materials in industrial plants and in construction work.

Lectures and collateral reading are the sources of most of the subject matter for this course.

Prerequisite: Senior classification. (Required in III group 3).

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425, 426. Railway Mechanical Engineering. (2-4). A study of types and the design of railway rolling stock and a study

of locomotive performance.

Prerequisite: Mechanical Engineering 319.

(Required in III group 3).

FOR GRADUATES

501, 502. Advanced Machine Design. (2-6).

The design of machines from the standpoint of kinematics, as well as stresses, the latter covering both the static and the dynamic machine. The practice may be planned to meet the special needs of the individual student.

503, 504. Power Plants. (2-6).

An advanced course in the design of central and isolated power plants with special attention to overall economical operation.

505, 506. Analytic Mechanics. (3-0).

An advanced course in statics and dynamics, with special emphasis on the latter.

507, 508. Experimental Engineering Rescarch. (1-8).

Methods and practice in Mechanical Engineering research, taking up extended problems specially chosen to meet the needs of the individual student.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

Professor: Lieutenant Colonel Turner. Professors: Major Sloan, Major Bertram, Captain Buchly, Captain Guidera, First Lieutenant Mickelson. Assistant Professors: Captain Limbocker, Captain Aldridge, Captain Besse, Captain Montgomery, Captain Cheshire, Captain Ware, First Lieutenant Powell.

INFANTRY UNIT

Professor: Edward H. Bertram, Major, Infantry. Assistant Professor: Edwin E. Aldridge, Captain, Infantry. Assistant Professor: Lloyd R. Besse, Captain, Infantry. Assistant Professor: Ralph L. Ware, Captain Infantry.

101. (1-2).

(a) Theoretical: Military courtesy and discipline; rifle marksmanship; physical training.

(b) Practical: Infantry drill; physical training.

Text: War Department Training Regulations.

102. (1-2).

(a) Theoretical: Infantry drill; rifle marksmanship; first aid, hygiene.

(b) Practical: Physical training; infantry drill; preliminary target practice; gallery practice; rifle practice; ceremonies.

Text: War Department Training Regulations. Prerequisite: M. S. 101.

201. (1-2).

(a) Theoretical: Scouting and patrolling; musketry; automatic rifle.

(b) Practical: Command and leadership as corporals, scouting and patrolling; musketry; automatic rifle.

Text: War Department Training Regulations. Prerequisite: M. S. 101, 102.

202. (1-2).

(a) Theoretical: Automatic rifle; interior guard duty.

(b) Practical: Command and leadership as corporals, ;automatic rifle.

Text: War Department Training Regulations. Prerequisite: M. S. 201.

301. (3-2).

(a) Theoretical: Machine guns, Topography.

(b) Practical: Command as sergeants; machine gunnery; topography. Prerequisite: M. S. 201, 202.

Text: War Department Training Regulations.

MILITARY SCIENCE

302. (3-2).

(a) Theoretical: Field Engineering, machine guns, combat principles.

(b) Practical: Command and leadership as sergeants; field engineering; machine gunnery.

Text: War Department Training Regulations. Prerequisite: M. S. 301.

401. (3-2).

(a) Theoretical: Combat Principles; Howitzer Company Weapons.

(b) Practical: Command and leadership as officers and instructors; combat principles; howitzer company weapons.

Text: War Department Training Regulations.

Prerequisite: M. S. 301, 302.

402. (3-2).

(a) Theoretical: Military history and policy; administration; military law; rules of land warfare.

(b) Practical: Command and leadership as officers and instructors; combat principles; howitzer company weapons.

Text: War Department Training Regulations.

Prerequisite: M. S. 401.

FIELD ARTILLERY UNIT

Professor: John E. Sloan, Major, Field Artillery.

Assistant Professor: Murray M. Montgomery, Captain, Field Artillery.

Assistant Professor: Russel D. Powell, First Lieutenant, Field Artillery.

103. (1-2).

(a) Theoretical. Fundamentals of Military Science. Organization and Administration. Military Hygiene; First Aid and Sanitation. Military Courtesy and Discipline. Customs of the Service. Military leadership and Morale. Field Artillery Drill Regulations to include School of Firing Battery.

(b) Practical: School of the Soldier, Squad and Battery, Dismounted; Standing Gun Drill, Firing Battery, Interior Guard Duty, Manual of the Pistol; Ceremonies.

Text: Field Artillery Manual, Wilson, Vol. I. 104. (1-2).

(a) Theoretical: Field Artillery material and gunner's instruction, the French 75 mm. gun and carriage, construction, mechanical principles, principles of design, tools, accessories, equipment, methods of carrying same; dissembling and assembling various parts of gun, lubrication, cleaning, sights, quadrants, fuse setters, fire control instruments, care; ammunition: powders, explosives, detonators, primers, projectiles, fuses; descripvion, care and use. The elements of Field Artillery gunnery; definitions; 214 AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

the military elements of Trajectory and the calculation, determination of firing data and their use by cannoneers, duties of the cannoneer.

(b) Practical: Standing gun drill, gunner's instruction, firing battery, use and care of individual equipment, ceremonies, gunner's examination.

Text: Field Artillery Manual, Wilson, Vol. I.

203. (1-2).

(a) Theoretical: Equitation and Horsemanship.

(b) Practical: Equitation, The Soldier Mounted; Care of Horses and Equipment. Adjustment of Harness.

Text: Field Artillery Manual, Wilson, Vol I.

204. (1-2).

(a) Theoretical: Topography and Orientation, Stable Management, Artillery Communications.

(b) Practical: Draft, the battery mounted. Orientation, Wire Maintenance, Care of Animals.

Text: Field Artillery Manual, Wilson, Vol. I.

303. (3-2).

(a) Theoretical: Advanced Gunnery, Conduct of Fire.

(b) Practical: Use of Fire Control Instruments, Determination of Firing Data, Smoke Bomb Firing.

Prerequisite: M. S. 103, 104, 203, 204.

304. (3-2).

(a) Theoretical: Advanced Gunnery, Conduct of Fire, Field Artillery Tactics, Organization, Communication and Reconnoissance, Motor Vehicles.

(b) Practical: Conduct and Observation of Fire, Terrain Board. Reconnaissance. Non-Commissioned Officer, with Battery Mounted, Communications. Operation of Motor Vehicles.

Prerequisite: M. S. 303.

403. (3-2).

(a) Theoretical: Administration and Army Paper Work, Organization and Tactics.

(b) Practical: Duties as Battery Officers and Instructors. Prerequisite: M. S. 304.

404. (3-2).

(a) Theoretical: Military History and Policy of the United States.(b) Practical: Same as 403 (b).

Prerequisite: M. S. 403.

SIGNAL CORPS UNIT

Professor: Arthur E. Mickelsen, First Lieutenant, Signal Corps

105, 106. (1-2).

(a) Theoretical: Military Courtesy and Customs of the Service, In-

fantry Drill Regulations, Organization and Administration of a Company, Military Hygiene. First Aid, Sanitation, Code Practice, Telegraphy, Military Telephones, Military Switchboards and Automatic Pistol.

(b) Practical: Infantry Drill, Tent Pitching and Display of Equipment, Basic Signal Communication, and Instruction as Field Linemen and in Communication Installations.

Prerequisite: Enrollment in Electrical Engineering.

205, 206. (1-2).

(a) Theoretical: Tactical Radio Procedure, Function of Various Arms, Army Organization, Map Reading and Sketching, Radio Sets and Wavemeters.

(b) Practical: Infantry Drill, Tent Pitching and Display of Equipment, Guard Duty, Switchboard Operation, Telephone and Test Station Operation, Working in Communication Nets, Sketching.

Prerequisite: Enrollment in Electrical Engineering.

305, 306. (1-2, 0-2).

(a) Theoretical: Message Center, Codes and Ciphers, Solution of Mutilated Code Groups, Signal Plans and Orders.

(b) Practical: Infantry Drill, Leadership, Message Center Operation, Operation of Radio Sets in Communication Nets, Instruction as Radio Operator.

In addition to the above the student must complete Electrical Engineering 309 and 310.

405, 406. (0-2, 1-2).

(a) Theoretical: Staff Organization and Duties, Company Paper Work, Management and Interior Economy of a Company, Organization of Various Arms and their Functions, Signal Corps Organizations, General Principles of Signal Communications for all Arms, Use and Limitations of Various Signal Agencies, Combat Orders, Tactics and Technique of Infantry and Signal Corps, Military History.

(b) Practical: Infantry Drill, Leadership, Practice in Instruction of Signal Corps Subjects, Handling of Message Centers, Radio Nets, Wire Nets and Combined Problems.

In addition to the above the student must complete Electrical Engineering 409 and 410.

CAVALRY UNIT

Professor: Walter E. Buchly, Captain, Cavalry.

Assistant Professor: Thomas F. Limbocker, Captain, Cavalry.

Assistant Professor: Henry H. Cheshire, Captain, Cavalry.

107. (1-2).

(a) Theoretical: Military Courtesy and Discipline; cavalry drill regulations to include the rifle platoon; elementary equitation; care of the horse

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

(b) Practical: Cavalry drill, dismounted, to include the rifle troop; Text: War Department Training Regulations.

108. (1-2).

(a) Theoretical: Rifle Marksmanship, the automatic rifle, musketry.

(b) Practical: Cavalry drill, mounted and dismounted, to include the rifle troop; ceremonies and inspections; target practice; the saber; the cavalry pack; physical training.

Text: War Department Training Regulations.

Prerequisite: M. S. 107.

207. (1-2).

(a) Theoretical: Map reading and sketching; equitation; cavalry drill to include the rifle troop.

(b) Practical: Command and leadership as corpals; cavalry drill, mounted and dismounted to include the rifle platoon; sketching.

Text: War Department Training Regulations.

Prerequisite: M. S. 107, 108.

208. (1-2).

(a) Theoretical: Pistol Marksmanship; minor tactics; military history; military hygiene, sanitation and first aid.

(b) Practical: Command and leadership as corpals; cavalry drill, mounted and dismounted to include the rifle troop, pistol practice; minor tactical problems.

Text: War Department Training Regulations. Prerequisite: M. S. 207.

307. (3-2).

(a) Theoretical: Park riding; cavalry drill to include school of the squadron; cavalry combat, squadron and higher units; equitation and jumping; ceremonies and inspection; machine gun; care and selection of animals.

(b) Practical: Instructors in 107 (b), 108 (b), 207 (b), 208 (b); cavalry to include school of the troop; cavalry combat; tactical exercises; tactical rides; ceremonies and inspections; equitation and jumping.

Text: War Department Training Regulations.

Prerequisite: M. S. 208.

308. (3-2).

(a) Theoretical: Hippology; selection and care of animals; horseshoeing; cavalry drill to include the school of the troop; cavalry combat; tactical rides and exercises; equipment and jumping; rules of land warfare; field fortifications and field engineering.

(b) Practical: Instructors in 107 (b), 108 (b), 207 (b), 208 (b); practical packing; selection and care of animals; horseshoeing; cavalry drill to include school of the troop; cavalry combat; tactical rides and exercises; equitation and jumping.

MILITARY SCIENCE

Text: War Department Training Regulations. Prerequisite: M. S. 307.

407.(3-2).

(a) Theoretical: Military history and policy of the United States; cavalry drill, including school of the squadron; equitation and jumping; ceremonies and inspections; military law, moot courts, international law.

(b) Practical: Instructors in 107 (b), 108 (b), 207 (b), 208 (b); cavalry drill to include school of the troop; cavalry combat; tactical walks and exercises; park riding; practical packing ;ceremonies and inspections.

Text: War Department Training Regulations.

Prerequisite: M. S. 308.

408. (3-2).

(a) Theoretical: Customs of the Service, Reserve Corps, Regulations, Uniform Regulations; Minor tactics; field service regulations; map maneuvers, relief maps, and table problems; administration; packing and transportation; cavalry drill, including school of the squadron; field exercises; advanced equitation.

(b) Practical: Instructors in 107 (b), 108 (b), 207 (b), 208 (b); leaders in tactical exercises; tactical leaders; participation in tactical exercises as leaders; cavalry combat; ceremonies and inspections; cavalry drill to include school of the troop; advanced aquitation; practical packing.

Text: War Department Training Regulations.

Prerequisite: M. S. 407.

AIR CORPS UNIT

Professor: Albert M. Guidera, Captain Air Corps.

109, 110. (1-2).

(a) Theoretical: Organization and administration of squadron; Military courtesy and customs of the service; Infantry drill; Nomenclature, care and handling of pistol and rifle; History of aeronautics; Employment of Air Corps, Air Corps organization; Marksmanship; Military Hygiene and First Aid.

(b) Practical: Organizing the unit, Assignment of leaders; Performance of guard duty; Infantry drill: Rifle and pistol practice; Ceremonies; Display of equipment and shelter tent pitching.

209, 210. (1-2).

(a) Theoretical: Infantry drill, Principles of leadership; Air Corps weapons and aerial machine guns; Synchronized gears; Scouting and patrolling; Interior guard duty; Air Corps fundamentals; Aircraft engines.

(b) Practical: Infantry drill; Machine gun, Rifle and pistol firing; Nomenclature and stripping of machine guns; Problems in minor tactics; radio; Ceremonies.

Prerequisite: M. S. 109, 110.

309, 310. (3-2).

(a) Theoretical: Radio, aerial photography, types of cameras, interpretation of aerial photographs, map making from aerial photographs; Military sketching and map reading; aerial observation missions; airplane instruments; aerial sights; aerial navigation; bomb rocks and sights; tactics of a division.

(b) Practical: Radio practice; Military Mapping; Use of aerial sights; pistol practice; infantry drill; leadership; functioning as non-commissioned officer.

Prerequisite: M. S. 209, 210.

409, 410. (3-2).

(a) Theoretical: Military history and policy of the United States; development of aeronautics; rules of land warfare; administration of the squadron; meteorology; air corps organization, operations, aerial tactics, bombardment; pursuit and attack, aviation duties of air corps officers; nomenclature, rigging, repair of machines; types of airplanes, advance tactics and technique of separate branches, military law.

(b) Practical: Radio communications; rigging, repair of motors, map problems, leadership, functioning as lieutenants, captains, and squadron commanders, administration, weather forecasting.

Prerequisite: M. S. 309, 310.

DEPARTMENT OF MODERN LANGUAGES

Professor Campbell, Mr. Woolket, Mr. Strehli.

In beginning courses a through drill in pronunciation, the essentials of grammar, and colloquial exercises is given through daily oral and written **exer**cises. The reading of simple texts is taken up as early as possible.

The work of the advanced courses consists in the reading of selected texts and magazines, with incidental grammar review and drill in the use of colloquial idioms. Short dictation exercises are frequently given. Special stress is laid upon sight reading. Parallel reading of from 150 to 300 pages of selected prose works is required. In French and German, the reading is gradually adapted to the scientific work of other departments; the texts read in Spanish are literary and commercial.

A modern language is required throughout the freshman and sophomore years on courses X and XIX; French is required throughout the junior and senoir years in course IX group 1; otherwise the work in modern languages is elective in all four-year courses.

- 101, 102. Beginning French. (3-0).
 Grammar and easy reading.
 (Required in IX group 1).
- 103, 104. Beginning German. (3-0). Grammar and easy reading.

- 105, 106. Beginning Spanish. (3-0). Grammar and easy reading.
- 201, 202. Intermediate French. (3-0). Reading and selected texts. Grammar review. Parallel reading. (Required in IX group 1).
- 203, 204. Intermediate German. (3-0). Reading of selected texts. Grammar review. Parallel reading.
- 205, 206. Intermediate Spanish. (3-0). Reading of selected texts; composition; conversation. Parallel reading.
- 301, 302. Modern French. (3-0).

Modern French: the study of representative works from the beginning of the nineteenth century to the present time, with outside reading.

First term, the drama: plays by Hugo, Dumas, Augier, Labiche, Scribe, Rostand, and others.

Second term, the novel: texts selected from the works of Hugo, Balzac, Maupassant, Daudet, Zola, Loti, and France.

303, 304. Modern German. (3-0).

Careful study of representative works from the beginning of the nineteenth century to the present time, with outside reading.

First term, the drama; selections from the works of Kleist, Grillparzer, Hebbel, Ludwig, Hauptmann, and others.

Second term, the novel: selections from the works of Scheffel, Feytag, Keller, C. F. Meyer, Sudermann, and others.

305, 306. Modern Spanish. (3-0).

The study of representative works from the beginning of the nineteenth century to the present time.

First term, the drama: plays by Gutierrez, Moratain, Martinez Sierra, Hartzenbusch, Benavente, Echegearay, and the brothers Quintero.

Second term, the novel: texts selected from the works of Alarcon, Romanos, Ibanez, Valera, Galdos, Pereda, Caballero, Perdo Bazan, and Pio Baroja.

311. Technical and Scientific French. (3-0).

A practical course designed primarly to meet the needs of those whose professional work requires proficiency in the reading and translation of scientific French. Reading of available texts and periodicals best adapted to the needs of the departments most concerned.

Prerequisite: Course 202 or equivalent,

(returned for 54 th Cat 313. Technical and Scientific German. (3-0). A practical course designed primarily to meet the needs of those whose

professional work requires proficiency in the reading and translation of scientific German. Reading of available texts and periodicals best adapted to the needs of the departments most concerned.

Prerequisite: Course 204 or equivalent.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

315 Commercial and Industrial Spanish. (3-0). (returner for 54 th Cat)

A practical course designed for those who expect to follow their professions among Spanish speaking people. Social and commercial corresponding and reading of commercial and industrial texts and periodicals. Prerequisite: Course 206 or equivalent.

405, 406. Spanish Literature to 1800. (3-0).

A general survey of Spanish literature from its inception to the nineteenth century, with special emphasis on the literature of the "Golden Age." Careful study of selected texts, with outside reading.

First term, the drama: selections from the works of Lope de Vega, Ruiz de Alacon, Tirso de Molina, and Calderon de la Barca. Special study of the "Don Juan" legend and of "Celestina."

Second term, the novel: selections from the works of Cervantes, Quevedo, Guevera, and others. Special study of the picturesque novel.

DEPARTMENT OF MUNICIPAL AND SANITARY ENGINEERING

Professor Steel

401. Sewerage and Sewage Disposal. (3-0).

Determination of the quantity of storm water and domestic sewage; design and construction of sewer systems; principles of sewage treatment; methods of treatment; operation of sewage disposal plants.

Text: Sewerage and Sewage Disposal, Metcalfe and Eddy.

Prerequisite: Civil Engineering 311.

(Required in IV group 3).

402. Water Supply and Purification. (3-0).

Development of ground and surface water supplies; principles and methods of water purification; design, construction and operation of waterworks systems for municipalities.

Text: Public Water Supplies, Turneaure and Russell.

Prerequisite: Civil Engineering 311.

(Required in IV group 3).

403, 404. Sanitary Design. (0-4).

Practical problems in the design of sewer systems and appurtenances; sewage disposal plants; water collection and distribution systems; water purification plants.

Text: To be selected.

Prerequisite: To be taken with Municipal and Sanitary Engineering 401 and 402.

 \cdot (Required in IV group 3).

406. Sanitation and Public Health. (3-0).

Relation of sanitation to public health; municipal sanitary work, including garbage and refuse disposal; plumbing; control of food supplies;

220

mosquito, fly and rodent control; sanitation of swimming pools and tourist camps; organization of health departments.

Text: To be selected.

Prerequisite: Junior or senior classification.

(Required in IV group 3; elective in IV groups 1, 2).

407. Rural Sanitation. (2-0).

Relation of sanitation to health; necessity for and methods of safeguarding farm water supplies; safe sewage disposal for rural homes; malaria control; hookworm control; sanitation of rural schools; county health work; the role of milk in the carriage of disease and sanitary requirements of municipalities governing rural dairies.

Text: To be selected.

Prerequisite: Junior or senior classification.

408. Municipal Administration. (2-0).

City government, including the city manager plan; relation of city to state; administration of city departments; public utilities; city planning.

Text: An outline of Municipal Government, Maxey.

Prerequisite: Junior or senior classification.

(Required in IV group 3).

410. Sanitory Engineering. (4-2).

The collection, storage and distribution of water for municipal use; necessity for and methods of water purification; design and construction of waterworks systems. Quantity of sewage; design, construction and maintenance of sewer systems; sewage disposal.

The practice includes problems in the design of water supply and sewerage works.

Texts: Public Water Supplies, Turneaure and Russell; Sewerage and Sewage Disposal, Metcalf and Eddy.

(Required in IV groups 1, 2).

FOR GRADUATES

501, 502. City Management. (4-0).

Development of European and American cities; forms of city government, functions of the city manager; administration of municipal affairs; organization of city departments; city finances; public utilities; fire prevention and protection; police administration; parks and playgrounds; tourist camps; public health and welfare; housing; city planning.

503, 504. Sanitary Engineering. (4-0).

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Principles and methods of sewage treatment; principles and methods of water purification; garbage and refuse collection and disposal; mosquito control; sanitation and public health.

DEPARTMENT OF PHYSICAL EDUCATION

Professor Bible, Professor Bender, Associate Professors Anderson, Rothgeb, Assistant Professor Penberthy, Mr. Sprague.

The work of the Department of Physical Education is given in the following divisions:

1 Physical Training and Corrective Gymnastics.

2 Intramural Athletics.

3 Freshman Athletics.

4 Intercollegiate Athletics.

5 Courses for Training Teachers of Physical Education.

1. Physical Training and Corrective Gymnastics.

(a) Physical examination of freshmen and individual advice regarding defects of any nature. Classification of each case according to physical exercise, capacity and needs.

(b) Health talks to freshmen at frequent intervals throughout year.

(c) Freshmen physical training correlated with the corrective program and the intramural program in such a way that every freshman participates in some form of physical activity suitable to his health and physical needs. This work is given two hours a week throughout the year in ten sections.

(d) Individual gymnastics.

2. Intramural Athletics.

Numerous intramural games and contests between classes and military organizations to utilize the competitive spirit in the development of sound bodies, self-control and athletic proficiency. Practically all students take part in some form of intramural athletics.

3. Freshman Athletics.

Teams known as "Freshmen Teams" are organized from student who are in their first year in attendance at the college. These teams are supervised by members of the Department. Freshmen teams are fostered in football, basketball, baseball and track. Contests are scheduled with teams from institutions of non-collegiate rank.

4. Intercollegiate Athletics.

The Department of Physical Education has charge of all intercollegiate athletics, under the regulations laid down by the College and by the Southwest Athletic Conference. Intercollegiate contests are now held in the following sports: Football, basketball, track, baseball, tennis, cross country, golf.

5. Courses for Training Teachers of Physical Education.

PHYSICS

305, 306. Public School Physical Training. (3-2, 0-2).

The course is designed for teachers of physical education in the public schools. Calisthenics, marching, gymnastics, plays and games, intramural athletics are taught and practice work in teaching is required.

Prerequisite: Junior standing, and especial aptitude for work in Physical Education.

303, 304. Personal and Community Hygiene. (3-0).

A non-technical course planned for teachers in the public schools as well as special teachers of physical education. Such topics as nutrition, exercise, nervous system, reproduction, disease prevention and control, immunity, mental hygiene, hygiene of special organs, etc., are considered.

Prerequisite: Junior standing.

311, 312. Athletic Coaching. (3-2).

A course in the theory and practice of athletic coaching. Football, basketball, baseball, track, treatment of athletic injuries, and the administrative details of each sport are considered.

Prerequisite: Junior standing, and especial aptitude for athletic sports.

DEPARTMENT OF PHYSICS

Professor Silvey, Assistant Professors Vezey, Sanders, Mr. Foster, Mr. McCorkle, Mr. E. G. Smith.

201, 202. College Physics. (3-2).

A general course in physics' for students in general science courses and those preparing to enter a medical school.

This course includes the mechanics of solids, liquids and gases; and the phenomena of heat, light, sound, electricity and magnetism. Instruction is given by recitations, quizzes, problems and demonstrated lectures. Emphasis is laid upon the fundamental principles rather than the mathematical processes involved.

The practice includes about thirty experiments in the subjects named above.

Laboratory fee, 50 cents each term.

(Required in X; elective in XIX).

203, 204. General. (3-3).

A general course in mechanics, heat, light, electricity, and magnetism for engineering students.

Stress is laid on the derivation of the various formulas necessary for an understanding of the mathematical relations existing in physical determinations. Emphasis is placed on practical problems.

The practice includes about thirty experiments in the subjects named above. The work is, in general, quantitative.

Text: General Physics, Ferry.

Prerequisite: Mathematics 101, 103.

Laboratory fee, \$1.00 each term. (Required in III, IV, VI, VIII, IX groups 1, 2; XIII, XV).

207, 208. General. (3-2).

This course is identical with course 203, 204, with the omission of electricity and magnetism.

Prerequisite: Mathematics 101, 103. Laboratory fee, \$1.00 each term. (Required in V).

301, 302. Heat and Properties of Matter. (3-3).

A discussion of universal gravitation, elasticity, surface tension, diffusion, viscosity, mechanics of fluids, laws of heat transfer, kinetic theory, critical points, isothermal and adiabatic changes and the thermodynamics of changes of state and radiation.

The work is more descriptive than mathematical, but ample opportunity is offered to study the application of the calculus to physics.

Texts: Properties of Matter, Heat; Poynting and Thompson, or equivalents.

Prerequisite: Physics 201, 202, 203, 204 or 207, 208, and Mathematics 203, 204.

Laboratory fee, \$1.00 each term.

305. Light. (2-0).

A discussion of the wave theory of light, optical instruments, dispersion, spectroscopy, aberrations, refraction, interference, diffraction, polarization, double refraction and theories of refraction and reflection.

The treatment in non-mathematical.

Text: Edser's Light for Students, or its equivalent. Prerequisite: Physics 201, 202, 204 or 207.

r rerequisite. Thysics 201, 202, 204 of 207.

401, 402. Optics; Electricity and Magnetism. (3-3).

A discussion of periodic motion, wave motion, the nature and propagation of light, interference, diffraction, theory of optical instruments, po'arization, magnetism, magnetic induction and potiental, current electricity, electrostatic induction and potential, electromotive forces, thermal effects, photo-electricity, electro-magnetic induction and electro-magnetic theory.

Texts: Optics, The Theory of Optics, Part I, Schuster, or equivalent; Magnetism and Electricity, Poynting and Thompson, or equivalent.

Prerequisite: Physics 201, 202, or 203, 204 and Mathematics 203, 204.

Laboratory fee, \$1.00 each term.

403, 404. Kinetic Theory; Electron Theory. (3-0).

A study of gas pressure, speeds of gaseous molecules, Boyle's law, determination of the gas constant, the law of Gay-Lussac, Graham's law, law of diffusion, the mean free path, viscosity, Maxwell's distribution law, the phenomenon of conductivity of electricity through gases, mobility and diffusion of gaseous ions, measurement of the elementary charge, ratio of charge to mass of ions, positive ions, photo-electric action, Brownian inovements.

•Prerequisite: Physics 301, 302 and Mathematics 203, 204.

FOR GRADUATES

501, 502. Analytical Mechanics. (3-0).

A study of rectilinear motion, plane and solid motion of a point, plane and solid rotational motion, mechanisms, strains, kinetics of a particle, kinetics of a rigid body, statics, attraction and potential, plane and solid statics of a rigid body, hydrostatics and hydrokinetics.

Text: Analytical Mechanics, Barton, or the equivalent.

503, 504. Advanced Electricity and Magnetism. (0-3).

A study of the underlying principles of alternating electrical currents; the development of graphical methods of analysis as a basis for the solution of practical problems. The development of the equations for the propagation of an electromagnetic disturbance through a dielectric and for electromagnetic waves along wires and cables. A study of electrostatic and electromagnetic fields, the electromagnetic theory of light, thermal and electrical conductivity, conduction in magnetic fields, discharge of electricity through gases, Roentgen rays, Becquerel rays and the theory of the structure of the atom.

505 - 506 Theory of Thermody namies & Thermal Radia 507 - 508 Kinetic Theory; Electron Theory (3-0) - opentiatudents DEPARTMENT OF POULTRY HUSBANDRY "rito have mad 505 - 506 "richohave mad op. of Bora in

Professor Reid, Assistant Professor Irving

102. Farm Poultry. (2-2).

A general course in farm poultry. The breeds and types of poultry, culling of poultry for egg production, incubation, brooding and feeding for growth and egg production, winter and summer management, housing and hygiene, preparing poultry for market, methods of marketing; the practical application of these subjects to general farm conditions.

Text: Poultry Production, Lippincott.

The practice consists of the identification of breeds and varieties, judging poultry as to sex, age, constitutional vigor and egg production, plans for poultry farms and poultry houses, identification of feeds, methods of dressing poultry.

Laboratory fee, 50 cents.

(Required in XII, XVI; elective in I, XIV, C).

301. Preparing Poultry Products for Market. (2-2).

Pen fattening, crate fattening, fattening of the turkey flock, special feeds for ducks and geese, methods of dressing, trussing and deboning the fowls, candling eggs, preparing for cold storage and crating of poultry products.

Phys 301-302

Text: Productive Poultry Husbandry, Lewis.

The practice includes feeding two crates of fowls, dressing and preparing them for market, candling and grading eggs.

Laboratory fee, 50 cents.

(Required in I group 11).

302. Feeding and Brooding Poultry. (3-2).

Common grain and mill feeds for poultry, chemical composition, vitamine content and value as poultry feeds, embryology of the chick and introduction to brooding from a commercial standpoint.

Text: Poultry Production, Lippincott.

Prerequisite: Poultry Husbandry 102.

The practice includes methods in balancing poultry rations, different methods of determining the value of feeds, identifications and mixing poultry feeds, anatomy of the common fowl, identification of digestion and egg production organs.

Laboratory fee, \$1.00.

(Required in I group 11; XIV group 3).

401. Poultry Culling and Management. (2-2).

The underlying principles of poultry culling, a study of literature, management of a large poultry flock on commercial poultry farms, selecting the breeding stock, qualities of a good breeding male.

Text: Practical Poultry Management, Rice and Botsford.

Prerequisite: Poultry Husbandry 102.

The practice includes a study of the relationship between physiological characteristics and egg production of the domestic fowl, the standard type, weight and qualities of standard bred domestic fowls.

(Required in I group 11).

402. Poultry Farming. (2-2).

The laying out of poultry farms, costs and management of raising a flock of one thousand or more, types of houses, incubators and brooders raising of special types of poultry, teaching and demonstration plans.

Text: Productive Poultry Husbandry, Lewis.

Prerequisite: Poultry Husbandry 102.

The practice consists of problems in organizing, financing and establishing a commercial poultry business.

(Required in I group 11).

403. Judging Standard Bred Poultry. (2-2).

The judging of all standard breeds and varieties, special instruction to judges, methods of fitting for the show room, methods of breaking ties in poultry show, standard disqualifications and special disqualifications for the different varieties.

Text: American Standard of Perfection, American Poultry Association.

Prerequisite: Poultry Husbandry 102.

The practice consists of judging classes of exhibition poultry raised on the College poultry farm and the judging of two or more small shows in the surrounding communities.

(Required in I group 11).

421. Incubation and Hatchery Management. (0-4).

The running of two different Mammoth Incubators successfully and the adjustment of these machines under various conditions of heat and moisture in order to secure hatches of healthy chickens. The use of a hair hygrometer, the self recording thermometer with practical lessons in the care and treatment of hatching eggs and the actual management of a hatchery.

Prerequisite: Poultry Husbandry 102.

422. Artificial Brooding Management. (0-4).

The actual brooding of several hundred baby chicks under close supervision. The pedigreeing, wing banding and culling of the growing chicks with lessons in the cost and best methods of mixing poultry feeds for young chicks.

Prerequisite: Poultry Husbandry 102.

FOR GRADUATES

501, 502. Research Poultry Husban'dry. (2-4).

This course includes a study of the recent investigations in Poultry breeding and nutrition. Research methods are given attention. Experiment station literature, scientific journals and newer publications are to be read and reported by the student.

503, 504. Advanced Incubation and Brooding. (2-4).

Factors underlying the successful hatching of eggs. A, study of the effects of various chemicals and disenfectants on the hatching of hens eggs. Peculiar requirements of hatching eggs from different species of domestic fowl. Chickens, ducks, geese, trukeys and guinea fowl. Nutritive requirements of the young of the different species of domestic fowl. Optimum percentages of proteins and other nutrients in the ration. The vitamines necessary for growth. Results of vitamine deficiency in rations.

(These two courses are carried on in cooperation with the Chemistry Department).

Laboratory fee, \$1.00 each term.

DEPARTMENT OF RURAL EDUCATION

Professor W. L. Hughes, Associate Professor Wilcox.

121, 122. Elementary School Methods. (3-1).

Methods of teaching the elementary schools subjects, with special attention to the teaching problems of the rural teacher. Special attention is given to such problems as fitting the course of study to the smaller rural schools, daily programs, and correlation of subjects.

(Required in XVI).

221, 222. Rural School Administration. (3-0).

This course covers the administrative problems of the rural and village schools, such as community leadership; evaluating the teachers' efficiency; testing, grading and promotion of pupils; teachers' institutes, county supervision; keeping school records; cooperating with agencies for rural school improvement.

(Required in XVI).

321, 322. Secondary School Methods. (3-1).

This course is designed to meet the needs of students who expect to teach in city high schools. Special attention is given to the teaching of high school subjects, and to the organization and administration of junior and senior high schools.

(Required in XVI; 322 in XXII).

421, 422. History of Education. (3-0).

The first term will be given to the educational doctrines of ancient times. The second term covers modern education. Special attention is given to the educational systems of modern times with present tendencies in education.

(Required in XVI; 422 required in XIII).

423. The Junior High School. (3-0).

The organization and problems of the Junior High School.

424 - (1-4) FOR GRADUATES 501, 502. Problems in Rural Education. (4-0).

The first term is designed to give the student a general background of the rural school problem in the United States, including problems in related fields.

The second term treats of organization, supervision, and administration of the rural schools.

503. Problems in Elementary Education. (4-0).

This course covers such problems as present tendercies, forms of organization, the curricula, management, selection of subject matter, and teaching children how to study.

RURAL SOCIOLOGY

504. Devleopment of Public School Education in Texas. (4-0).

The origin and development of public school education in Texas.

505, 506. Principles of Educational Administration. (4-0).

The first part of this course covers administration of state and county school systems.

The second part covers the problems and principles of city school administration.

DEPARTMENT OF RURAL SOCIOLOGY

Professor Russell

201. Introduction to Social Problems. (3-0).

This course is an introduction to the study of society. It is mainly descriptive, but the ethical implications of some social relations are discussed. It covers such general subjects as human relations in the family—education, economic activity, politics, race contacts, and international affairs.

Text: Society and Its Problems, Dow. (Required in XXII).

204. Introductory Rural Sociology. (3-0).

An attempt is made to acquaint the student with some of the underlying social problems of the country district. The human element in rural life and production is emphasized; some disorganizing tendencies in rural life as farm tenancy, communication, poor schools, decaying churches, progressive agricultural tendencies.

Text: The Sociology of Rural Life, Hawthorne. (Required in XIII).

311. Social Psychology. (3-0).

The factors affecting group behavior together with methods of social control; the forces and influences which determine the mental attitudes of country people; the connections between a good understanding of the social mind and successful organization effort; methods of dealing with the problems involved; the many questions related to public opinion.

Text: Lectures and Library Readings.

(Required in I group 12).

312. General Sociology. (3-0).

This course is designed to give the student a clear idea of the field of sociology. The position of sociology among the social sciences is detined. The subject matter of sociology is outlined under the following heads: Population, physical environment, cultural environment, human motivation, social organization and social pathology. Emphasis is placed upon methods of investigation and quantiative measurement of the data of sociology.

Text: Introduction to the Science of Sociology, Park and Burgess. (Required in I group 12).

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

404. Rural Organization. (3-0).

A study of communal life in the rural districts with its natural organizing and disorganizing tendencies; a survey and evaluation of attempts at community organization, as; the survey, community club plan, community council plan, the school community center, the community church, the Y. M. C. A., the Red Cross in rural districts, etc.

Text: Community Organization, Steiner, and library readings. • 405. Social Research Methods. (2-2).

A study of the technique of making, editing, and publishing social science studies; the social survey, the case study, the interview, the questionnaire, the monograph. Several completed surveys are studied with an idea of understanding method as well as content. Special attention is paid to research possibilities of rural social problems.

Text: Field Work and Social Research, Chapin; Selected Surveys. 407. Rural Sociology. (2-2).

An analysis of the conditions, forces and agencies influencing the life of the country dweller and the country community; a detailed study of a number of special problems related to the social side of country life, such as, population questions; cityward drift; town and country relationships; rural health problems, recreation, rural leadership; community organizations and community planning. Attention is also given to the social prob-. lems connected with the home, the school, the church, the press and other social institutions.

Text: Rural Sociology, Gillette.

(Required in I group 12; XII, XVI).

415. Agricultural Journalism. (2-2).

The principles of newspaper writing, especially the preparation of material for agricultural papers and country weeklies; the part a county paper should play in country development; in the laboratory work, opportunity is given for actual writing for newspapers and farm journals. The Publicity Office of the College, and the Publicity Department of the Extension Service cooperate in the course.

Text: The Country Weekly, Ging; selected readings.

(Required in I group 12).

416. Agricultural Journalism. (2-2).

A continuation of course 415. Additional practice in the prepara- χ , tion of articles for agricultural and country papers; news campaigns for γ special objectives; the business side of conducting a paper.

Text: To be selected.

FOR GRADUATES

501, 502. Advanced Rural Sociology. (4-0).

An intensive study of some important aspects of the field of rural sociology. The first term is concerned mainly with the evolution of rural society; the second term with an analysis of some of the principal rural social problems of today and proposed solutions.

230

TEXTILE ENGINEERING

509, 510. History of Social Theory. (4-0).

The history of social theories which have been held by some of the leading thinkers in this field. Material for the course is drawn from such writers as the following: Plato, Aristotle, Macchiavelli, Rousseau, Hobbes, Comte, Malthus, Spencer, Ward, Giddings, Small, Tarde, Ross, Hobhouse, Lowie, Rivers, etc.

History of modern Social Haught. (4-0) Rural Community. (4-0) 512 DEPARTMENT OF TEXTILE ENGINEERING

Professor Bagley, Associate Professors Dowd, Lichte, Mr. Baker.

101, 102. Cotton Classing, (0-2).

Practice in grading and stapling cotton, the methods of handling the crop from the field to the mill. Other subjects of general interest to a cotton student are presented in lecture form.

Laboratory fee, 50cents each term.

 \cdot (Required in C).

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103, 104. Weaving. (0-3).

Practice in operating plain and dobby looms.

107, 108. Cotton Classing. (2-5).

Classes of buyers found in interior towns; problems and methods of interior buying; detail office methods, keeping accounts of purchases and sales of cotton. Practice, same as in 101, 102.

Text: Cotton Trade Procedure, Handrick & Dowd. Laboratory fee, \$1.25 each term. (Required in XVIII).

113. Cotton Exchanges. (3-0).

History and purpose of cotton exchanges, operation and details. Text: Cotton and the Cotton Market, Hubbard. (Required in XVIII).

206. Yarn Manufacture. (0-3).

Practice in operation of machinery used in the manufacture of cotton yarns.

(Required in VI, XVIII).

207. Weaving. (0-3).

Practice in operating plain looms. (Required in VI).

211, 212. Cotton Classing. (1-5).

Lectures covering larger problems of cotton marketing. Practice, same as in 107, 108.

Laboratory fee, \$1.25 each term. (Required in XVIII).

Forcign Catton Mine : = (3-2)

301, 302. Yarn Manufacture. (2-3, 0-2).

Recitations on the machinery and processes in the manufacture of coarse cotton yarns. Instruction is given with a view of imparting a general knowledge of the machinery and processes, including the study of the raw material; mixing; construction and operation of picking machinery, carding, drawing, slubbing, roving, ring spinning, spooling, reeling, and twisting; calculations to determine the neecssary gearing to produce given numbers, speeds and production.

Text: Cotton Yarn Manufacture, Winchester. (Required in VI).

303, 304. Fabric Designing. (0-3).

The classification of fabrics; the elementary principles of fabric structure; the explanation of various technical terms applied to designs and fabrics; the representation of drawing-in drafts and harness chains; the design of fancy shirting, madrases, dress goods, etc.

(Required in VI, XVII).

307, 306. Weaving. (3-3).

Recitations and lectures on the construction, operation and adjustments of plain, automatic, gingham, dress goods, and Jacquard looms.

Text: International Library of Technology, Vol. 80.

(Required in VI, XVII).

401, 402. Yarn Manufacture. (3-2, 2-3).

A continuation and more exhaustive treatment of courses 301, 302. A study of warp preparation, combers, mules, and organizations for the manufacture of all classes of yarns.

Text: International Library of Technology, Vols. 76, 77. Prerequisite: Textile Engineering 301. (Required in VI; 402 in XVII).

404. Fabric Analysis. (1-0).

Dissection of small samples, data for their reproduction. Prerequisite: Textile Engineering 303, 304. (Required in VI, XVII).

412. Magazine Review. (1-0). Students report in class on articles assigned them in textile magazines. (Required in VI, XVII).

413, 414. Cotton Classing. (1-2, 0-2).

Recitations and lecture on classification and stapling of cotton, buying spot cotton, papers used in the cotton trade and cotton exchanges.

Laboratory fee, 50 cents each term.

Text: Cotton and the Cotton Market, Hubbard. (Required in I group 4a; VI, XVII).

415, 416. Fabric Designing. (0-3). A continuation of course 304.

232

Prerequisite: Textile Engineering 304. (Required in VI).

- 417. Yaru Manufacture. (3-0). Same as course 401 without practice. (Required in XVII).
- 419, 420. Weaving. (1-2, 0-3).
 A study of loom fixing, cloth room machinery, and yarn dressing. Text: Practical Loom Fixing, Nelson.
 Prerequisite: Textile Engineering 307, 306. (Required in VI).

422. History Textile Industry. (2-0).

The development of the textile industry of the United States, covering phases of technical manufacturing; labor, wages, education; associations and combinations. A comparison of these topics is made with English and European manufacturing.

Text: The Cotton Manufacturing of the United States, Copeland. (Required in VI, XVII).

DEPARTMENT OF VETERINARY ANATOMY

Professor Francis.

111. Anatomy of the Domestic Animals. (3-6).
A careful study of the bones, joints and muscles. Text: Anatomy of Domestic Animals, Sisson. Laboratory fee, \$2.00. (Required in XI, XXI; elective inI).

112. Anatomy of the Domestic Animals. (3-6).
A study of the thoracic and abdominal viscera.
Text: Anatomy of Domestic Animals, Sisson.
Laboratory fee, \$2.00.
(Required in XI, XXI; elective inI).

Anatomy of the Domestic Animals. (3-6)
 This course includes a dissection of the circulatory system, the nervous

system and the organs of special sense.
Text: Anatomy of Domestic Animals, Sisson.
Laboratory fee, \$4.00.
(Required in XI, XXI; elective inI).

(Required in XI, XXI, elective in).

213. Ilistology and Embroyology. (2-4).

A lecture and laboratory course.

Texts: Normal Histology, Stohr; Embryology of the Chick, and Pig, Prentiss.

Laboratory fee, \$2.00.

(Required in XI, XXI; elective inI).

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

302. Anatomy and Physiology of Domestic Animals. (2-2).

This course is intended as an introduction to the study of veterinary medicine. It treats the fundamental processes of animal nutrition in detail, so that each student may be prepared to meet the problems that arise in the economic production of beef, pork, and dairy products.

Reference books: Physiology of Domestic Animals, Smith; Veterinary Anatomy, Sisson.

Laboratory fee, \$1.50.

(Required in I group 5).

306. Animal Diseases. (3-2).

A popular course on the common diseases of animals on the farm. Text: Principles of Veterinary Science, Hadley. (Required in XII; elective in C).

312. Topographical Anatomy. (0-6).

Prerequisite: Courses 111, 112, 211.

Text: Topographical Dissection Guide, Stewart.

FOR GRADUATES.

511, 512. Veterinary Anatomy. (2-4).

DEPARTMENT OF VETERINARY MEDICINE AND SURGERY

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Professor Marsteller, Associate Professors Lenert, Dunn. 351. Non-infectious Diseases. (3-0).

This course consists of lectures and demonstrations on physical diagnosis.

(Required in XI, XXI).

352. Non-infectious Diseases. (3-0).

In this course instruction is given on diseases of the digestive, circulatory, respiratory and urinary organs.

(Required in XI, XXI).

361. General Surgery. (3-0).

In this course instruction is given in the principles of surgery, restraint of domestic animals, surgical diagnosis, surgical exercises and soundness.

(Required in XI, XXI).

362. General Surgery. (3-0). (Required in XI, XXI).

371. Clinics. (0-7).

Laboratory fee, \$2.00.

372. Clinics. (0-12).

Laboratory fee; \$2.00.

- 471. Clinics. (0-7). Laboratory fee, \$2.00.
- 472. Clinics. (0-7). Laboratory fee, \$2.00.

234

All students taking clinics are required to give attention daily to cases assigned, and if necessary laboratory diagnosis and post-mortem examinations must be conducted. When necessary students will be required to visit sick animals on farms, ranches, and other premises near the College. Trips to other parts of the State are required when outbreaks of diseases occur that can not be studied at the College. About twenty-five hundred cases of non-infectious diseases, infectious diseases and surgical diseases of animals and fowls are treated each year.

(Required in XI, XXI).

403. Animal Diseases. (3-2).

A discussion of common infectious and non-infectious diseases of domestic animals.

Text: Veterinary Medicine, Vols. 1, 2, 3, 4, 5, Law. Prerequisite: Veterinary Anatomy 304. (Required in I group 5).

451. Diseases of Small Animals and Fowls. (3-0).

In this course special attention is given to non-infectious and infectious diseases in pet animals and domestic fowls.

(Required in XI, XXI).

452. Practice of Veterinary Medicine and Jurisprudence. (3-0).

The aim of this course is to acquaint the student with general business methods and State and national laws relating to the practice of veterinary medicine.

(Required in XI, XXI).

453. Infectious Diseases. (3-0).

This course involves the study of the symptoms, treatment and control of infectious diseases.

(Required in XI, XXI).

455. Diseases of Poultry. (2-0).

In this course instruction is given in diseases of poultry.

461. Obstetrics. (2-0).

This course treats of accidents of breeding, diseases incidental to pregnancy, parturition and post-partum conditions. Attention is also given to diseases of the newly born.

(Required in XI, XXI).

462. Operative Surgery. (3-4).

In this course instruction is given in castrating, spraying, dentistry, lameness, shoeing. Surgical exercises are required.

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Laboratory ree, \$+00. (Required in XI, XXI). 464. Diseases of the Reproductive Organs. (2-2).

This course deals largely with the causes and treatment of sterility of domestic animals. Some time will be given to infectious diseases of the reproductive organs.

Prerequisite: Veterinary Medicine 461.

Text: Diseases of the Genital Organs of Domestic Animals, Williams.

FOR GRADUATES

501, 502. Special Surgery. (2-4).

This course deals with problems of surgical conditions, surgical pathclogy, surgical technique and sterility of animals.

Laboratory fee, \$2.00 each term.

DEPARTMENT OF VETERINARY PATHOLOGY

Associate Professor Wharton

The practice consists of the microscopical study of these processes and 242. General Pathology. (3-2).

The elementary disease processes and their causes, including a study of the gross and minute appearance of the diseased tissues. Such processes as inflamation, necrosis, gangrene, atrophy, hypertrophy, ulceration; the various degenerations, infiltrations, pigmentations and tumor formations are considered.

instruction in laboratory technique.

Reference: General Pathology, Ziegler; Text-book of Comparative General Pathology, Kitt; Text-book of Pathology, Delafield and Prudden; Pathological Technique, Mallory and Wright.

Prerequisite: Veterinary Anatomy 213.

Laboratory fee, \$1.50.

(Required in XI, XXI).

341, 342. Special Pathology. (2-0, 2-4).

Lectures on the special systematic pathology and morbid anatomy of the different organs and systems of organs. The pathology of the various infectious and contagious diseases is considered.

The practice includes the demonstration of museum and fresh specimens, and an introduction to post-mortem technique.

References: Pathology and Therapeutics of the Diseases of Domestic Animals, Hutyra and Marek; Veterinary Post-mortem Technic, Crocker. Baboratory fee, \$4.00, second term.

Prerequisite: Veterinary Pathology 242.

(Required in XI, XXI).

343. Special Bacteriology. (2-4).

The pathogenic micro-organisms; their morphology, cultural characteristics and pathogenicity are considered.

The practice work consists of the study of the more important microorganisms which produce diseases in man and domestic animals.

236

References: Microbiology, Moore; Veterinary Bacteriology, Buchanan; A Text-book of Bacteriology, Hiss and Zinser.

Prerequisite: Biology 209, or its equivalent. Laboratory fee, \$4.00. (Required in XI, XXI).

441. Immunology and Serum Therapy. (2-2).

The fundamental principles of immunity. Special attention is given to the preparation of biologics used in the prevention of infectious diseases. Prerequisite: Veterinary Pathology 343. Laboratory fee, \$4.00.

(Required in XI, XXI).

442. Meat Hygiene. (2-2).

The abattoir inspection of meats and meat products; the Federal regulations governing such inspection, condemnation and disposal of carcasses, also the regulations governing interstate and foreign shipments of live stock.

Text: Meat Hygiene, Edelmann, Mohler and Eichorn. Prerequisite: Veterinary Pathology 341, 342. (Required in XI, XXI).

443. Parasitology. (2-2).

The parasites infesting the domestic animals, and the pathological conditions produced by them. Attention is given to the treatment and control measures.

Prerequisite: Biology 201, 202, or equivalent.

Laboratory fee, \$1.50.

(Required in XI, XXI).

444. Laboratory Diagnosis. (2-2).

The methods of procedure in the preparation of materials for laboratory examination; the technique of examination; biological tests of special importance.

Prerequisite: Veterinary Pathology 341, 342, 343. Laboratory fee, \$2.00. (Required in XI, XXI).

FOR GRADUATES.

541, 542. Advanced Special Pathology. (3-4).

Etiology, pathogenesis, lesions and results of diseases of organs and systems of organs; pathology of the infectious diseases.

Prerequisite: Veterinary Pathology 242, or equivalent.

Laboratory fee, \$2.00 each term.

543, 544. Advanced Special Bacteriology. (3-4).

A study of the pathogenic micro-organisms; their cultural and biological characteristics and pathogenicity.

Prerequisite: Biology 209, or equivalent. Laboratory fee, \$2.00 each term.

DEPARTMENT OF VETERINARY PHYSIOLOGY AND PHARMACOLOGY

Associate Professor Burns-

121. Physiology of the Domestic Animals. (2-0).

Lectures on the physical and chemical processes involved in the physiological functioning of the bodies of the domestic animals.

(Required in XI, XXI).

122. Physiology of Domestic Animals. (2-0).

Lectures on the physiology of the circulatory, respiratory, muscular and locomotive systems.

Prerequisite: course 121. (Required in XI, XXI).

221. Physiology of the Domestic Animals. (2-0).

Lectures on the nervous system, includings special senses, digestion, absorption, secretion and excretion.

Prerequisite: course 122. (Required in XI, XXI).

222. Physiology of the Domestic Animals. (3-4).

Lectures on physiological chemistry, with special reference to digestive juices ,enzymes, ferments, hormones, internal secretions, milk, urine, and chemical composition of the body.

The practice consists of studying blood, milk, urine, and other body fluids, including the action of natural and artificial digestive juices (enzymes) on the various foodstuffs. The student also makes graphic records of the physiological functioning of the muscular, nervous, respiratory, and circulatory systems.

Prerequisite: course 221. Laboratory fee, \$2.50. (Required in XI, XXI).

333. Pharmacology. (3-4).

The general preliminary work in pharmacology; a detailed study in metrology of the history of therapeutics, the source and composition of drugs, the methods of administration, the various factors influencing the action of drugs upon the individual, and the active constituents of medicinal plants and posology; the drugs affecting the circulatory and nervous systems, including anti-pyretics, are then studied.

The practice consists of laboratory work in examining and identifying crude drugs, making tests for their purity, extracting their active constituents, making chemical tests for each. Pharmaceutical methods used in the manufacture of medicinal preparations are carefully studied and each student is required to make a definite number of all types of official preparations, described in the Pharmacopedia and in addition a number of nonofficial preparations. Prescription filling, preparing, compounding and dispensing pharmaceutic preparations are all given ample consideration. The student is given an opportunity to observe the actions of drugs on experimental animals. The chemical and biological methods of standard-ization of medicinal preparations are taken up in detail.

Text: Veterinary Pharmacology and Therapeutics, Milks.

Laboratory fee, 3.00.

(Required in XI, XXI).

334. Pharmacology. (3-0).

This course is a continuation of course 331 and takes up all the drugs not studied in that course.

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Prerequisite: course 333. (Required in XI, XXI).

432. Toxicology. (1-2).

The causes, symptoms, lesions, prevention and treatment of organic and inorganic poisons, including poisonous plants and endogenous poisons.

In the practice, each student is required to make microscopical, chemical and biological analyses of the more common organic and inorganic poisons and poisonous plants. The student also observes the symptoms, lesions and methods of treatment of cases produced by the more common poisons upon experimental animals.

Texts: Veterinary Toxicology, Lander; Medical Chemistry and Toxicology, Holland.

Laboratory fee, \$2.50. (Required in XI, XXI).

FOR GRADUATES.

501, 502. Advanced Practical Physiology. (2-4).

This course affords opportunity for observations of the more intricate and recent phases of physiology. It is arranged for advanced students or teachers of physiológy who wish to make a thorough study of modern experimental methods. The work is arranged to suit the needs of the student and in hormany with is previous training.

503, 504. Advanced Physiology of Nutrition. (2-4).

A detailed study of the modern theories of nutrition with special reference to vitamines.

505, 506. Advanced Poisonous Plants. (2-4).

Original investigations and detailed studies of the poisonous plants affecting domestic animals.

507, 508. Advanced Experimental Pharmacology. (2-4).

This course affords opportunity for studying the modern methods of research in pharmacology and pharmaceutical processes. It comprises original research in studying the actions and uses of drugs.

PART V RESEARCH, EXTENSION, SUMMER SESSION, AND OTHER ACTIVITIES

THE TEXAS AND AGRICULTURAL EXPERIMENT STATION SYSTEM

B. YOUNGBLOOD, Director

The Texas Agricultural Experiment Station System is the research agency of the Agricultural and Mechanical College of Texas, and its function is the investigation and solution of agricultural problems. It consists of the central or Main Station at College Station with appropriate indoor laboratories and experiment station farms, and fifteen outdoor laboratories, or experiment station farms, located in various sections of Texas, as follows: Angleton, Beaumont, Beeville, Chillicothe, Denton, Lubbock, Nacogdoches, Balmorhea, Spur, Temple, Troup, Sonora, Llano Grande, Iowa Park and College Station. In addition, there are beevards at Dilley, Seguin and Roxton, and a queenyard and the State Apicultural Research Laboratory located at San Antonio. The work of the Station System comprises researches into the more important problems of veterinary science, chemistry, horticulture, animal industry, botany, entomology, agronomy, plant pathology and physiology, plant breeding, forestry, farm and ranch economics, rural home research, and the Feed Control Service. The substations and other outdoor or field laboratories are utilized for extending the work of the Main Station so that Statewide information may be secured upon the various phases of the investigational work. The Station System is the source of valuable information for students of agriculture and the farmers and stockmen of the State. It is looked to for facts by the School of Agriculture, the Extension Service, and other agencies for the dissemination of agricultural information. The work on the Main Station and on the Feeding and Breeding Substation (Substation No. 10) presents to students very unusual opportunities both in theoretical instruction and practical experience.

For this fiscal year, the Station System receives \$60,000.00 Federal funds and \$257,876.76 State appropriation.

A brief statement of the work of the Station System is as follows:

MAIN STATION

Veterinary Science:

The Division of Veterinary Science conducts researches covering the diseases of farm animals of various kinds. Special attention is being given to diseases affecting horses and mules, cattle, sheep, goats, and swine, and because of liberal appropriations by the Legislature, emphasis is being placed upon the study of the loin diseases of cattle. *Chemistry*:

The Division of Chemistry conducts researches relating to feeding stuffs, soils, fertilizers, irrigation waters, mineral, paints, and miscellancous analyses; the analysis of feeding stuffs for the Feed Control Service; and the enforcement of the State law regulating the sale of commercial fertilizers. The Chief of the Division is also State Chemist.

Horticulture:

The division of Horticulture conducts investigations relating to fruits, vegetables, and ornamental trees and shrubs, and the introduction and propagation of new and promising varieties of fruits, vegetables, and shrubs from foreign countries.

Range Animal Husbandry:

Under the Division of Range Animal Husbandry, researches are made with reference to the breeding management, feeding, and grazing of range animals, such as sheep and Angora goats, and cattle. Special attention is being paid to inheritance and scientific breeding as related to the improvement of specially adapted types of animals and the improvement of wool and mohair. This Division operates the wool and mohair scouring and grading plant, which is located at the Main Station. Substations No. 7, 10, and 14 are used extensively for researches relating to range animal husbandry.

Soil Survey:

The Division of Soil Survey is operated in cooperation with the Bureau of Soils of the United States Department of Agriculture, and its work is the detailed and reconnoissance soil survey of the entire State of Texas, by counties and areas. Soil surveying is merely the recording of the soil resources by type, or an inventory of the soil. The value of a soil survey is generally recognized by all classes of people as an aid to agricultural advancement.

Feed Control Service:

The State law regulating the sale of concentrated commercial feeding stuffs and the materials from which they are manufactured, provides for defining them, for prohibiting their adulteration; for correct weighing and marking, and for collecting of samples; it also provides for the expense of enforcing the law, and for fixing penalties; and places the enforcement of the act in the hands of the Director of the Texas Agricultural Experiment Station. The Director is empowered to adopt names, standards and definitions; to refuse registration of any feeding stuff under a name which would be misleading as to the materials of which it is made up, or which does not conform to the standards, and after ten days' notice to cancel such registration as may be found in violation of the law or contrary to the names, standards and definitions in effect.

The purpose of the Feed Control Service is to afford protection alike to buyers and sellers of feeding stuffs. Annual bulletins are issued, giving the names, standards and definitions; lists of firms registered for the purpose of selling feeds in Texas, and the feeds offered by them, as well as the chemical composition of these feeds, as determined by the chemist for the Feed Control Service. The Feed Control Service investigates problems encountered in the enforcement of the law, with reference to the feeding values of various feeds and combination of feeds. The results of these investigations are given to the people of the State through bulletins and circulars, issued from time to time.

Entomology:

The Division of Entomology conducts researches relating to the insect pests affecting the crops grown in Texas, including life-history and methods of control of the various species, as well as researches relating to the beekeeping industry of the State. The Chief of the Division is also State Entomologist, and as such has charge of the details of the enforcement of the law regulating foulbrood in bees.

Agronomy:

The Division of Agronomy conducts researches with farm crops and soils, paying especial attention to the introduction of new and promising varieties and the improvement of field crops by breeding methods. Particular attention has been given to breeding work with the grain sorghums, cotton, wheat, and other crops, not only toward improving them, but in the determination of the modes of inheritance of characters. Investigations are made as to tillage methods, methods of applying fertilizers, and the use of green manure crops for soil improvement. Through the introduction of new varieties and strains and the improvement of these and others by selection, marked increases have occurred in the acreage and production of the grain sorghum in Texas. Another accomplishment of great economic importance to the State, is the extension of the cotton-growing area of the State, brought about through early trials and tests of varieties followed by breeding work in Northwest Texas, which has opened up an extensive new cotton-growing region which is not infested with the bol¹ weevil.

Plant Pathology and Physiology:

The Division of Plant Pathology and Physiology conducts researches relating to the diseases affecting the plants of the State, with a view to developing methods of combating them. Studies are made of the diseases of field crops, vegetables, trees, and ornamentals and shrubs of various kinds, Marked progress has been made in the study of cotton root rot.

Farm and Ranch Economics:

The Division of Farm and Ranch Economics makes studies of agricultural economic problems in the State. A detailed study of costs and methods of range livestock production and ranch organization is being made on twenty-four typical ranches in the Edwards Plateau area of Texas.

In Rockwall and Collins Counties, 25 farms are being studied by inducing farmers to keep detailed farm record and accounts.

A comprehensive study of cotton staple is being made, contrasting the local cotton markets with the central cotton market as to grade, staple, and price.

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Botany:

The Division of Botany has as its purpose in making of botanical surveys of both ranching and crop-farming sections of the State. These surveys will be closely correlated with the farm and ranch economics and soil surveys of the Station. A great deal is known of the cultivated plants which are adapted to our conditions, and the crops sequence in which they can be grown to best advantage, but there is little knowledge of this kind applicable to our wild flora, including grasses, weeds, brush, and other plants utilized for grazing. These changes in the wild flora are of utmost importance to the grazer.

Swine Husbandry:

The Division of Swine Husbandry conducts investigations and researches in the feeding, breeding and management of swine. The swine husbandry plant is located on the grounds of the feeding and breeding substation near the College Campus.

Dairy Husbandry:

The Division of Dairy Husbandry also has its plant on the feeding and breeding substation, where researches into the feeding, management, and improvement by breeding, of dairy cattle are being conducted.

Poultry Husbandry:

The Division of Poultry Husbandry is conducting investigations in connection with the feeding, breeding, and management of poultry, with special reference to the improvement of flocks by breeding, and increased egg-production through the judicious use of animal and vegetable protein feeding stuffs. The poultry plant is located on the grounds of the feeding and breeding substation near the College Campus.

Rural Home Research:

The Station System is receiving the benefit of the Purnell Fund, which is an increasing fund from year to year. This fund is intended for the support of existing lines of research, and such economic, sociological, and rural home researches as will bring improvement to rural industry and rural life. A Division of Rural Home Research on the staff, with a thoroughly competent research woman as Chief, is being developed to look after all projects which have a bearing upon rural home problems.

State Apicultural Research Laboratory:

The great need for a specially equipped laboratory for the conduct of appropriate beekeeping investigations has been met by the State Apicultural Research Laboratory which is located near San Antonio, in Bexar County. This laboratory, which is completely equipped, is in charge of a competent queen breeder, is conducting researches bearing directly on the successful continuation of the beekeeping industry of the State. In addition to this laboratory and a queenyard near San Antonio, beekeeping outyards are maintained at Roxton, in Lamar County; Dilley, in Frio County; and Seguin, in Gaudalaupe County.

Main Station Farm:

The Main Station Farm at College Station is operated as a field laboratory for the conduct of tests of field crops and the researches having to do with soil fertility as well as those having to do with the introduction and propagation of valuable trees, shrubs, and grasses. Special attention is being given to the cotton breeding work, which is conducted by the Division of Agronomy on this farm. There is on the farm a modern gin-plant primarily for the ginning of the increase cottons for pure seed, but neighboring farmers have taken advantage of this gin-plant to have their increase seed ginned without danger of mixture with other non-pure cotton seed.

SUBSTATIONS

The fifteen substations, or experiment farms, owned and operated by the Station System, are, as their name implies, subordinate to and a part of the Main Station. In the location of these substations, due regard has been given to the need of outlying work within the several agricultural regions of the State, and the principal lines of work are closely related to the problems peculiar to the region involved.

Cooperation With the. School of Agriculture

Under the terms of a memorandum of understanding between the School of Agriculture and the Station, a number of teachers in the School of Agriculture are carrying cooperative projects of research on the Station, and certain research workers from time to time lecture to classes in the School of Agriculture.

Cooperation With the Graduate School

In cooperation with the Graduate School members of the Agricultrual Experiment Station Staff offer the following graduate courses, which are described under the respective departments of instruction.

Agricultural Economics 571, 572. Agricultural Experiment Station Methods of Research. (2-4).

Agricultural Economics 573, 574. Research in Ranch Economics. (2-4)

Animal Husbandry 571, 572. Wool and Mohair Research. (3-4).

Animal Husbandry 573, 574. Research in Animal Breeding.

Biology 571, 572. Research in the Physiology of the Cotton Plant (2-4).

Chemistry 571, 572. Special Topics in the Chemistry of Animal Nutrition. (2-6).

Chemistry 573, 574. Special Topics in the Chemistry of Animal Nutrition. (2-6).

Genetics 571, 572. Research in Cotton Breeding.

PUBLICATIONS.

The reports, bulletins, and circulars issued by the Station System are distributed to the farmer and stockmen and other citizens of Texas free for the asking. Because of limited funds available for printing, it is necessary to practice strict economy in the distribution of these publications. All requests for bulletins, circulars, and reports should be directed to the following address.

The Director,

Texas Agricultural Experiment Station, A. and M. College of Texas, College Station, Texas.

AGRICULTURAL EXPERIMENT STATION

THE ENGINEERING EXPERIMENT STATION F. C. BOLTON, Director.

The Texas Engineering Experiment Station is composed of all the engineering departments of the College, and was organized in 1914 for the purpose of affording a service to the industries of Texas similar to that afforded to the agricultural interests by the Agricultural Experiment Station; of assisting the urban population of the State in solving the technical problems of urban life; of investigating engineering and industrial problems of especial importance to Texas; and of disseminating information along these lines.

The Texas Engineering Experiment Station Staff consists of the entire teaching force of the following departments of the College:

Agricultural Engineering. Architecture. Chemical Engineering. Civil Engineering. Electrical Engineering. Geology. Mechanical Engineering. Municipal and Sanitary Engineering. Physics. Textile Engineering.

Thirty-three bulletins have been issued relating to appropriate problems. These bulletins are distributed free, except in a few cases where the supply has become exhausted. For a list of these bulletins or for further information address the Director. 11

THE EXTENSION SERVICE CHAS. H. ALVORD. Director

Extension work in agriculture and home economics by the Agricultural and Mechanical College in cooperation with the United States Department of Agriculture was established under the terms of the Smith-Lever Act, the Texas Legislature formally accepting the terms of the Federal Act passed in May, 1914. The board of Directors and the President of the College executed the first cooperative agreement under its terms with the States' Relations Service of the United States Department of Agriculture in 1914.

The general purpose is to carry information relating to agricultural and home economics from the College, the experiment stations and other authentic sources to farmers, farm women, farm boys and girls and by practical demonstrations teach them how to apply this information to the solution to their problems. In addition to the regular State and Federal Smith-Lever funds that are available for the conduct of the work, several cooperative projects are maintained by the United States Department of Agriculture under cooperative agreement between the College and the Department, these activities being correlated with and functioned through the Extension Service at the College. Besides the important undertakings of farm and home demonstration work through county agents, sustained jointly by the county, the College and the United States Department of Agriculture, the service disseminates information by demonstrations given by specialists in counties having no county agents and through bulletins and other printed material prepared and sent out from the institution. The demonstrations and the information sent out cover every phase of better farming and home making and promote improvement in rural welfare. The funds available from the counties, the State and the Federal Department have been sufficient to enable the College to maintain county agents in practically all of the more important agricultural counties in the State. The condition under which work is placed in a county is, that the county commissioners court or other local organization pay from one-half to two-thirds of the salary of the agent; the remaining portion of the salary and expenses being borne by the College and Department.

FARM DEMONSTRATION WORK

The farm demonstration work is conducted by district and county agents, and consists of applying scientific principles to the solution of the problems of production and marketing farm and ranch products.

HOME DEMONSTRATION WORK

The farm home is an essential part of the farm establishment, and the district and home demonstration agents are disseminating information to farm housewives through demonstrations, lectures, publications, in home management, dairying, gardening, orcharding, poultry keeping, and other phases of home improvement; thus enabling the farm women to keep fully informed with reference to modern methods in dealing with household problems.

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EXTENSION SERVICE

SPECIALISTS

In the growth and development of the work, trained specialists in certain phases of agricultural work have been found essential to the successful dissemination of information on improved agricultural practices. These men and women specialists keep in touch with the latest information obtainable regarding their particular specialty and assist the county and home demonstrations agents in the solution of difficult problems in their work, requiring the services of specially trained men and women along certain lines, and compile information, answer correspondence, and emergency calls.

RURAL ORGANIZATION

The Extension Service, through its specialists, district and county agents, is encouraging rural organization in counties where agents are maintained, the purpose of these organizations being to stimulate cooperation among farmers in all matters of interest to farm families, and especially the co-operative handling of farm products through purchase and sale in such manner as to obtain the best returns.

BOYS AND GIRLS' CLUBS

The primary mission of an educational institution is to look after the rising generation, and while the Extension Service would in no wise neglect the adult farmer, yet it has realized the importance of properly training the youth of the State during the formative period; therefore, special effort has been made under trained leadership and by diligent instruction to give the boys and girls the proper understanding of agriculture and home economics and to prepare them for successful and happylife in the country. The particular projects maintained are boys' agricultural and live stock club work, and girls' canning and poultry club work.

PUBLICATIONS

Seasonal advice on farm problems is issued through bulletins, leaflets, circulars, correspondence, newspaper articles, and the Semi-Monthly Extension Service Farm News, as well as correspondence and mimeographed letters and circulars.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

THE TEXAS FOREST SERVICE E. O. SIECKE, Director

The State Forestry activities were initiated by an act of the thirtyfourth Legislature. In accordance with the law the Director has supervision over all forest interests and matters pertaining to forestry within the jurisdiction of the State. He is charged with the duty of enforcing all laws pertaining to the protection of forests and woodlands, preventing and extinguishing forest fires, collecting data relative to forest conditions, and cooperation with counties, towns corporations and individuals in preparing plans for the protection, management and replacement of trees, wood lots and timber tracts.

The State is authorized to accept gifts of land to be used to demonstrate the practical utility of timber culture, water conservation and as refuges for game. The Board of Directors has the power to purchase lands in the name of the State, suitable chiefly for the production of timber, as State Forests, using for such purposes any special appropriations or any surplus money not otherwise appropriated which may be standing to the credit of the State forestry fund. Two State Forest areas, comprising 3,336 acres have been purchased through legislative appropriation made for that purpose. A third State Forest of 2350 acres, containing eight million feet of merchantable pine timber, was obtained in 1925, through legislative act transferring jurisdiction from the Prison Commissions to the Texas Forest Service. Two of the State Forests are now under administration for the purpose of demonstrating the reforestation and management of timber crops.

For the current year \$50,000.00 of State funds and \$27,000.00 of Federal funds are available for carrying on the designated activities of the office. The personnel comprises five technical foresters and forty-four field men.

DIVISION OF FOREST PROTECTION

This Division has charge of activities relating to the protection of timber from fire, insects and diseases. The Chief of the Division maintans headquarters at Lufkin which is centrally located as regards the timber section of Texas.

DIVISION OF FOREST MANAGEMENT

The administration of the State Forest areas and the various demonstration projects pertaining to methods of reforestation and management fall in this Division. It also has charge of the co-operation extended to the owners of large tracts of timber land who desire to initiate forestry practices on their holdings.

DIVISION OF FARM FORESTRY

Under the terms of the memorandum of understanding between the Extension Service and the Texas Forest Service, the Farm Forest activities are conducted on a cooperative basis. The field of farm forestry comprises EXTENSION SERVICE

a stimulation of proper forest management on the part of the farmers in the timbered portion of the State and the encouragement of tree plant-, ing for protection and utility purposes by the farmers in the treeless portions of Texas.

PUBLICATIONS

Seventeen bulletins have been issued which deal with practically all phases of forestry and, in addition, a large number or un-numbered forestry circulars have been prepared and published. Requests for forestry publications should be addressed to Director. Texas Forest Service, College Station, Texas.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

SUMMER SESSION

The regular Summer Session consists of two terms of six weeks each. The 1927 Summer Session opens Monday, June 6, and closes Saturday, August 27. Students may enroll for the full session or for either term.

The purpose of the Summer Session is:

1. To provide teachers and others denied the privilege of attend College during the regular session an opportunity to pursue courses for college credit.

2. To give students of the College and others an opportunity to shorten their college course by doing summer school work.

3. To offer those qualified to pursue graduate work an opportunity for study in courses leading to the Master of Science degree.

4. To provide opportunity for professional improvement through short courses, of a highly specialized character, in certain trades and professions, as: Cotton classing; industrial education; a course for electric metermen; and a short course for graduate veterinarians.

Practically all departments of the College are open to students in the Summer' Session. Detailed announcements of all the courses will be iscued about the first of March. For further information and Summer School catalogue, address Director of Summer School, or The Registrar, College Station, Texas.

FERTILIZER CONTROL SERVICE G. S. FRAPS, State Chemist

The chemist of the Texas Experiment Station is designated by law as State Chemist, and has charge of the enforcement of the fertilizer law. Under his direction fertilizers are inspected, sampled for analysis, the samples analyzed, and the results published as bulletins of the Experiment Station. It is also the duty of the State chemist to investigate the composition, properties, and agricultural values of fertilizers, and of fertilizer materials, and to conduct experiments relative to the value of fertilizers Such investigations are being made, and the results published from time to time. The people of the State are furnished with information concerning fertilizers, by means of personal letters, bulletins, and otherwise. Co-operative fertilizer experiments are made with farmers, so that they can test the effects of various combinations of fertilizers on their own land.

Analyses are made of soils, irrigation and domestic waters, fertilizers, etc., when the analysis would be of public benefit along the lines of agricultural chemistry, and when the samples are taken in accordance with the requirements necessary to secure a suitable sample. Persons who desire to secure an analysis should request further information and instructions for sampling, as samples must be properly taken if the analysis is to have any value.

Analyses of feeding stuffs for the Feed Control Service, and chemical investigations of their composition and properties, are also made by the Division of Chemistry of the Experimen⁺ Station.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

OFFICE OF STATE ENTOMOLOGIST F. L. THOMAS, State Entomologist

By act of the Legislature the entomoligst of the Texas Agricultural Experiment Station is ex-officio State Entomoligist and is charged with enforcing the law of the State relative to diseases of bees. Under this law the State Entomologist is empowered to issue such regulations as may be necessary to control, eradicate or prevent the introduction, spread or dissemination of diseases of honey bees, as far as may be possible. The regulations that have been issued prohibit the moving or shipping of bees and appliances capable of transmitting diseases from one county to another without proper authority. Apiaries where American foulbrood is found are placed under quarantine until declared free from disease. Keeping of bees in hives or boxes not possessing movable frames has been made unlawful in order to facilitate examination of colonies in the areas where diseases occurs. Bees on combs must be accompanied by a proper certificate when shipped into this State.

Biennial reports on the work of the inspection service contain information on the recognition, control and eradication of bee diseases.

PART VI REGISTER OF STUDENTS

REGISTER

GRADUATE STUDENTS

LL.B., St. Louis University, 1912; LL.M., University of Tennessee, 1920. Binney, John HenrySci......Bryan M.A., University of Texas, 1925. Crawford, Charles WilliamME.....Bryan B.S., A. and M. College of Texas, 1919. Cushing, Emory ClaytonAg......Ag.....Bryan B.S., A. and M. College of Texas, 1923. Doak, Clifton ChildressSci.....Colleg. Station B.S., North Texas State Teachers' College, 1922. Faires, Virgil MoringBryan B.S., University of Colorado, 1922. B.S., University of Nebraska, 1926. Foster, H. A.Sci.....College Station M.A., University of Texas, 1926. Foster, Thomas Orion, Jr.CE......San Antonio B.S., A. and M. College of Texas, 1922. Fouraker, Leroy Levi _____EE ____Bryan B.S., A. and M. College of Texas, 1914. Galbraith, John Warren _____CE ____Belton B.S., A. and M. College of Texas, 1926. A.B., Trinity University, 1925. Harrington, Marion ThomasChE.....Plano B.S., A. and M. College of Texas, 1922. Hosking, Floyd JamesBryan B.S., University of Minnesota, 1924. Johnson, Habert HerringSciWaco A.B., Baylor University, 1926.

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

Killian, Martin BurgerCE.....Alvord B.S., A. and M. College of Texas, 1926. of Texas, 1925. B.S., Pennsylvania State College, 1913. B.A., Abilene Christian College, 1923. Morgan, Ellis HamiltonCE.....Houston B.S., A. and M. College of Texas, 1923. Nelson, Thomas RobertSci......College Station M.A., University of Texas, 1922. Rode, Norman FrederickEEBryan B.S., Clemson Agricultural College, 1919. Ross, James WendellSci.....Sci......Sci.....Bryan B.A., University of Texas, 1923. Sandstedt, Carl EdwardCE......College Station A.B., Leland Stanford University, 1910. A.B., Baylor University, 1926. Smith, Elmer GillamSci......College Station A.B., Amherst College, 1919; M.S., A. and M. College of Texas, 1925. M.A., Baylor University, 1924.

| Tidwell, Herbert C. | Sci | College Station |
|-------------------------------|-----------------|-----------------|
| M.A., Baylor University, 19 | 19. | |
| Vezey, Edward Earl | Sci | College Station |
| B.S., A. and M. College of | Oklahoma, 1910. | _ |
| Watson, John Leroy | AA | Bryan |
| B.S., A. and M. College of | Texas, 1915. | |
| Watt, Russell A. | Ar | Bryan |
| B.S., University of Illinois, | 1918. | - |
| Wenzel, William Charles | RE | Comfort |
| B.A., Southwest Texas State | | |
| Williams, Edward L. | IE | College Station |
| B.S., University of Pittsburg | g, 1925. | - |
| Wilson, Carl Bassett | CE | Kirbyville |
| B.A., Baylor University, 19 | | |
| Wright, Samuel Robert | CE | College Station |
| B.S., A. and M. College of | | 5 |

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UNDERGRADUATE STUDENTS

ABBREVIATIONS

| AA—Agricultural Administration AgEd—Agricultural Education Ag—Agriculture | IE—Industrial Education Land—Landscape Art LA—Liberal Arts |
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| AgEng—Agricultural Engineering | ME-Mechanical Engineering |
| Ar-Architecture | RE—Rural Education |
| CE-Civil Engineering | Sci—Science |
| EE—Electrical Engineering | TE—Textile Engineering |
| IA—Industrial Arts | VM—Veterinary Medicine |
| CM-Two-year Course in Cotton | Marketing and Classing |
| Tex-Two-year Course in Textile | Engineering |
| C-Two-year Course in Agriculture | 2 |
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| Abell, Thomas Henry | 1 LA | Wharton |
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| Abernethy, Robert Grandison, Jr. | 2 LA | Palestine |
| Abney, Zach | 4 AA | Marshall |
| Acres, Richard Louis | 1 ME | El Paso |
| Adams, Cyril Samuel | I CE | Waco |
| Adams, Edward Vergne | 1 Sci | Brvan |
| Abney, Zach Acres, Richard Louis Adams, Cyril Samuel Adams, Edward Vergne Adams, Herbert Benjamin | 1 ME | Laredo |
| Adkerson, John Ridgley Affleck, Bert, Jr. | 3 AA | Granger |
| Affleck, Bert, Jr. | 1 TE | Childress |
| Akins, Dee Wyatt, Ir | 1 EE | Fort Worth |
| Albert, Clarence Glenn | 1 ME | San Angelo |
| Alexander, Charles Crews | 1 Ar | Ballinger |
| Alexander, Thomas Mayben | 3 EE | Fort Worth |
| Atheck, bert, Jr. Akins, Dee Wyatt, Jr Albert, Clarence Glenn Alexander, Charles Crews Alexander, Thomas Mayben Alford, James Ervin Allen, Edwin Joseph Allen, James Grenade | I EE | Caldwell |
| Allen, Edwin Joseph | 4 EE | San Angelo |
| Allen, James Grenade | 2 Tex | Fort Worth |
| Allen, Jesse Lowel | 1 EE | Ouanah |
| Allen, Theodore Hugh | l Ar | Wichita Falls |
| Allen William Rivers | 1 I A | Bryan |
| Allison, George Edward Allison, Jack Edward | 1 LA | San Angelo |
| Allison, Jack Edward | 1 AA | San Angelo |
| Almond, Joe | l Ar | Del Rio |
| Almond, Maxwell Douglas | 2 LA | Corsicana |
| Almond, Robert Gibson | 1 Ag | Alfred |
| Alsabrook, Oda Dee | 1 I.A | Cisco |
| Alspaugh, Claude E. | 1 CM | Arlington |
| Altenbern, Carl Albert | 4 EE | Savanna, Illinois |
| Amend, James Daily | 4 Ag | Ideal |
| Amend William Scott | 3 Ασ | Ideal |
| Amsler, Marcus John | | Dallas |
| Amsler, Marcus John Anderlitch, Frank | 1 CE | Los Angeles, Calif |
| Anderson, Clifford Ernest | 1 ME | Longview |
| Anderson, Donald Bertrand | | |
| Anderson, Ernest Monroe, Jr | | |
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| Anderson, Gran Victor | 3 ME | Donna |
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| Anderson James Floud | 2 ^ ^ | I I'll ab a wa |
| Anderson Linscomb | 4 IF | Ardmore Okla |
| Anderson, Louis Wilmer Anderson, Louis Wilmer Anderson, Marion Alphous Anderson, Tomme | 1 Δ α | Tavlor |
| Anderson Marion Alphous | 1 Δ σ | Marchall |
| Anderson, Marion Aprious | 2 C L | Ciliante a |
| Anderson, Fomme | | Silverton |
| Anderson, waiter Edward | | Dallas |
| Anderson, Walter Edward Anderson, William Irven Anderson, Wayne Yeargan | | Cuero |
| Anderson, Wayne Yeargan | I AA | Cooper |
| Ando, Minoru Andrews, Ernest Lee | 2 <u>ME</u> | Hitchcock |
| Andrews, Ernest Lee | 2 EE | Fort Worth |
| Andrews, Hilma Felix Andrews, Homer Milton | 1 Ag | Bryan |
| Andrews, Homer Milton | 1 AA | Electra |
| Appleman, James Clyde | | Dallas |
| Arlla. Charles Max | I AĂ | Houston |
| Appleman, James Clyde Arlla, Charles Max Armour, Victor Prentiss | LEE. | Mineola |
| Armstrong, Robert Markle | 1 FF | Sugarland |
| Armstrong, William Davis | 1 Δσ | Wharton |
| Arnold, Dennie Claude | 1 IE | |
| Arthur Curtic Link | | Del Klo |
| Arthur, Curtis Link Arthur, James Billy | I Af | Groveton |
| Arthur, James Diny | I AA | Dallas |
| Asbury, Jay B. | | Dallas |
| Asbury, Jay B. Ashley, Howard Ashy, Joe Henry Atkins, Glenn Wyatt Atkinson, Arthur Richard | 2 ME | San Antonio |
| Ashy, Joe Henry | | Jasper |
| Atkins, Glenn Wyatt | l Ar | Midlothian |
| Atkinson, Arthur Richard | 1 EE | Houston |
| Atwell, William Fred Augustat, LeRoy | 2 EE | Ballinger |
| Augustat, LeRoy | 1 EE | Marlin |
| Among Dahart Walton | 11 A | D. 11 |
| Avery, Robert walton | I LA | Drookshire |
| Avery, Robert Walton Avery, Warren Solomon | 1 ME | Brookshire |
| Avery, Warren Solomon Avila, Felipe de Jesus | 1 ME 1 EE | Brookshire Groveton Durango Dgo |
| Avery, Warren Solomon Avila, Felipe de Jesus | 1 ME 1 EE | Groveton Durango, Dgo., |
| Avery, Warren Solomon Avila, Felipe de Jesus | 1 ME 1 EE | Groveton Durango, Dgo., |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro | 1 ME 1 EE Sp Ag | Groveton Durango, Dgo., Mexico Durango, Dgo., |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro | 1 ME 1 EE Sp Ag | Groveton Durango, Dgo., Mexico Durango, Dgo., |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro | 1 ME 1 EE Sp Ag | Groveton Durango, Dgo., Mexico Durango, Dgo., |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro | 1 ME 1 EE Sp Ag | Groveton Durango, Dgo., Mexico Durango, Dgo., |
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| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Aylor, Charles Mahlon Aylor, Homer Borden | 1 ME 1 EE Sp Ag 4 CE 2 ChE 1 ME | Groveton Durango, Dgo., Mexico Durango, Dgo., Mexico Tucson, Arizona Yoakum San Saba |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Aylor, Charles Mahlon Aylor, Homer Borden Babcock Russell Montrose | 1 ME 1 EE Sp Ag 4 CE 2 ChE | Groveton Durango, Dgo., Mexico Durango, Dgo., Mexico Tucson, Arizona Yoakum San Saba San Saba Ecrt Worth |
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| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Ayıor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Bacher, Robert Marshall | 1 ME 1 EE | Groveton Durango, Dgo., Mexico Durango, Dgo., Mexico Tucson, Arizona Yoakum San Saba San Saba Fort Worth Houston |
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| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Aylor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Badger, Marion H. Badgett, Lloyd Franklin Badgett, Walter Howard Bailey, James Luther Bailey, Roy Alexander Bain, Thomas Calhoun Baker, Rubie Arnold | 1 ME 1 EE Sp Ag | Groveton |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Ayor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Bacher, Robert Marshall Badgett, Lloyd Franklin Badgett, Walter Howard Bailey, James Luther Bailey, Roy Alexander Bain, Joe Bailey Bain, Thomas Calhoun Baker, Stanley James Baker, Stanley James | 1 ME 1 EE Sp Ag 4 CE 2 ChE 2 ChE 1 ME 1 AA 3 EE 4 Ar Sp AA 1 Ag 2 Ar 2 Ag 1 Sci 3 ME 1 CE 4 ME 4 ME 4 Ag 4 Ag 4 Ag 1 AG | Groveton |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Ayor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Bacher, Robert Marshall Badgett, Lloyd Franklin Badgett, Walter Howard Bailey, James Luther Bailey, Roy Alexander Bain, Joe Bailey Bain, Thomas Calhoun Baker, Stanley James Baker, Stanley James | 1 ME 1 EE Sp Ag 4 CE 2 ChE 2 ChE 1 ME 1 AA 3 EE 4 Ar Sp AA 1 Ag 2 Ar 2 Ag 1 Sci 3 ME 1 CE 4 ME 4 ME 4 Ag 4 Ag 4 Ag 1 AG | Groveton |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Ayor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Bacher, Robert Marshall Badgett, Lloyd Franklin Badgett, Walter Howard Bailey, James Luther Bailey, Roy Alexander Bain, Joe Bailey Bain, Thomas Calhoun Baker, Stanley James Baker, Stanley James | 1 ME 1 EE Sp Ag 4 CE 2 ChE 2 ChE 1 ME 1 AA 3 EE 4 Ar Sp AA 1 Ag 2 Ar 2 Ag 1 Sci 3 ME 1 CE 4 ME 4 ME 4 Ag 4 Ag 4 Ag 1 AG | Groveton |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Ayor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Bacher, Robert Marshall Badgett, Lloyd Franklin Badgett, Walter Howard Bailey, James Luther Bailey, Roy Alexander Bain, Joe Bailey Bain, Thomas Calhoun Baker, Stanley James Baker, Stanley James | 1 ME 1 EE Sp Ag 4 CE 2 ChE 2 ChE 1 ME 1 AA 3 EE 4 Ar Sp AA 1 Ag 2 Ar 2 Ag 1 Sci 3 ME 1 CE 4 ME 4 ME 4 Ag 4 Ag 4 Ag 1 AG | Groveton |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Ayor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Bacher, Robert Marshall Badgett, Lloyd Franklin Badgett, Walter Howard Bailey, James Luther Bailey, Roy Alexander Bain, Joe Bailey Bain, Thomas Calhoun Baker, Stanley James Baker, Stanley James | 1 ME 1 EE Sp Ag 4 CE 2 ChE 2 ChE 1 ME 1 AA 3 EE 4 Ar Sp AA 1 Ag 2 Ar 2 Ag 1 Sci 3 ME 1 CE 4 ME 4 ME 4 Ag 4 Ag 4 Ag 1 AG | Groveton |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Ayor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Bacher, Robert Marshall Badgett, Lloyd Franklin Badgett, Walter Howard Bailey, James Luther Bailey, Roy Alexander Bain, Joe Bailey Bain, Thomas Calhoun Baker, Stanley James Baker, Stanley James | 1 ME 1 EE Sp Ag 4 CE 2 ChE 2 ChE 1 ME 1 AA 3 EE 4 Ar Sp AA 1 Ag 2 Ar 2 Ag 1 Sci 3 ME 1 CE 4 ME 4 ME 4 Ag 4 Ag 4 Ag 1 AG | Groveton |
| Avery, Warren Solomon Avila, Felipe de Jesus Avila, Jose Pedro Axline, Edwin Jasper Ayers, Vernon Preston Aylor, Charles Mahlon Aylor, Homer Borden Babcock, Russell Montrose Badger, Marion H. Badgett, Lloyd Franklin Badgett, Walter Howard Bailey, James Luther Bailey, Roy Alexander Bain, Thomas Calhoun Baker, Rubie Arnold | 1 ME 1 EE Sp Ag 4 CE 2 ChE 2 ChE 1 ME 1 AA 3 EE 4 Ar Sp AA 1 Ag 2 Ar 2 Ag 1 Sci 3 ME 1 CE 4 ME 4 ME 4 Ag 4 Ag 4 Ag 1 AG | Groveton |

| Barbeck, William Randolph | 1 ME | San Antonio |
|---|---------|-----------------|
| Barber, Clifford Fountain | 1 CE | San Antonio |
| Barker, Elmer David | 1 4 4 | Houston |
| Barker, Jesse Edward | 1 FF | Tovarkana |
| Darker, Jesse Luward | 1 TE | Техагкана |
| Barmore, Clifford Hubert Barnard, William Clifford | | Cameron |
| Barnard, William Clifford | IEE | Deport |
| Barnes, Clarence Whaley | I LA | Marshall |
| Barnes, Jack A | 1 ME | Waco |
| Barnes, Jack A Barnett, Othal Vernon | IME | Beaumont |
| Barnett, Patrick Edward | | Lufkin |
| Barney, Kenneth Fred | 1 M F | Fort Worth |
| Barnhill, Noel William | 1 FF | Silchee |
| Barrett, Darrell Maurice | 1 4 9 | Dublin |
| Darrett, Darrett Maurice | 1 M E | |
| Barron, Rupert Douglas | I IVI E | Wellborn |
| Bartlett, Frederick W., Jr. | I LA | Dallas |
| Bartlett, Zenas Wilson | 2 ME | Marlin |
| Basinger, Charles Spurgeon | 1 EE | Dallas |
| Bates, Roy Phillip Batjer, Jack | | Dallas |
| Batier Jack | 2 Ag | Cape Girardeau |
| Dutjer, juen | | Missouri |
| Batjer, Robert Dunbar | 2 A g | Cape Girardoau |
| Datjer, Robert Dunbar | | |
| D C | C- ME | Missouri |
| Bauer, George C. | | Bryan |
| Bauer, Ralph Elliott | 2 ме | Houston |
| Baughn, Milton Hubert | 1 Sci | Paris |
| Baumann Theodore Philip | 1 EE | Mexico D F |
| Baxter, William Kirk | I TE | San Saba |
| Baxter, William Kirk Bayless, Robert Earl | 2 A A | Hillsboro |
| Beach, William Davis Beams, George William | C I | Wichita Falle |
| Beams Coorge William | 2 F F | Horoford |
| Beard, Albert Paul | 2 ME | |
| Beard, Albert Paul | 2 FF | Kurten |
| Beard, Calvin Wayne | | Kurten |
| Beard, Calvin Wayne Beard, James Feimster | ZIE | Austin |
| Beasley, John F | I LA | Bryan |
| Beasley, John F | 2 AA | Austin |
| Beck Ben Denton | I.A. | Spearman |
| Beckham Beverly Welford | 1 LA | Hearne |
| Bedford, D. R. | 1 M F | Fort Worth |
| Bell, Clarence Ward | 114 | Houston |
| Bell, John Bernice | 4 ^ ^ | Tular |
| Bell, John Sparks | | Surahun Cuit |
| Bell, John Sparks | I EE | Suphur Springs |
| Bell, Joe Warren ; | I ME | Sulphur Springs |
| Bell, Lloyd Clifton | 4 EE | Bellville |
| Bell Stanton Forrest | 2 M F | Asherton |
| Bell Therman Milton | 1 E E | San Juan |
| Belsher Horace Ellisor | 4 Ar | Houston - |
| Bennett, Foreman Rush | 4 A A | Dallas |
| Bennett, Glenn Gordon | 2 M F | Sour Lake |
| Benton, Marion Bythel | 3 4 9 | Slaton |
| Dennon, Marion Dyther | 1 M E | Colied |
| Bergman, Ewald John | | Gonad |
| Bergstrom, Charles Richard, Bergstrom, John August Earl. | Jr | |
| Bergstrom, John August Earl | | Austin |
| Bernhard Dick | | Dallas |
| Berry Lahan Edward | 2 A A | Waco |
| Bertrand Iav | 2 A A | Houston |
| Bethea, William Cade | I CE | Brvan |
| Bethel, Milligan | | |
| | 4 AgEd | Hext |
| Bierschwale, Albert Johnson | 4 AgEd | Hext |

| Liffle, Roy Ethridge | l IA | Gainesville |
|--|-----------|-----------------|
| Biggers, Samuel William | 1 LA | Dallas |
| Billman, Clarence Charles | 1 AA | Donna |
| Bird, James Madison | 2 Ag | Dublin |
| Birdsong, Bailey Simmons | 3 TĒ | Greenville |
| Birdwell, James Weldon | 3 Sci | Overton |
| Bissell, Alfred Lindley | 1 Sci | Giddings |
| Black, Laurin Dougal, Jr | 4 A A | Temple |
| Black, Richard Murray | 1 Ar | Hollywood Calif |
| Blackaller, James Harrison | 3 C F | Pearcall |
| Blackburn Cyrus Orion | 1 66 | Mathic |
| Blackburn, Cyrus Orion Blackshare, Everrett Ogborn | 1 EE | Mamphia |
| Diackshare, Everiett Ogborn | | Mamphis |
| Blackshare, John Murrel Blackwell, Reiffert Forbs | I Ar | Wemphis |
| Blackwell, Reiffert Forbs | | Cuero |
| Blain, Hayes Blair | | |
| Blair, Hal Hamilton | 4 Ar | Houston |
| Blair, John Cambelton | l CE | Corsicana |
| Blair, Johx, T. Jr. Blair, Robert Overall Blair, Walter Raymond | SpAg | Coleman |
| Blair, Robert Overall | 1 Ag | Coleman ' |
| Blair, Walter Raymond | 1 EĔ | Dallas |
| Blake, Wilmer Hildreth | 1 EE | Iasper |
| Blanch, John Cannon | 1 AA | Beaumont |
| Blanchard Dean Clifton | 1 F F | Ranger |
| Blanks William Henry | SnCE | San Angelo |
| Blanton, Byron Dewey Blevins, Paul | 1 Ασ | Dublin |
| Bleving Paul | 305 | FL Campo |
| Bloomer, John Pierce | 1 E E | Balton |
| Plount John Frenklin | IEE | |
| Diount, John Franklin | 2 AA | San Augustine |
| Blount, John Franklin Blount, Robert John Blum, Howard Fred | I CM | Gainesville |
| Blum, Howard Fred | I EE | San Antonio |
| Bobo, Clarence Eugene | I_EE | I-lolland |
| Bock, Abe | 2 Ar | Dallas |
| Bock, George | 3 Ar | Dallas |
| Bodine, Willis Raymond Boehm, Eston Lewis | .4 AgEng | Temple |
| Boehm, Eston Lewis |] EÉ | Genoa |
| Boethel, Roy Henry | 1 Ag | Hallettsville |
| Bogle Robert Gerald | 2 I A | FI Paso |
| Bohlmann, Otto Joseph Boog-Scott, John Elliot, Jr Booth, James Edwin | 4 Ar | Schulenburg |
| Boog-Scott John Elliot Ir | 1 A.ø | Fort Worth |
| Booth James Edwin | 2 F F | Dallas |
| Bordages, Elliott Isadore | 1 M F | Beaumont |
| Boriskie Loe Rudolph | 1 TE | Bruen |
| Boriskie, Joe Rudolph Bostick, Walter Leon | 1 M C | Distant |
| Boswell, Arthur Dale | I ME | Beaumont |
| Boswen, Arthur Dale | I UNE | Fort Worth |
| Boudreaux, Chester Andrew | I ME | Houston |
| Bounds, William Baillio | I Sci | Cleburne |
| Bourland, Lacey Noel | 3 Sci | Clarendon |
| Bouton, John Waldo | 2 EE | Webster |
| Boutroue, Victor Jules | 2 M E | Sour Lake |
| Bovell, William Thomas | 2 AA | |
| Bowen, Albert Guss | I LA | Waco ' |
| Bowen, George Gradie | 1 AA | Clyde |
| Bowen, Robert Harold | I Land | Vernon |
| Bowers, Albert Verne | 3 F F | Lubbock |
| Bowers, Albert Verne Bowlin, Berry Thomas | 4 Ar | Amarillo |
| Bowman, Clyde Roland | 114 | Bryan |
| Boy George Pierce | 31 4 | Cuero |
| Box, George Pierce Box, Roy Alton | 4 A a E d | Stopher 11 |
| box, Roy Anon | T ABEU | |
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| Boyd, Allmon Taylor | I AgĿd | Lewisville |
| Boyd, Robert Earl | IEE | Needville . |
| Boyd, Walter Ernest | I LA | Houston |
| Boyd, William Giles Boykin, Robert Stafford Jr | 4 Ag | College Station |
| Boykin, Robert Stafford Jr | 2 EE | Cameron |
| Boyles, William James Boynton, Sidney Moses | 1 CM | Sweetwater |
| Boynton, Sidney Moses | | Lufkin |
| Boyt, Cecil Kenneth Boyt, Elmer Vernon | CI | Cheek |
| Boyt, Elmer Vernon | 4 CF | Cheek |
| Bradford, Raymond Moore Bradley, Elbert J. Jr. | 1 Ar | Fort Worth |
| Bradley Elbert I Ir | 2 M E | Fort Worth |
| Bradshaw, Price | 1 66 | MaCrogor |
| Drausilaw, Frice | | Starling City |
| Braeuer, Harry Ernest Branum, Kermit Estous | | Sterling City |
| Branum, Kermit Estous | | Hornersville, Mo |
| Branyon, William Elgin | I AA | Lockhart |
| Braskamp, Leon Herbert | I RE | Mission |
| Braunig, Élwyn Paul | 1 EE | Hallettsville |
| Bray, Austin Coleman | 2 AA | Dallas |
| Breazeale, Lawrence Callier . | l Ag | Crockett |
| Brehmer, Herbert | 4 Ag | |
| Bret, Peter Emile | | Hitchcock |
| Brewer, Lawrence Joseph | 1 ChF | Houston |
| Brewster, Sam Findley | 4 A σ | Relton |
| Brian, William Thomas, Jr | 2 4 4 | Voakum |
| Bridges, Orville Dial | 1 CE | Son Antonio |
| Bridges, Raymond | ICE | Waat |
| Bridges, Raymond | I CL | west |
| Briggs, Preston Pengra | | Eastland |
| Briggs, Wallace Eugene Brightman, Volney English | | Lampasas |
| Brightman, Volney English | | Crockett |
| Brinkoeter Hilbert (lavton | 2 4 4 | Karnes (lity |
| Broad, Bertram Carl Broad, John Franklin | 2 ME | Brady |
| Broad, John Franklin | Sp Land | Austin |
| Brock, Gayle Lee Brock, Kirk Patrick | | |
| Brock, Kirk Patrick | | Livingston |
| Brock Norman Howard | 166 | San Antonio |
| Brockette, Elmer Earl | 2 T F | Grandview |
| Brochead, James Gilbert | 1 FF | Allen |
| Brodhead, John Randolph | IME | Allen |
| Brodnax, Roby Lewis | 1 E E | Waso |
| Brodnax, Roby Lewis | 2 CM | Burton |
| Broesche, Edwin Broesche, Joseph Hoffman | 2 E E | Durton |
| Broesche, Joseph Hollman |) EE | Durton |
| Broiles, Hiram | Sp 1 E | Fort worth |
| Brokaw, Charles Austin | ICE | Houston |
| Brooks, Frank Arbuckle | 1 ChE | Giddings |
| Brooks Jack Manual | 2 A A | San Antonio |
| Brooks William Alonzo | 1 F F | Palestine |
| Provisionard Wilfred John | 1 M F | Port Neches |
| Brown Bernard Pierce | 3 ChE. | Burleson |
| Brown Clittord I Ir | 11 A | Uorsicana |
| Brown Edward Watts | 7 A g | Henrietta |
| Brown Fred Ross | 1 6 6 | Dallas |
| Brown, George Parks | 205 | Seymour |
| Brown, George Washington | ······································ | Gainesville |
| Brown, George Wasnington Brown, Henry Carleton | | Oil Hill Kanner |
| Brown, Henry Carleton | I AI | Louston |
| Brown, Horace Kirtland | I EE | |
| Brown John Bradford | I C M | 1 2100 |
| Brown log Himer | 1 6 6 | Alvord |
| Brown, John James | 3 TE | Weston |
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| D I 1/ | | |
|---|--------------------|-----------------|
| Brown, Jesse Moore | I CM | Iort Davis |
| Brown, Jesse Thomas | I <u>Ar</u> | Lockhart |
| Brown, Jesse Thomas Brown, Joe Taylor | 3 CE | El Paso |
| Brown Kenneth I vons | 1 C M | Runge |
| Brown, Lycurgus Van Zandt | 3 CE | Fort Worth |
| Brown, Lycurgus Van Zandt Brown, Paul Armstrong Brown, Roy Calvin | 3 CE | Somerville |
| Brown, Roy Calvin | 2 L.A | Houston |
| Brown Robert Fugene | 1 4 4 | College Station |
| Brown, Raymond Kenneth Browning, Jack Thomas | 1 Ar | San Antonio |
| Browning Jack Thomas | 1 5 5 | Stamford |
| Brummett, James Robert | 21 4 | Dallas |
| Bruss, Ernest Hudgins | | Dallas |
| Druss, Efficit Hungins | 2 1 ~ | Danas |
| Bryan, Herbert Harris Bryant, Allen Cullen | | Danquete |
| Bryant, Allen Cullen | I Ar | Mexia |
| Bryant, Alton Watson | I Ar | Sweetwater |
| Buchan, Rudolph Carl | | Galveston |
| Buchanan, John Terrell Buchanan, Leil Orville Buchanan, Robert James | I LA | Saratoga |
| Buchanan, Leil Orville | 4 TE | Plainview |
| Buchanan, Robert James | 2 Ag | Kurten |
| Buchel, Carl Anthony | | Cuero |
| Buck Cleo Eugene | 1 Sci | Beaumont |
| Buck John McKinnon | 1 A A | Leander |
| Buck Richard Allan | 1 4 4 | Beaumont |
| Buckley Francis Augustine | 3 4 a | Refugio |
| Buckley, Francis Augustine Buescher, Vastine August Bulnes, Carlos C |) Ag 2 A A | Smithville |
| Bulace Coales C | 1 CE | Solution C |
| Duines, Carlos C. | IUE | Walantin C. A. |
| Bunton, Sam Emmitt, Jr | | Valentine |
| Burch, George Davison Burges, Ellis Jordan | 2 EE | Yoakum |
| Burges, Ellis Jordan | I LA | Seguin |
| Burgess Hershel Edwin | I I A | Haelenter |
| Burgess, John Sanderlain, Jr | 4 AA | Dallas |
| Burgess, John William Burgess, William Warfield, Jr Burks, Darnall | 1 Ar | Fort Worth |
| Burgess, William Warfield, Ir | 1 ME | Fort Worth |
| Burks, Darnall | 3 CE | San Antonio |
| Burks Lack | M E. | San Antonio |
| Burnett, Jerrold J Burney, J. W. Jr. | 1 Ar | Bonham |
| Burney I W Ir | 1 CE | Evant |
| Burnitt, Richard White | 1 66 | Calvert |
| Burns, Weldon Bailey | 1 ME | Catorina |
| Durits, weldon Dailey | I MIE | Tovorbana |
| Buron, William Avondino Burrage, James Wilson | I CILE | Texarkana |
| Burrage, James Wilson | Z ME | Dallas |
| Busby, Ernest Monroe | | waco |
| | | |
| Butler, Arthur William Butler, George Edward | I ChE | Dallas |
| Butler, George Edward | I TE | Dallas |
| Butler, George Edward Butler, Walter Cecil Byars, Russell Henry Byrom, Mills Herbert Cage, Richard Grady Caldwell, Blake Marable Caldwell, Richard Hanner Callaghan, George Franklin Callaghan, John Bell | 2 V M | Fort Worth |
| Byars, Russell Henry | 1 M E | Houston |
| Byrom Mills Herbert | 4 M F | College Station |
| Cage Richard Grady | 1 Ag | San Antonio |
| Caldwell Blake Marable | 4 ChE | Muskogee Okla |
| Caldwell, Diake Marable | | Muskogeo, Okla |
| Caldwell, Richard Hanner | ······1 1 L.······ | Tovorkone Okia. |
| Calhoun, Harold Eugene | | Гехагкапа |
| Callaghan, George Franklin | | Houston |
| Callaghan, John Bell | | Houston |
| Callahan Albertis Neelv | 1 C E | Dallas |
| | | |
| Camp, Sam Dines Campbell, Charles Vance | 2 Ar | Weatherford |
| Campbell, Charles Vance | | Lampasas |
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| Campbell, Henry Villard Jr Campbell, Jack Shelton Campbell, Sam McInnis | 3 AA | Lampasas |
|---|---------------|------------------|
| Campbell, Jack Shelton | l Ag | Richardson |
| Campbell, Sam McInnis | 2 Ag | Devine |
| Cannon Arthur Felix | l Ar | Fort Worth |
| Cannon Ben W | 1 M F | Crockett |
| Cannon, John Allardyce | 1 EE | Texarkana |
| Cannon, John Allardyce Cannon, Timothy Cannon, William Alston | 1 ME | Dallas |
| Cannon, William Alston | I TE | Texarkana |
| Cape, Enos | 2 CE | San Marcos |
| Card, Leland Poythress | IFE | Houston |
| Cargile, Charles Wyatt | LEE | Hot Springs A |
| Carhart, Isaac Whitfield | 2 FF | Greenville |
| Carl, Edward Miller | IFF | San Antonio |
| Carlisle, Marvin Leroy | 1 M F | San Antonio |
| Carlson, Oluf Guy | 4 F F | Eort Worth |
| Carmichael William Reginald | 2ΙΔ | Burkburnott |
| Carmichael, William Reginald Carothers, Charles Lowry Carpenter, Allen Lawrence | 1 C M | Sulphur Spring |
| Carporter Allon Lowronce | | |
| Carpenter, Fred Ray | | Maraball |
| Carpenter, Rodolph David | 2 ME | Waishan |
| Carroll, Bernard John | | |
| Carson, Kermit Langford | | College Station |
| Carson, Kermit Langiord | I MIC | w aco |
| Carter, Arthur Edwin Carter, Arthur Paul | | Luing |
| Carter, Arthur Paul | | Bryan |
| Carter, Gilbert Buie | | Dallas |
| Carter, James Clifton | I Ar | Iexarkana, Ar |
| Carter, Leo Vernon | I CM | Dalhart |
| Carter, Willis Griffith | I ME | Port Lavaca |
| Casey, Joseph Douglas | I CE | Dallas |
| Cashell, James Bethel | | Greenville |
| Castillo, Fabio Castleman, Andrew Liston | I CE | Salvador, C. A |
| Castleman, Andrew Liston | 4 AA | Waco |
| Cates, Charles Allen | I ChE | Deratur |
| Cates, John Hale, Jr | 3 EE | Decatur |
| Catron, Joe Devore | 2 EE | Rosenberg |
| Caudle, Thomas Glenn | 3 Ag | Stephenville |
| Cates, John Hale, Jr. Catron, Joe Devore Caudle, Thomas Glenn Caudry, Lee | 2 EE | Sherman |
| Caushy I Allen | 11 H | (randall |
| Causey, Edward Livingston Cavileer, John Palm | 2 Ar | Dalhart |
| Cavileer, John Palm | 2 AA | Austin |
| Chadwick, Wiley Jackson Chambers, Ben R. | 2 CM | Brenham |
| Chambers, Ben R | 4 Ag | Houston |
| Chambless, Henry Baldwin Champion, Willis Neuman | I CĔ | Bomarton |
| Champion, Willis Neuman | 2 Sci | Donna |
| Chandler. Olen Hubbard | 3 M.E | Dallas |
| Chapin, Alfred Victor | | Arlington, Colo. |
| Chapman Clifford Grady | LEE | Forney |
| Chase, Arthur Merten, Jr. | 2 MF | Houston |
| Cheaney Frank Hail | 416 | 1)21/26 |
| Chi. Hsueh Chi | SpIA | Changsha China |
| Chi, Hsueh Chi Chi, Isueh Chi Chilcoat, Milton Benjamin | 31F | Dallas |
| Childers Acie Rill | 2 Δσ | lasher |
| Childers, Acie Bill Childers, Ben Watson | | Dalbart |
| Childers, Homer William | 2 4 4 | Houston |
| Childers Walter Thomas | | |
| Childers, Walter Thomas Chimene, Irvin Edward | I Ag A E C | Uzolia |
| Chimene, Irvin Edward Christal, George Granville Christal, Pichard Allison | | |
| | | |

| Chaister D. L. | 105 | 11 |
|---|-------------|-----------------|
| Christensen, Peter John Christensen, William Ole | | Houston |
| Christensen, William Ole | l Ar | Dallas |
| Cisco, Orvil | I Sci | Ardmore, Okla. |
| Clanton, Ralph Francis | <u>l EE</u> | Dallas |
| Clardy, Carl Dennis | | Galveston |
| Clark, John Haney | 3 ChE | Fort Worth |
| Clark, John Haney Clark, John Haney Clark, Jack Placete | I LA | Yoakum |
| Clark, Marcus Hughes | I Sci | San Antonio |
| Clark, Robert Frederick | ZEE | Beaumont |
| Clark, Sanger A. | 4 AA | Whitney |
| Clark, William Parrish | 1 L.A | Lockhart |
| Clark, Will T. | 4 EE | Weatherford |
| Clarke, Arthur Cyrus | I AA | San Benito |
| Clarke, Ira Douglas | 4 Ar | San Benito |
| Clay, James Jackson | 1 EE | San Angelo |
| Clay, Marion Alexander | 2 E E | San Angelo |
| Cleaver Maurice | 2 I A | Dallas |
| Cleveland Raymond Baker | 3 A o | Hillshoro |
| Clingingsmith, George Ira | 1 66 | Hart |
| Clute, William Benjamin | 2 FF | Schenectady N V |
| Cobb, Cecil Arnett | 1 A A | Franklin |
| Cochran John Henry | 1 ME | Houston |
| Cochran, John Henry Cochran, Roy | 2 ChE | New Salem |
| Cochran, Kuy | 2 DE | Houston |
| Cochran, Virgil Eugene Cocke, Richard Powell | Z KE | Son Ponito |
| Cockrell, Clifford McDonald | | Marshall |
| Cockrell, Chilord McDonald | 4 ME | |
| Cocks, Tilford William | I AA | Slisbee |
| Codrington, Charles Francis | I EE | Comfort |
| Cody, Raymond Albert | 2 Ag | Celeste |
| Coffey, Joe Wendall | I AA | Electra |
| Coker, William Rutherford | 2 AA | Athens |
| Cole, Thurston Stuart | 1 CM | Bryan |
| Coleman, Earnest Abernathy | 3 LA | Miles |
| Coleman, John Scott | 4 A A | Wellington |
| Coleman, Steve Alfred Jr. | .4 Ch E | Brownwood |
| Coleman Wood Rolls | l A a E d | Wellington |
| Coleman, William Thomas, Jr Colgin, Paul C Collins, Orville Grimmitte | .2 ČhE | Denton |
| Colgin, Paul C. | | Gatesville |
| Collins, Orville Grimmitte | 3 F.F | Benbrook |
| Collins, Willis Elmer | / (.H | Scheneciady N Y |
| Coltrin, Robert Barnett | 1 Ar | Galveston |
| Condron, William Franklin | 1 Tex | Elgin |
| Connally Herschol C Ir | 100 | Rocobud |
| Connally, Wince Lanier Conner, Richard Roth | 3 A A | Sulphur Springs |
| Conner, Richard Roth | l Ar | College Station |
| Conover, Brooks William Merle | 114 | Dallas |
| Cook Chauncey Levitt | 1 66 | McAllen |
| Cook, Chauncey Levitt Cook, Eugene Glynn | 2 F F | Putnam |
| Cook, Elmo V. | ΛΔα | Colorado |
| Cook, William Bert | | Soaly |
| Cooke, Arthur Charles Henry | | Houston |
| Cooksey, Charles Melvin | عد 1 ∧ م | Turn and itta |
| Cooper Francia Crealist | I Ag | i urnersville |
| Cooper, Francis Crockett | | Houston |
| Cooper, James Major Cooper, Joseph Theoria | I AA | Center |
| Cooper, Joseph Theoria | Z CE | I emple |
| Cooper, Maurice Royce | 4 AA | Center |
| Cooper, Maurice Royce Cooper, Roy Kenneth Cope, Jesse Tiner, Jr. | I LA | Hugo, Oklahoma |
| Cope, Jesse 1 mer, Jr. | .I ME | Karnes City |
| | | |

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|---|---------|----------------|
| Coppedge, Liston Glenn | ГТЕ | Dallas |
| Corley. Quinn Marvin | 2 Ag | Del Rio |
| Corman Abe Loe | ITE | Dallas |
| Corns, Joseph Barr Courville, Dan Batiste Covacevich, Nicholos S. | 4 Δ σ | Harlingen |
| Comille Der Patiete | 4 M C | Deegen |
| Courville, Dan Baliste | | Reagan |
| Covacevich, Nicholos S. | I ME | San Antonio |
| Cowan, lames Vance | | Dallas |
| Cowan, Willis David | 4 AA | Arlington |
| Coward Chester Raymond | 2 A A | Austwell |
| Cox, Dudley Sewell | 1 Sci | Wichita Falls |
| Cox, Elmer Oliver | 1 M E | Normangaa |
| Cox, Einer Onver | | Normangee |
| Cox, Fred Butler | | Whitney |
| Cox, Herman Grahm | 2 Ar | Fort Worth |
| Cox, Preston Wright | 1 CE | Wichita Falls |
| Cox Robert Travis | 1 Sci | Eastland |
| Cox, William Boyd Cox, Willie Oscar | 4 CF | Lacksonville |
| Cox, Willia Occar | 3 M E | Normangaa |
| Cox, while Oscal | | Normangee |
| Coyle, William Hunter Crabtree, James Edley | I EE | Rowlett |
| Crabtree, James Edley | | Clarendon |
| Craddock, Thomas Drayton | 1 CM | Crockett |
| Craig Robert Matthews | 3 6 6 | Hamilton |
| Craig, Thomas Gwynne Craig, William David, Jr. | 1 Ar | Edna |
| Craig, William David Ir | 1 Sci | Austin |
| Craig, Willmot Walker | 4 M E | |
| Craig, willinot walker | | Hamilton |
| Craigo, Edgar James | I CM | |
| Crain, Oscar Lee Crawford, Weldon Louis | I ME | Cumby |
| Crawford, Weldon Louis | | Palestine |
| Crecelius, Emory Speer | 1 AĂ | San Antonio |
| Crecelius, Emory Speer Creed, Reginald Farquhar | 2 AgEng | Bryan |
| Crews, John Branson | ICM | Doucotto |
| Criswell, Jack Fowler | 2 / / | Doucette |
| Criswell, Jack Fowler | | Forney |
| Criswell, Leonard Lucius | I AA | Forney |
| Criswell, Willard | | Dallas |
| Criswell, Willard Crocker, Alfred | 2 Ag | Center |
| Crocker Charles Graham | 1 M F | San Angelo · |
| Crook, George Calvin Cross, Paul Smith | 1 TE | Austin |
| Cross Paul Smith | 1 CM | Brvan |
| Crownover, Herman Angus | ITE | Grandview |
| Crumley Floyd Burney | 4 Sci | Ligh |
| Crumley, Floyd Burney Crump, Johnnie Hanson Culli, Minor Edward | 2 TE | Manand |
| Crump, Jonnine rianson | | |
| Culli, Minor Edward | I CE | San Antonio |
| Cunningham, Robbie | I EE | Cleveland |
| Cunningham, Thomas Clovd | 3 AgEng | McKinney |
| Cunyus, Paul Alonzo Curry, George Washington | 4 Ag | Longview |
| Curry George Washington | 3 6 6 | FI Paso |
| Curry John Hall | | Catoguillo |
| Curry, John Hall Curtner, William L. Cuthrell, Antum Eugene | 2 M C | Lauston |
| Curther, william L. | | Houston |
| Cuthrell, Antum Eugene | I ME | Navasota |
| Cuthrell, John Harris Dabney, Inmann Taylor | 2 Sci | Navasota |
| Dabney, Inmann Taylor | l Ar | San Antonio |
| Dalton Llovd Amos | 114 | McGregor |
| Dalton Murnhy Leon | 3 4 4 | Dallas |
| Demoron Alton Bernard | 1 | West |
| Dalton, Murphy Leon Dameron, Alton Bernard Danhoff, Walter | I AI | |
| Dannon, wanter | | Corpus Christi |
| Daniel, Robert Leonce | 2 CF | Marietta |
| Daniel, Thomas Hugh | 4 EE | Cleburne |
| Daniels. Robert Nelson | 1 Sci | Dallas |
| Dannelly, Perry | 2 CE | Dallas |
| | | |

| Dansby, Romney Evander Darby, James Wilson | 2 L.A | Bryan |
|---|-------------|-----------------|
| Darby James Wilson | IFF | Beeville |
| | | |
| Darley, William George Darragh, George Gillum, Jr Dashiell, Albert McGee Dashiell, Walter Norris | 2 F F | San Antonio |
| Darragh George Gillum Ir | ÎTE | Marble Falls |
| Dachiell Albert McGee | 1 4 4 | Mission |
| Dashiell, Walter Norris | 4 C F | Mission |
| Daughtrey, Elisha Robuck Dauterive, Carroll Anthony | 2 M E | Pleasanton |
| Daughtrey, Elisia Robuck | 2 ChE | Houston |
| | | |
| David, winiani Lewis | 2 CE | Kansas City Mo |
| Davidson, Anned Harry, Jr. | 2 A - | Wharton |
| David, William Lewis Davidson, Alfred Harry, Jr Davidson, Raymond Wright Davis, Ben Reps | 2 CM | |
| Davis, Ben Reps | | |
| | | |
| Davis, Charley Reives Davis, Clarence Reid | I EE | San Antonio |
| Davis, Clarence Reid | 4 CE | Keltys |
| Davis, Francis Clark | I AA | Denton |
| Davis, Francis Marion | 4 CE | Hondo |
| Davis, Fred Terry | l <u>Ar</u> | Silsbee |
| Davis, Harold Authur | I <u>EE</u> | Sulphur Springs |
| Davis, Henley Hardeman | I EE | Waco |
| Davis, lames A. | 4 Sci | Big Spring |
| Davie John Brittain | 2 C M | Hubbard |
| Davis, Ioseph Eugene | -1 CM | Foreman, Ark. |
| Davis, James Russell | 1 EE | Giddings |
| Davis James William | 31.4 | Stephenville |
| Davis, leff Wilson | I AA | Brownwood |
| Davis. Matt McKinney. Ir. | I AA | San Antonio |
| Davis. Rov B. | 4 Ag | Lamesa |
| Davis, Samuel Brice | 2 EĒ | Lometa |
| Davis, Samuel Taylor | | Denton |
| Davis, Samuel Taylor Davis, Tom Eli1 Davis, Willson | AgEng | Fort Worth |
| Davis, Willson | 3 I.A | Stephenville |
| Davis William Edwin | 2 4 4 | Mineral Wells |
| Davis William Jefferson | 1 CF | Nacogdoches |
| Davis, William Joseph Davis, Wallace Turpin | 1 FF | Ridgeway |
| Davis Wallace Turnin | 1 FF | Mertens |
| Davis, William Truett | 1 FF | Marfa |
| Davisson Alfred Williston | 2 Ar | Corpus Christi |
| Davisson, Alfred Williston Day, John Frank, Jr. | 1 TE | Eden |
| Day James Reneau | 2 Sci | Caddo Mille |
| Day, James Reneau Day, Russell Edward | 1 4 4 | Center |
| Dean, John Randolph | 2 E E | Athens |
| Dean, William Harrell | | Clauda |
| Dean William Walters Ir | 1 C M | Dococ |
| Dean, William Walters, Jr Deane, William Francis | | Kingeville |
| Dear, George Willard | 21 4 | Troup |
| DeBardeleben John Erederick | | |
| DeBardeleben, John Frederick DeBardeleben, James Mitchell | | Drownsville |
| Debardeleben, James Mitchell | | Brownsville |
| Debnam, Marcus McKinley3 | Ageng | Lamesa |
| Decker, Charles Thomas | 1 Sci | Wission |
| Deeg, Charles Owen Deen, William Alonzo |] EE | San Antonio |
| Definition Alonzo | | Bryan |
| Deffebach, John Alexander | | Fort Worth |
| Delany, George Beckwa ¹⁷ | I CM | Galveston |
| DeMaret, Allen Navarre | 2 CE | Bryan |
| Dennis, Reagan Griffin | I <u>CM</u> | I errell |
| Denton, Theodore, Jr. | | |
| | | |

| DePasquale, Francis Robert | I M.E | Dickinson |
|--|-------------|---------------|
| Dewey, Henry Cooper | I ME | Amarillo |
| Dexter, rederick Fenwick, Jr | 3 Ar | Houston |
| Dezell, Edward Franklin | SnTF | Mexia |
| Dibble, Samuel Beck | 1 EE | Waso |
| Dibble, Samuel Deck | ILE | |
| Dick, Leslie Gilliam | | |
| Dickey, Grier Moffat | I EE | Alvord |
| Dickey, John Ralph | 4 EE | Dodd City |
| Dickinson, William Calvin Dickinson, William Cecil | I EE | Gonzales |
| Dickinson, William Cecil | 3 EE | Ballinger |
| Dielmann, Simon Joseph | 4 A A | San Antonio |
| Diers, Alfred Gerard | 3 5 5 | LaGrange |
| Diers, Allieu Octatu | 16-: | Lisuator |
| Dies, William Winford Dietel, Edwin Alwin | | |
| Dietel, Edwin Alwin | 4 EE | New Brauniels |
| Dieterich, Louis Gunther | 2 RE | El Paso |
| Dietert Milton Emil | 3 4 4 | Kerrville |
| Dillard, B. A. Jr. Dillard, Guy Conway | C1 | Chillicothe |
| Dillard, Guy Conway | Sp-CE | Waco |
| Dillon, Earl Applewhite | 3CF | San Antonio |
| Dillon, Thomas R. | 1 4 9 | San Antonio |
| Dilworth, Collett Broyles | 21 4 | Austin |
| Dilworth, Collett broyles | | Austin |
| Dinn, Forrest Albert | 1 Sci | Beeville |
| Disch, Oran Dorsett | 4 M.E | Franklin, La. |
| Ditta, Tony Anthony | I ME | Waco |
| Dittmann, Louis Emanuel Dixon, Claude Frank | I CM | Houston |
| Dixon, Claude Frank | Sp M E | Brvan |
| Dixon, Royce Lee | Í ChF | Port Acres |
| Dixon, Robert Melton | 3 ChE | Frisco |
| Dobbs, James Robert | 3 M E | Longview |
| Dobbs, James Robert | 2 T C | Consistent |
| Dockum, Richard Swanson | | Corsicana |
| Dodd, John Roger, Jr. |] <u>EE</u> | Henrietta |
| Dodge, Fred Knowlton | 2 CE: | Jacksonville |
| Dodge, John Hopkins Doke, Ralph Homer | 2 M E | Jacksonville |
| Doke, Ralph Homer | l Ar | Wichita Falls |
| Dolan, Adreon Robert | 1 EE | Houston |
| Dollahite, John Calvin | IME | Johnson City |
| Dollinger John III | IME | Beaumont |
| Dollinger, John III Donahue, Joseph William | | Vornon |
| Donalide, Joseph William | 1 A | Vernon |
| Donalson, Sidney Jackman Donalson, Thomas Kyle | I Ag | |
| Donalson, Thomas Kyle | I Ag | Kyle |
| Donges, Norman August | 4 Ag | Montell |
| Donovan, Claude Belmont, Ir | 4 M.E | Cleburne |
| Dorsey, Ralph Robert | 1 Sci | Fort Worth |
| Dosterschill, Walter Lloyd Dougherty, Thomas Brook | l Ar | Dallas |
| Dougherty Thomas Brook | l Ar | Palestine |
| Doughrameji, Ahmad Rafat | 1 Δα | Arbil Mes |
| Douglas, James Brock | 1 E C | Commondo |
| Douglas, James Drock | I CC | Commerce |
| Douglas, Pat Moore | | Bryan |
| Dowd, Lonnie Elic | | Bryan |
| Downard, Richard Walter Downs, Lloyd Henry Doyle, John Edward | Sp LA | Bryan |
| Downs, Lloyd Henry | I CM | San Augustine |
| Dovle, John Edward | I CE | San Antonio |
| Drake Cecil LeRoy | 2 Ag | San Antonio |
| Drake Lemuel Clyde | ICE | Memphis |
| Drake, Cecil LeRoy Drake, Lemuel Clyde Drescher, Edward Lawrence | 1 66 | Caldwell |
| Drossor Daul Alton | ILL | Consisens |
| Diessei, raui Alton | I LA | Corsicana |
| Dresser, Paul Alton Dritt, John Roy Drivers, Lewis Edward | I CE | |
| Drivers, Lewis Edward | 4 AA | San Antonio |
| | | |
| | | |

| Driver, Roy Duckworth, Roy Earl Dudley, Jess William Duffield, Robert Foster | 1 CF | Austin |
|--|--------------|-----------------|
| Duckworth Roy Farl | 2 Ag | Westover |
| Dudley, Jess William | IAĂ | Houston |
| Duffield, Robert Foster | IME | Houston |
| Duke, Edward Henry Dunaway, Carl Dallas Duncan, Verlyn Hudson Dungan, Henry Lee | 1 Sci | Abilene |
| Dunaway Carl Dallas | 1 CF | Cleburne |
| Duncan Verlyn Hudson | 2 C M | Houston |
| Dungan Henry Lee | 31 A | Fnnis |
| Dungan, William Taylor Dunlap, Cecil Norton | 1 Δ σ | McKinney |
| Dunlan Cecil Norton | Δ Δ r | Mexia |
| Dunlap, Lawrence Bettes | 105 | Dallas |
| Dunn Charles Henry | 2 4 4 | Shorman |
| Dunn, Charles Henry Dunnahoo. Walter Burks | 1 CE | Dallac |
| Durham, James Jay | 4 4 4 | Lizo |
| Durham, Jake Webber | | ΠICO |
| Durham, Jake webber | I LA | Didoll |
| Durham, William Joseph | I LA | Amarillo |
| Durst, Louis Hopkins | 4 CE | Crockett |
| Dusek, William Max | Sp Ag | Flatonia |
| Dyer, David R. | l Ag | Fort Worth |
| Dusek, William Max Dyer, David R Dyer, James Edward Eagleton, Foute Earl, Eugene Leonard | I <u>EE</u> | Marlin |
| Eagleton, Foute | 2 EE | Commerce |
| Earl, Eugene Leonard | 2 CE | Bynum |
| Easterning, Marcus Cleo | M F. | wiegargei |
| Easton, John Salter Eatman, Joseph Walter Eaton, Auvil Robert | Sp Ag | Sinton |
| Eatman, Joseph Walter | 2 Sci | San Antonio |
| Eaton, Auvil Robert | 1 E.F | Rule |
| Eckles, William Elam | 214 | Dallas |
| Eddins Carlton Wilbur | 2 Ασ. | Kerrville |
| Edgar Robert Charles Ir | 1 A a | San Antonio |
| Eckles, William Elam Eckles, William Elam Eddins, Carlton Wilbur Edgar, Robert Charles, Jr. Edgar, Robert Leslie | 415 | Cleburne |
| Edge Charles Hudson | 21 4 | Bryan |
| Edge John Harold Ir | 2 CE | Bryan |
| Eblers Leclie | 1 A a | LaCrange |
| Elder Debort Marian | I Ag | LaGrange |
| Ellipte Aubress | I Ag | Tainita |
| Children Vie " | 1 50' | |
| Edgar, Robert Leslie Edge, Charles Hudson Edge, John Harold, Jr. Ehlers, Leslie Elder, Robert Marion Elliott, Aubrey Ellis, Clyde Virgil Ellis, Harvie Russell Ellis, Lynn William | I MI F | wichita Falls |
| Ellis, Harvie Russell | Z V M | College Station |
| Ellis, Lynn William | 2 CM | Houston |
| Ellis, I om Porter, Jr. | I AA | Dallas |
| Ellis, Willis Tinsley | 4 EE | San Antonio |
| Elliston, Fred Addison | 4 EE | Fort Worth |
| Ely, Ralph Adams | 2 EE | Fort Worth |
| Ellis, Tom Porter, Jr. Ellis, Tom Porter, Jr. Elliston, Fred Addison Ely, Ralph Adams Embree, Chester Arthur Emmons, Alton Brocks | I CE | Belton |
| Emmons, Alton Brocks | 2 RE | Clarendon |
| Emmons, James Rufus | l Ag | Clarendon |
| Emmons, James Rufus Emmons, Walter Mark Emshoff, Will Hermann | 1 RĔ | Clarendon |
| Emshoff, Will Hermann | 1 CM | Eagle Lake |
| Engel, Meredith Card Enquist, Burton Reinhold | 2 At | San Antonio |
| Enquist, Burton Reinhold | 1 ME | Sugarland |
| Epp. Clarence Edwin | 2. Ar | |
| Epperly, Don | 2 Ar | Fort Worth |
| Erhard, Fred William Ir | 1 M F | Galveston |
| Epperly, Don Erhard, Fred William Jr Eriksen, Clarence Emil Erskine Alexander Madison III | 1 ChE | Brooklyn N V |
| Linden, Charchee Linn | | |
| Erskine Alexander Madicon III | | Security |
| Erskine, Alexander Madison III | 1 ME | Seguin |
| Erskine, Alexander Madison III Erzt, Albert John | 1 ME 2 CM | |
| Erskine, Alexander Madison III Erzt, Albert John Esparza, Jorge Gerardo | 2 CM ? Ar | Houston |
| Erskine, Alexander Madison III Erst, Albert John Esparza, Jorge Gerardo Essary, Edwin Eugene Etter, John Wesley | 2 CM ? Ar | Houston |

| Europa Craig | 1 4 | San Antonia |
|--|--------------|------------------|
| Evans, Craig Evans, Clarence William | 1 CE | San Antonio |
| Evans, Clarence william | I CE | |
| Evans, John Temple Evans, L. H. Jr. | 2 E C | Overter |
| Evans, L. H. Jr Everheart, Jack D. Everts, Curtiss Mitchell, Jr Ewell, Walter Leighton Ewing, Roy Francis Ewing, Trephor Pleas Fagan, John James Fagg, Lee Eallenberg, Roy Turner | | Rolla |
| Evente Curtice Mitchell Ir | 2 Ag | |
| Events, Curtiss Mitchen, Jr | | Dallas |
| Ewing Doy Example | IIE | Winnfield La |
| Ewing, Roy Flaticis | 2 AA 2 TE | Speedewille |
| Ewing, Trephor Fleas | | |
| Fagan, John James | | Dallas |
| Falge, Lee | | Corsicana |
| Falkenberg, Koy Turner | 4 EE | |
| Falkenberg, Roy Turner Falley, Charles Fred Farmer, Norman Kittrell Farmer, Robert Ruffin Farquhar, Bannister Wells Farquhar, Robert Edward Farrell, Joe Tapley Farrell, Joe Tapley | I CE | |
| Farmer, Norman Kittrell | I Ag | Junction |
| Farmer, Robert Ruttin | I AA | |
| Farquhar, Bannister Wells | ICE | waco |
| Farquhar, Robert Edward | | Ennis |
| Farrell, Joe Tapley | | Paris |
| Farris, Percy Carl Farrish, Harold Price | | Uvalde |
| Farrish, Harold Price | | Dallas |
| Fawcett, Walter Robert Feigelson, Julius Zeve | I Ag | Del Rio |
| Feigelson, Julius Zeve | I ME | Beaumont |
| Ferguson, James Edwin Ferguson, Lloyd Benjamin Fern, George Henry Fields, William John Figari, Ernest Emil | C2 | Paris |
| Ferguson, Lloyd Benjamin | I Ag | Brandon |
| Fern, George Henry | Sp LA | Bryan |
| Fields, William John | 2 Ag | Sonora |
| Figari, Ernest Emil | 3 ME | Galveston |
| Finnegan, Robert Paul | 1 CE | Temple |
| Fischback, Alexander Antone, Jr. | 2 CE | Dallas |
| Finnegan, Robert Paul Fischback, Alexander Antone, Jr. Fischer, Harry Otto, Jr. Fisher, Richard Elwood | 2 CE | San Antonio |
| Fisher, Richard Elwood | I ME | Houston |
| Fisher, Wilfred Albert Fisher, Alexander D. Jr. Fitzgerald, Robert Henry Fitzhugh, Vernon Franklin | 2 Ar | San Antonio |
| Fisher, Alexander D. Jr | 2 ME | Longview |
| Fitzgerald, Robert Henry | 1 CE | Sweetwater |
| Fitzhugh, Vernon Franklin | 3 Ag | Tolar |
| Flannery, John Oge | 4 AA | San Antonio |
| Flato, Henry William | 2 ME | Monterrey,, Mex. |
| Flannery, John Oge Flato, Henry William Fleming, James Clifford Floca, Charles Vinson | 4 ME | Dublin |
| Floca, Charles Vinson | I AA | Temple . |
| Floca, Sam William | 4115 | lemple |
| Floeck, Jesse Charles Jr. | 1 AA | Houston |
| Florer, Cornelius Maynard Flores, Daniel, Jr. | 4 AA | Dallas |
| Flores, Daniel, Jr. | 4 Ar | San Antonio |
| Flores, Isaac | 4 ChE | San Antonio |
| Florey, Albert Jourdaine, Jr | 4 Ag | Brownwood |
| Flory, Clarence Mathew | 2 LĂ | Smithville |
| Floyd, Clay McClane | 1 AA | Midland |
| Floyd, Jay Hawkins | 4 Ag | Midland |
| Floyd, Robert Hyron | 1 EĔ | Longview |
| Focke, George Marckmann | 1 AA | Galveston |
| Focke, John Clark | 3 Ag | Galveston |
| Flores, Isaac Florey, Albert Jourdaine, Jr. Flory, Clarence Mathew Floyd, Clay McClane Floyd, Jay Hawkins Floyd, Robert Hyron Focke, George Marckmann Focke, John Clark Follett, Clarence Reneau Fontaine, John Edward Footaine, John Edward Fooshee, Irb Haskell Forester, Russell Vann Forgy, Moral Dee Forman. William Mahlon | 2 AgEng | Houston |
| Fones, Robert Glvnn | Ì CĔ | Houston |
| Fontaine, John Edward | 3 EE | Texarkana, Ark. |
| Fooshee, Jrb Haskall | 2 ChE | Fort Worth |
| Forester, Russell Vann | 1 FF | Houston |
| Forgy Moral Dee | 2 Ar | San Antonio |
| Forman William Mahlon | 2 C M | Denison |
| i critten, withall manon | | |

| Forester, Arthur George | 1 FF | Dallas |
|--|--------------------|---------------------|
| Foster, Dell Keesee Foster, Lee Alston Foster, Martin Amable | 1 Sci | Marlin |
| Foster Lee Alston | 2 TE | Hope Arkansas |
| Foster Martin Amable | 4 FF | Gulf |
| Foster, Richard Eugene | 1ΙΔ | Houston |
| Foster, Sumner Bacon | | Ward Colorado |
| Foster, Summer Dacon | 1 ME | Dellas |
| Fox, Joseph Frank | I IVI C | |
| Fox, Joseph Frank Fox, James Lucius Foxhall, James Lesley | | |
| Foxhall, James Lesley | I Ar | Memphis |
| Eov Harold Ularkson | LL.A | Baird |
| Francis, Charles True |] <u>EE</u> | Houston |
| Francis, James Carlton, Jr Francis, Joseph Franklin | I <u>CE</u> | Longview |
| Francis, Joseph Franklin | 4 M E | Kingsbury |
| Frank. Bernie Lewis | 3 CE | Iefferson |
| Frank, M. P. | 3 CE | Dallas |
| Frank, Philip Heakes | 4 ME | Shreveport, La. |
| Franke Herbert Adolph | 2 Sci | Smithville |
| Franke, Louis John Franki, Guido Ernest | 4 Ag | El Campo |
| Franki Guido Ernest | 1 Ag | Del Rio |
| Franklin, George Emory | 2 I A | Bryan |
| Franks, Roye Wendell | 1 FF | Ennis |
| Frazier, Dillon Schadt | 2 C F | Fort Worth |
| Frazier, Joseph Cullen | Sp I A | College Station |
| Frazier, William Allen | 1 4 a | Carrizo Springe |
| Frazier, William Allen Free, Walter Granville | I Ад I МС | Dallas |
| Frels, Earl Ben | 4 ME | Cillatt |
| Fiels, Eall Dell | 4 MIE | Cillett |
| Frels, Herbert Henry French, John Abner | | |
| French, John Abner | I UNE | |
| Friday, Louis Steven Frier, Walter Albert | I AA | Laguna |
| Frier, Walter Albert | I Ar | Houston |
| Fritch, Charlie Edward | 2 ChE ₄ | Dallas |
| Fritze, Hilmar Alfred Louis | 2 ChE | San Antonio |
| Froehlich, Egmont | 4 ChE | Los Angeles, Calif |
| Frost, Spencer Cary | 3 EE | Dallas |
| Frost, Spencer Cary Fuente, Genaro de la | 1 AA | Saltillo, Coah,Mex |
| Fuente, Ildefonso de la | 1 Ag | Saltillo, Coah,Mex |
| Fuente, Ildefonso de la Fuente, Jose de la | 3 Ag | Saltillo, Coah, Mex |
| Fuller, Eugene Thomas, Ir | 2 A A | Beaumont |
| Fuller, George Stoney Furneaux, Joe Edward | 4 M E | San Antonio |
| Furneaux, Joe Edward | 4 TE | Carrollton |
| Gallenkamp, Edgbert Harry | 1 CF | Lometa |
| Galley Cyrus Abel 2 | AgEng | Hereford |
| Galloway, I. B. | | Mesquite |
| Galloway, J. B. Galloway, James Harrison, Jr Galloway, Robert Brice | 1 M F | Sour Lake |
| Galloway, Robert Brice | 2 M F | Corsicana |
| Galt, Sidney | l Sci | Mt Vernon |
| Gandy, L M | 1 4 4 | Bryan |
| Carcia Arthur | 2 4 a | Honduras C A |
| Garcia, Arthur Garcia, Evaristo | 1 CE | Larlingen |
| Garcia, Jesus Maria | 100 | |
| Conducta, Jesus Maria | | |
| Gardner, Cirtis Thurman Gardner, Robert Houston | I CE | Dallas |
| Gardner, Robert Houston | <u>2</u> EE | Alice |
| Garison, John Cullen | 2 AA | Buda |
| Garland, Lee Heard Garrett, John Rollin | I Ag | Hope, Arkansas. |
| | | Frankston |
| Garrett, John Rollin | I ME | I Tankston |
| Gass LeRov Charles | 2 Sci | San Antonio |
| Garrett, John Rollin Gass, LeRoy Charles Gates, Alfred Louis Gatlin, Jabez Linten | 2 Sci | San Antonio |

| | 2.4 | 17 |
|-----------------------------|-------------|------------------|
| Gay, Clarence McLean | | Moran |
| Gayle, Victor Prentice | 4 AA | Bryan |
| Gear, Harry Compton | 2 CE | Fort Worth |
| Gerdes, Francis Leo | 3 AA | Corpus Christi |
| Gibbs, Acy Meridoth | 2 M E | Burnet |
| Gibson, George Guilford | | Trinity |
| Gipson, James Gladney | 4 U n F | |
| Giesecke, Carl Gus | 2 Sci | |
| Giesev Sam Charles | 166 | Sherman |
| Giesler, Jack Floyd | 1 Tex | Flectra |
| Giffin, Paul Kenneth | 3 MF | Dallas |
| Gill, Harry C. | Sale | Bryan |
| Cill Lester Oliver | | Dallas |
| Gill, Lester Oliver | | Dallas |
| Gill, Oliver Preston | 4 CE | Bellevue |
| Gilland, Clifford Charles | I CE | Franklin |
| Gillean, Marvin A. | l Ar | Waxahachie |
| Gilmore, John Richmond | I CM | Ennis |
| Gips, Alvin Rudolph | 1 ME | Yorktown |
| Girand, Walter Dunlap | 1 LA | Abilene |
| Givens, Harrison Crandall | Sp CE | Little Rock, Ark |
| Glass, Wicker Ira | Sp Ag | Emory |
| Glidden, Dell Loren | 2 4 4 | Orange |
| Glitsch, Fritz William, Jr. | 4 ME | Dallas |
| Glitsch, Hans Carl | 4 ME | Dallas |
| Closup Vinsil E | | Sulahun Saringa |
| Glosup, Virgil E. | | Sulphur Springs |
| Glover, George Haskell | | Greenville |
| Gnauck, Robert Ernest | 3 EE | El Paso |
| Gohmert, Sylvester Robert | 4 AA | Yorktown |
| Gomez, Federico | 4 Ag | Linares, Mex. |
| Good. Henry Oran | 4 EE | Farmers Branch |
| Goodman, Willis Kellogg | 1 CE | Houston |
| Goodpasture, Henry Campbell | 1 EE | Memphis |
| Goodson, Richard Allen | 4 A A | Iacksonville |
| Goodwin, Lamoyne | 4 I F | Kvle |
| Gorman, Edwin | 2 4 4 | Gilmer |
| Gorman, John Wardell, Jr. | 166 | Alexandria I a |
| Gossett, Harry Alonzo | 1 LL | Corsigana |
| Cashle Lease Clinter | | East Wasth |
| Grable, Jesse Clinton | I LA | |
| Gragg, Jack Eugene | I ÇE | |
| Graham, Lawrence Elbridge | <u>I LA</u> | El Paso |
| Graham, Robert Clarence | 2 CE | Jasper |
| Grammer, James Henry | 2 Sci | Pittsburg |
| Grant, Herbert Lucien | 1 Ar | Weimar |
| Grant, Richard Bruce, Ir. | 2 Sci | Brvan |
| Grau, Carl August | 1 EF | Taylor |
| Graves, Henry Lee | ICM | Dallas |
| Gray, James Ra'ph | 1CF | Ralle |
| Green, Calvin Richard | 1 4 4 | Granger |
| Green, Eugene Barrow | | |
| Green, Eugene Darrow | I GM | Beeville |
| Green, Hubert Gordon | I CM | Palestine |
| Green, William Robert | | Oglesby |
| Greenstreet, Thomas Abner | I AA | Laredo |
| Greenwade, Bryan Palmer | 3 CE | Whitney |
| Greenwade, James Walton | 1 Ag | Whitney |
| Greenwade. Turner G | 3 Ag | Whitney |
| Greenwood, Calhoun Thomas | 4 Ag | Luling |
| Greer, James Albert | l Ar | Morgan |
| Greer, William Abner | l Ar | Morgan |
| Greer, winnann Abher | | |

| Gregory, Marolf Preston | 1 66 | Stomall |
|---|--------------|----------------------|
| Gregory, Maton Freston | | |
| Gregory, Thomas Mac | 1 MC | Dallas |
| Gribble, Ronald William Griffing, Ralph Clarence | I EE | McKinney |
| Griffing, Kalph Clarence | I AA | Beaumont |
| Griffis, Yale Berger | I LA | Dallas |
| Grimes, Benjamin Lyman | | Lampasas |
| Griffis, Yale Berger Grimes, Benjamin Lyman Groendes, Arthur Wilhelm | I CE | Moody |
| Grote Fred Gerrit | 3 M F | San Benito |
| Groves, Joseph Taylor Gudger, Gordon Boone | 1 Ag | Leonard |
| Gudger, Gordon Boone | .2 ME | Orange |
| Gunn, James Edward | 2 Sci | .Paris |
| Gunn, Willis Franklin | 2 Sci | Fort Worth |
| Gunter, William Montaguè | 1 I.A | San Angelo |
| Gurley Arnold Malcolm | 1 Ar | Fort Worth |
| Guyler, Robert Lerert | 1 Sci | Eagle Pass |
| Gwin, Clyde Wortham | C 1 | Oenaville |
| Hable, Robert Ernest | 1 E E | Corsicana |
| Haby, Homer Howard | 1 Ar | Lampasas |
| Haby, Walter Edward | 2 FF | Lampasas |
| Haegelin, Hilmer Bernard | 2 4 4 | Hondo |
| Hail John Pinkney | 2 Δ Δ | Crockett |
| Hail, John Pinkney Haile, Jack Blaisdell | 3 CE | Goliad |
| Halbouty Mike Thomas | 1 Sei | Bonumont |
| Halbouty, Mike Thomas Halbrook, William Warwick | 2 EE | Catomilla |
| Halbrook, william warwick | | Galesville |
| Hale, Fred | .SpAg | College Station |
| Hale, Fred Haley, William Caldwell Hall, Hardie Bernard | 4 Ar | Dallas |
| Hall, Hardie Bernard | I AA | Luling |
| Hallaman, Joe Charles | ! 느느 | Dallas |
| Hallaran, Kenneth Sherman |] <u>E</u> E | .Fort Worth |
| Hallaman, Joe Charles Hallaran, Kenneth Sherman Haller, Elmer Charles | 1 EE | San Antonio |
| Hallmark Oscar Clifford | 4 Ar. | Belton |
| Hallum Frank Frskine | 1 Ar | San Antonio |
| Hamilton, Albert Lee | 1 CE | Houston |
| Hamilton Horace Cockerham | | Stanton |
| Hamilton, Loyd Weldon | 3 CE | Stephenville |
| Hamilton, Loyd Weldon Hamilton, Paul | .1 RE | Quitaque |
| Hammond Jack | 1 Sci | Sherman |
| Hamner Ed John | 1 FF | Wirt Oklahoma |
| Hampe Clinton William | 1 CE | Kyle |
| Hampe, Homer August | SpTex | Kyle |
| Hancock Loe Mason 2 | AgEd | Morgan Mill |
| Hand Cecil Vermillon | 1 FF | Plainview |
| Haneman, Albert, Jr. | 1 CE | Bryan |
| Lanks Loster | 1 A A | San Augustine |
| Hanna, John James, Jr. Hannig, Sylvan Julius Hansborough, John William | 1 4 9 | Quanah |
| Hannia, John James, Jr. | 2 CU | Vieteni |
| Hannig, Sylvan Julius | 2 CE | Victoria |
| Hansborougn, John William | | Dallas . |
| Hanszen, Öscar Jerome | 4 Ag | Dallas |
| Harbin, John Everett | I EE | Donna |
| Harden, Richard Harold Harder, Paul Frederick | I EE | Hamlin |
| Harder, Paul Frederick | | .Mart |
| Hardin, David Bonner | .I TE | lerrell |
| Hardin, Henry Harrell | 3 Ch E | Beaumont |
| Hardin, Robert Ross, Jr. | 1 CM | Terrell |
| Hardison, Joe Hillard | 2 M E | Dallas |
| Hardy, W. Tyree | 1 VM | .Big Spring |
| Hargis, Paul Martin | 2 EE | Lubbock |
| Harder, Paul Frederick Hardin, David Bonner Hardin, Henry Harrell Hardin, Robert Ross, Jr. Hardison, Joe Hillard Hardy, W. Tyree Hargis, Paul Martin Hargis, Smallwood Basil | .2 EE | Okmulgee, Okla |
| | | 0 ., 0 |

| Hargrove, Harold Hunt | 1 ChF | Pittsburg |
|--|---------|------------------|
| Harman Noland Lang | 1 A A | Lampasas |
| Harman, Noland Lang | 1 Ch F | Brenham |
| Harper, Richard Thomas | 1 CM | Dallas |
| Harper Terrell Ray | 1 Ar | San Antonio |
| Harrington Harry Arthur | 3 MF | Davton |
| Harper, Terrell Ray Harrington, Harry Arthur Harris, Arthur Robert | 1 Ag | Gatineau Pointe. |
| | | One Canada |
| Harris, Archibald Thomas | | Dallas |
| Harris, Charles Arthur | I Ar | Fort Worth |
| Harris, Emmett Gordon | 3 Ar | McAllen |
| Harris Hilbert Howard | 2 I A | Flectra |
| Harris, Jerome Dee | 1 CE | San Antonio |
| Harris, Marvin Lyle | I AA | Llano |
| Harris, Nathan | | Dallas |
| Harris, Thomas Gilmore | 4 AA | Dallas |
| Harrison Robert Daniel | 1 C.M | Terrell |
| Hart, Gordon Lee Hart, Isaac Arty | 4 Ag | Bremond |
| Hart, Isaac Arty | 3 CĔ | Fort Worth |
| Hart, Malcolm Hartman, Monroe Arthur | 3 ME | Abilene |
| Hartman, Monroe Arthur | 1 AgEng | Thrall |
| Hartung, Louis Adolph Harwell, Garrison Greenwood | Ž AĂ | San Antonio |
| Harwell, Garrison Greenwood | 1 LA | Harlingen |
| Harwood, William Edmund | 1 ME | Cuero |
| Haslbauer, Alfred | 1 ME | San Antonio |
| Haslbauer, Otto Frank Hastings, Guy Warren | 4 Ag | San Antonio |
| Hastings, Guy Warren | 2 MĔ | Leonard |
| Hasty, Thomas Brooks | 1 EE | Houston |
| Haswell Henry Matthew | l Ag | Cedar Hill |
| Hatch, Otis Lamar | 1 L.A. | Kerrville |
| Hatfield, Robert Lee | | Sherman |
| Haupt, Lewis McDowell, Ir | 4 E E | Kvle |
| Haycock, Gus Harold Hayden, Francis Willard | 2 Ag | San Antonio |
| Hayden, Francis Willard | 1 CM | Fort Worth |
| Havnes, Albert Leman, Ir. | 1 Land | Austin |
| Havnie, Robert Crawford | 3 M E | Cleveland. Ohio |
| Hays, Carl Davis | 4 ChE | Frisco |
| Head, Virgil Jack Heafer, John Benson | 3 EE | Brownfie!a |
| Heafer, John Benson | 2 LA | Houston |
| Healy, Ardmore Joseph | 2 LA | Fort Worth |
| Heap. John Arthur | 2 AA | Tavlor |
| Hearne, Alford Taylor | l Ar | Jacksonville |
| Heartsill, Charles Edwin | 2 AA | Marshall |
| Heath, Horace Jackson, Jr | l AA | Sweetwater |
| Heffington Jack Winston | 11 A | Fort Worth |
| Hegemann, Otto Haenel | 3 ME | San Antonio |
| Heilhecker, John Wester | | Chillicothe |
| Hein, Harold Ernest Helmle, Fred | 2 Ar | San Antonio |
| Helmle, Fred | 1 TE | Knippa |
| Hembree. Fred Ottis | 1 EE | Fort Worth |
| Henderson, David Leslie | 1 EE | Longview |
| Henderson, George Theodore | 2 EE | San Antonio |
| Hendrick Robert Ellis | 1 CF | Fort Worth |
| Hensarling Philip Hawthorne | Ir 4FF | Bryan |
| Herfurth, John William | 2 CE | Garland |
| Herfurth, John William Herpin, Claude | 1 CE | Port Arthur |
| Herren, John Charles | 2 EE | San Antonio |
| Herren, John Charles Herring, Floyd Dawson | 1 EE | Fort Worth |
| | | |

| Hesse, Ashton Cleveland | ΙΔσ | Cuero |
|---|----------------|------------------|
| Hester, Leonard Howard | 1156 | Humble |
| Hewett, Vern | | |
| Heye, Gus Diedrich | | San Antonio |
| Heyne, Theodore Phil | 1 C M | Clop Elora |
| Hickerson, Richard Benjamin | 21 Δ | Rosebud |
| Hickman, Hector Harrison | 1 E E | Dising Stor |
| Hightower, Raleigh James | 1 L.L 1 A A | Madisonville |
| Hilger, George | 2 E E | Sharman |
| Hilger, John Allen | 1 ME | Shormon |
| Hill, Fred Keller | I ME | Electro |
| Hill, Herbert Wade | | Holland |
| Hill, James Garrette, Jr. | | Vooluum |
| Hill, John Mayes | | Cooledan |
| Hill, Willmot Garrison | | Computer Charity |
| Hill, Willmot Garrison | | Corpus Christi |
| Hillboldt, C.S. | | Manahall |
| Hilliard, Clifford Morris | Z Ar | Marshall |
| Hillin, Donald Ross | I KE | Mt. Calm |
| Hillin, Harold Ashley Hillis, Hugh Wilcox | | Mt. Calm |
| Hillis, Hugh Wilcox | I ChF | |
| | 100 | . Mexico |
| Hindman, Bernie Lain | IEE | |
| Hindman, Charles Hampton | | Greenville |
| Hiner, Carl Raymond | I Ag | Granbury |
| Hiner, Thomas Lynn | | Granbury |
| Elinolosa lorn Howard | 7 A A | NO Grande |
| Hipp, Dickson G. | 3 LA | Waxahachie |
| Hirons Ray Acklam | 1 M E | Pharr |
| Hobbs Louis Edward | . / Ag | San Antonio |
| Hobgood, Jack Davis | I <u>ME</u> | Frisco |
| Hodge, George Washington | l EE | Piedger |
| Hodge, Oliver Lloyd | 1 EE | Pledger |
| Hodges, lot | 1 H.H | Archer City |
| Hodges, John Franklin | l EE | Bandera |
| Hoecker, Lawrence Lee | l AA | Galveston |
| Hoff, Stuart Sheets | 2 CE | San Antonio |
| Hoffman, Laurence Calvin | I TE | Paris |
| Hotstetter Fred Ward | 1 I A | San Antonio |
| Hogg, Walter Stelling | 1 CM | Fort Worth |
| Holden, Horace, Jr. | 1 EE | Franklin |
| Holden, Horace, Jr Holleron, Tcm Clary | I AA | San Antonio |
| Holleron, William Kelly Hollingsworth, Merle Cooper | 2 M E | San Antonio |
| Hollingsworth, Merle Cooper. | 3 CE | San Antonio |
| Holloway, George Crawford | 1 M E | Forney |
| Holmes, Frank Leslie, Ir. | l Ar | Waco |
| Holmon lamon (ordon | 2 A a L d | roup |
| Holmes, James Gordon Holmes, John Moss Holt, Edgar Holt, George Hartzell | 2 Tex | Fort Worth |
| Holt, Edgar | 4 Ag | Colorado |
| Holt, George Hartzell | 2 EE | San Antonio |
| Holtzciaw William E | I A A | Blida |
| Homann, Richard Edward Hooe, Kenneth Wilcox | 4 Ag | San Antonio |
| Hooe, Kenneth Wilcox | 1 CM | Waco |
| Hooker Loe Dick | 185 | Carthage |
| Hooks James Moore | 1 C M | Dallas |
| HOOVer lames Archer | 7 (M | Flouston |
| | | |
| Hopkins, Robert Orion Horn, Homer Edward | | Fort Worth |
| Horn, Homer Edward | | Dallas |
| | | |

| Horn, Merl Edison | 2 6 6 | Sugarland |
|---|----------|-----------------|
| Horn Walter James | 1 Ar | San Antonio |
| Hornbuckle, William Edward, Jr | 2 C M | Houston |
| Hornby, Fred Brooks | 4 FE | Dallas |
| Howard Hartley Ernest | | Devine |
| Howard, Hartley Ernest Howard, Henry Luther | 2 Ch+ | Lacksonville |
| Howard John | 1 ChE | Dallas |
| Howard, John Howard, William Weldon | 1 Sci | Pittsburg |
| Howe Roland John | 1 Ασ | Seymour |
| Howe, Roland John Howe, Ralph Waldo | Ι Δσ | Seymour |
| Howerton, William Anaclet | 4 F F | San Antonio |
| Howland, Walter Jay | 1 A A | Houston |
| Hoyt, John Seymour | 1 M F | Fort Worth |
| Huckeba, William Claude | 1 AgEd | Mt Pleasant |
| Hudnall, Millard Rufus | l Ar | Teague |
| Huison, Charles Edward, Jr | 1 AgEng. | Dallas |
| Hauson, James Elmore | Ar | Houston |
| Huason, LeRoy | | Lancaster |
| Hucson, Rupert Loranzo | 1 Ag | Mart |
| Huettet. Edward Richard | 2 CM | LaGrange |
| Huggins, Sam Wallace | 4 A A | Childress |
| Hughes, Forest, Jr. | SpCM | Dallas • |
| Hughes, Fitch Henry | | Nocona |
| Hughes, Joseph Ferdinand | 2 F.F | Iefferson |
| Hughes, William Lycurgus Hughes, Wray Payne | 1 Sci | College Station |
| Hughes, Wray Payne | 4 ĒE | Waco |
| Hume John Ir | 4 F F | Houston |
| Humphreys, Jewel Humphries, Jennings Humphries, Jack Crawford | | Dublin |
| Humphries, Jennings | | San Antonio |
| Hunnicutt, Jack Crawford | 2 AA | Fort Worth * |
| Hunt, Uliver Joel | | |
| Hunter, Ralph William | 1 EE | Crowell |
| Hunter, Von Drew | I ME | Kirbyville |
| Hurff, Joseph Lawrence | 4 EE | Bryan |
| Hurst, Don Leo | 1 EE | Ferris |
| Hutcherson, James Louis | 1 CM | Sulphur Springs |
| Hutchins, Ralph Willard | 4 Ag | College Station |
| Hutson, Arthur Cary | 1 Ch E | East Orange N I |
| Hyland, Joe | 1 Ch E | College Station |
| Ilse, Lee August | l Ag | D'Hanis |
| Ingram, Charles Carol | 1 LA | Wharton |
| Ingram, Temple Byrn | 4 CE | terrell |
| Ingrum, Robert Porter, Jr | 3 Ag | San Antonio |
| Irwin, James Benjamin | l AA | Garrison |
| Irwin, Lee Andrew Ivan | l LA | Dallas |
| Ish, Frank Welcker | I AA | Waco |
| Jackson, Columbus Smith | I AA | l-ranklin |
| Jackson, Charles William | 3 EE | Humble |
| Jackson, Harold Collins Jackson, Hiram Thomas Bartlet | 4 AgEng | Hereford |
| Jackson, Hiram Thomas Bartlet | tI CM | Garwood |
| Jackson, Joe Beck | I LA | College Station |
| Jackson, Joseph Marvin | 2 Ag | Abilene |
| Jackson, Jesse Olin Jackson, Monroe Homer | l Ar | Houston |
| Jackson, Monroe Homer | | Sherman |
| Jackson, Richard Ernest | I EE | Silsbee |
| Jackson, Ralph Semmes | I ChE | San Antonio |
| Jackson, Wilbur Mortrude | | San Antonio |
| Jacobs, Phillip Emil | I ĽĖ | Galveston |
| | | |

| acobson, Oscar William ames, Forrest Coram | I L.A | Texas City |
|--|-------------|-----------------|
| ames, Forrest Coram | 2 Ar | Port Arthur |
| ames Gordon | 4 A A | Fort Worth |
| ames, Sessions S. | | Forest |
| ames William Frederick | l Ar | Port Arthur |
| amison Frank S | SnA A | College Station |
| anak, John James ancik, Edward Charles | IME | Weimar |
| ancik, Edward Charles | 2 CE | Bryan |
| ared. Ira Church | I CE | Dallas |
| armon, Ioseph Kuehn | 2 A A | Voakum |
| efferies, Perry Doddridge efferson, John Robertson, Jr. | 1 Ar | Laredo |
| efferson, John Robertson, Ir. | 1 CE | San Antonio |
| elinek Engelhert Anton | 4 Ar | Cranger |
| lelinek, Robert | l Ar | Taylor |
| lenkins Roy Olin | 1 A A | Lubbard |
| ennings Isson Edwin | 4 FF | East Worth |
| ennings, Jason Edwin | | Sanatorium |
| ennings, Robert Newton ennings, William Bland | 1 TF | |
| enull Frank Joseph | 1 Ar | San Antonio |
| enull, Frank Joseph ett, Stonewall Jackson | 1 M F | Saura Laba |
| obson Theron Simpson | | Sour Lake |
| obson, Theron Simpson ohnsey, William Oliver | | San Marcos |
| ohnsey, william Onver | | Memphis |
| ohnson A P | 2 C C | Fentress |
| ohnson, Adison Asberry ohnson, A. B ohnson, Afton Benton | 1 A A | Waco |
| ohnson, Beno | | Lockhart |
| onnson, Beno | | Lone Oak |
| ohnson, Ben Hershel ohnson, Clifford Lee | | San Antonio |
| onnson, Clifford Lee | | Ardmore, Okla. |
| ohnson, Charles R. | I CM | Gainesville |
| ohnson, Daniel Hubbard | IIE | San Antonio |
| ohnson, Harold Eugene | | Yoakum |
| ohnson, James Raymond | ICE | Pharr |
| ohnson, Marshall Albert | ICE | Prairie Lea |
| chnson, Paul Rufus | | Creedmoor |
| ohnson, William Charles | | Harlingen |
| ohnson, William Gray | IME | Beaumont |
| ohnston, Lawrence Walton | <u> .A</u> | Fort Worth |
| ohnston, Lawrence Walton ohnston, Murray Lloyd ohnston, Thomas Frazier | i <u>EE</u> | Houston |
| ohnston, Thomas Frazier | I EE | Irinidad |
| ones, Berry Edward | 4 AA | Sherman |
| ones, Ben Lee | IME | Houston |
| ones, Carol Lafayette | I <u>EE</u> | Lufkin |
| ones, Clyde Leon | I EE | Port Arthur |
| ones, Frank | 2 LA | Center |
| ones, Fred Jackson | 2 Ag | Farmersville |
| ones, Fred Rufus | Sp M E | College Station |
| ones, Fred Jackson ones, Fred Rufus ones ,Henry Murry ones, John McKinley | 1 Sci | San Antonio |
| ones, John McKinley | Sp AA | College Station |
| ones loe Mac | |)2128 |
| ones, James Truitt | 1 LA | Waco |
| ones, James Truitt ones, Lawrence | 1 Ar | Houston |
| ones Roy Addison | 1 CM | San Antonio |
| ones, Richard Harris | 4 IE | Galveston |
| ones, Richard Harris ones, Tom Ingle ones, Weldon Everett | 3 CE | Dallas |
| ones. Weldon Everett | 1 Ag | Hillsboro |
| ones William Leche | 1 And | Brvan |
| IT III AND | | V 1 |
| ordan, Charles Henry ordan, Leland Thomas | 21F | Velasco |

| Jorns, Cecil Forest | 1 Sci | Houston |
|--|-------------|----------------------|
| Kaiser, Amos Frank | I CE | Wharton |
| Kaiser, George B. | 3 EE | Wharton |
| Kalleen, George Alexander | .2 CM | Houston |
| Kallus, Vaclay Thomas | l Ag | Hallettsville |
| Kaper, John, Ir. | 1 EE | Nederland |
| Karren, Albert Aaron | 2 Ar | San Antonio |
| Kasprowicz, Billie Joseph | 1 AA | Brenham |
| Kasprowicz, Max John | 1 Ar | Brenham |
| Kavanaugh, Frank Eugene | .1 M E | Port Arthur |
| Keahey, Wendell Lowe | 1 AA | Bluff Dale |
| Keating, Thomas Morrison | 2 Ag | Grandview |
| Keel, John Louis, Jr. | l Ag | Abilene |
| Keen, Elza McDonald | 2 EE | McKinney |
| Keene, George Francis | .1 CM | San Antonio |
| Keene, Leo M. Jr Keepers, Hugh Verner Keeton, Harry Hampton | 1 <u>CM</u> | Gainesville |
| Keepers, Hugh Verner | РСЕ | Karnes City |
| Keeton, Harry Hampton | I LA | -Fort Worth |
| | | |
| Keith, James Robert, Jr | 2 Ch E | Cleburne |
| Keller, Daniel Benjamin | 4 M E | Elm Mott |
| Keller, Henry William, Jr Kelley, Samuel Emmett | l Ag | Mason |
| Kelley, Samuel Emmett | I ^g | San Saba |
| Kellner, Herbert Ernest | 4 Ar | Fernwood, Miss. |
| Kelly, John Joseph, Jr. | I ChE | College Station |
| Kelly, Jack Walter | ! AA | Texarkana |
| Kendall, Erion Joseph John |] AA | Charleston, Ark. |
| Kennedy, James Russell | | Denison |
| Kennedy, Sherman Scott | I LA | - Taylor Regument |
| Kennedy, Sherman Scott | .3 ME | Louston |
| Kennerly, Arthur Burnett | | Dovino |
| Kennerly, Arthur Burnett Kennington, Clyde Britton Kent, George Frederick Kerby, Travis Airhart | 4 Ag | Havana Cuba |
| Kent, George Frederick | 4 EE | San Marcos |
| Kerby, Travis Airnart | 2 T C | Houston |
| Ketterson, Frank Andrew Kezeler, James Linden | | Maniton Colo |
| Khaira, Randhir Singh | I EE | Punjab India |
| Kiber, John Baptiste | 4 EE | Corsicana |
| Kibler John Anderson | 1 A A | Gainesville |
| Kibler, James Anderson Killian, Jim Gaddy | 1 A ~ | Alvord |
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| Vilnetnial Dohowt Emmett In | 1 6 6 | LIAIVESTOR |
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| Kimmell (.ordon A | | I fai fingen |
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| Kingold Thomas Armstrong Ir | 1 1 0 | UZONA |
| Kinchen Albert Leonard | 20F | Breckenidge |
| Kinchen, Albert Leonard King, James Devereaux, Jr. | 114 | Ennis |
| | | |
| King, William Casey | 216 | Denison |
| | | |
| Kirkpotrick Arthur Maurice | 1 (M | Emms |
| | | |
| | | |
| Klein, Eugene John | 1 Ar | San Antonio |
| Klevnas Fred | 2 CM | Waco |
| Kline Sidney | 4 î F | San Antonio |
| Klein, Eugene John Kleypas, Fred Kline, Sichney Kluttz, Robert Algustus | øFng | Princeton |
| matte, mobile measure | -00 | |

| Knapp, Charles Ralph Knapp, William Allen Knebel, Sam Sanger Knight, Cam B'ack Knipling, Edward Fred | 21.1 | Arlington |
|--|--------|-----------------|
| Knapp, William Allen | 3 EE | Kaufman |
| Knebel, Sam Sanger | 1 Sci | San Antonio |
| Knight, Cam B'ack | 2 I E | Temple |
| Knipling, Edward Fred | 1 Tex | Port Lavaca |
| Knolle, Henry Pearson Knox, Frank Arnold | 2 Ag | Corpus Christi |
| Knox, Frank Arnold | 4 Ch E | San Antonio |
| Knupp, Paul Raymond | l Ar | Amarillo |
| Knupp, Paul Raymond Koerth, George Emil | 2 Sci | Yoakum |
| Kollman Raymond Edwin | I C M | avior |
| Konecny Frank Jack | 4 M F | Brvan |
| Konecny, Johnny Frank Kornegay, Clifford Newton | 1 LA | Bryan |
| Kornegay, Clifford Newton | 2 AA | Winters |
| Kosshiel Robert Claude | 2 C F | Cuero |
| Kraft Allen Tanner | 1 4 4 | Bryan |
| Krauel, Theodore Albert Leon Kreager, D. J. | 3 Ar | Houston |
| Kreager, D. J. | 2 CE | Dallas |
| Krizek, Julius R. Kroulik, Alfred Raymond | 1 ME | Port Lavaca |
| Kroulik, Alfred Raymond | 2 AA | Bellville |
| | | |
| Kuehn, Alfred Adolph Kunitz, Marcellus Richard Kunitz, Ralph Albert | 3 EE | Sinton |
| Kunitz, Ralph Albert | | Sinton |
| Kunz, Howard Edward | 2 M E | McGregor |
| Kunz, Howard Edward Kuykendall, William Elton Kyser, Eugene Elliot La Boa, Victor | 1 EE | Sulphur Springs |
| Kyser Eugene Elliot | 1 A A | Marlin |
| La Boa Victor | 1 FF | Houston |
| Lacey, Bert Thomason | 3 I.A | Centerville |
| Lackey Hubert Byron | 1 Sci | Fort Worth |
| Lackner Fred William Ir | 2 C M | Houston |
| Lacey, Bert Thomason Lackey, Hubert Byron Lackner, Fred William, Jr Lacy, Myron Dean Lagow, Thomas Kenneth Laird Orville | 1 Ag | |
| Lagow Thomas Kenneth | 2 Ar | Dallas |
| Laird, Orville | 1 FF | Mineral Wells |
| Land, Orvine Lake, Kenneth Leroy Lam, Frank Hampton | 2 FF | La Paloma |
| Lam Frank Hampton | 1 F F | Oglesby |
| | | |
| Lander, Raphael Heber | 1 4 4 | Datias |
| Lander, Raphael Heber Lander, Tilman Brooks Landon, James Caughey Lange, Robert Bruce Lange, Howard Fred Langford, William Burnard Langford, William Harper Langhammer, Ulrich Langlotz, Wilburn Edward Lanier, Granville Teaff Lapham, Loyle George | 1 Δα | Menard |
| Landon Jamos Caughow | 3 A A | San Angelo |
| Land Dobort Bruco | 201 | leaguin |
| Lange Howard Ered | 11. | Lano |
| Lange, novard fred | | Hillsboro |
| Langford William Harpor | 1 CM | Georgetown |
| Langhommor Illrich | 4 EE | Dallas |
| Langlatz Wilburn Edward | | Favettesville |
| Langiotz, whourn Edward | 1 I A | Crowell |
| Lanier, Granville Teatt Lapham, Loyle George | 2 E E | San Antonio |
| | 1010 | . Libro |
| Laster, Lawrence Lafayette Laughlin, Loran | I CRE | San Angelo |
| Laurenzo Eduin Balah | | Hillsboro |
| Lawrence, Eewin Kalph | | Luther |
| Lawrence, Robert Frankin | | letferson |
| Laughlin, Loran Lawrence, Edwin Ralph Lawrence, Robert Franklin Lea, Joe Wood Leatherman, Adam Dahnke | I LA | Palmer |
| Leatherman, Adam Dannke | 4 AA | Big Spring |
| Leatherwood, wendell | I EE | Lubbock |
| Leaverton, Dave Nunn, Jr. | ſAr | Weatherford |
| Lee, William Lecel | 4 Ag | Port Arthur |
| Lettingwell, Sammie Dennis | | Eart Worth |
| Leatherman, Adam Dahnke Leatherwood, Wendell Leaverton, Dave Nunn,Jr Lee, William Lecel Leffingwell, Sammie Dennis Leftwich, Herman Charles LeGear, Clyde Edwin | | Sancer |
| LeGear, Clyde Edwin | I MH | Jangel |
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| Lehde, Johnnie R. | 1 | Californill |
|--|--------------|--------------------------------------|
| Lende, Johnnie K. | I AA | Caldwell |
| Lehman, August John | ;2 EE | Giddings |
| Lehman, Herman Oswald | 1 Sci | Giddings |
| Lehrer, Charles Gerrard | I AA | Abilene |
| Leidecker, Robert Augustus Leighton, Charles Kelton | l Ar | San Angelo |
| Leighton, Charles Kelton | 2 CE | Corsicana |
| Lentz Cody | LCM | Red Rock |
| Lentz Dennis Curry | 1 CM | Red Rock |
| Lesikar, George Lesikar, Laddie John | | Temple |
| Lesikar, Laddie John | 3 F F | Temple |
| Leslie, Frank Claude | 4 FF | Dallas |
| Leslie, Sydney Clyde | Sn CE | College Station |
| Leslie, Sydney Clyde | | Childroop |
| Leslie, William Chafin Leverett, Wilton Howard | 4 M E | Ciliaress |
| Leverett, witton Howard | 4 ME | Overton |
| Levinson, John Van Davidoke | | Corpus Christi |
| Levy, Morton Louie | 4 1 E | Marlin |
| Lewis, Alf Allen | 3 CE | Kaufman |
| Lewis, Jack Earle | 1 EE | Eastland |
| Lewis, lames Paramore | 2 AA | Gonzales |
| Lewis. Meredith Townsend | 4 EE | San Antonio |
| Lewis, Robert Edward, Jr | 2 EE | Ennis |
| Ley, Homer Edward | 1 CM | Houston |
| Lincoln, Glenn Combs | 1 A r | Rockdale |
| Lindsey, Reginal Forest | 1 Δα | Malon |
| Lincomh Sowall Waston | I Ag | Houston |
| Lipscomb, Sewell Weston Lister, Walter Sidney | 2 4 4 | Livin motor |
| Lister, waiter Sidney | | Livingston |
| Littlefield, William Morris | | San Benito |
| Littlefield, William Morris Lloyd, Frierson A. | | Balmorhea |
| Locke, G. W. Ir. | | I rinity |
| Locke, Wallace Drummond | 1 LA | Bryan |
| Lockett, Tyler Coleman | 1 LA | Hutto |
| Lockhart, Harvey Lee | 4 Ar | Plainview |
| Loew. Gilbert Edward | 4 CE | Beaumont |
| Lokey, Walter Clemons | 1 CM | Runge |
| Lomax, George K., Jr. | 1 66 | Port Arthur |
| Long, Wayne Eggleston | 4 M F | Roscoe |
| Longino, Alvin Charles | 4 Δα | Ingleside |
| Lothrop, Reuben Knight | 2 A A | Marshall |
| Loupot, Herman Max |) AA 1 CM | Dallaa |
| Loupot, Herman Max | I CM | Dailas |
| Love, Duncan Dewitt | I AA | w neelock |
| Love, George Elliott, Jr | I Ag | Del Rio |
| Love, William Frank | 3 ME | Sherman |
| Lovelace, Thurston Ray | 1 EE | Menard |
| Loveless, Robert Wells | 2 LA | Lamesa |
| Lovell, George Hendrick | 4 EE | Center |
| Lovell, Lester Irving | 1 EE | Galveston |
| Lowing lames losenhiis lr | 7 6 6 | San Antonio |
| Lowe, Albert Edward Lowrey, Jack Kenyon | 3 4 4 | Weatherford |
| Lowrey Jack Kenvon | 2 T F | Wilmer |
| Lowrey Mack Kenneth | ÎTE | Wilmer |
| Lowrey, Mack Kenneth Lowrey, Robert Dyer Lowry, Burris Howard | 1 A A | Servitheville |
| Lowrey, Robert Dyer | I AA | |
| Lowry, Burris Howard | I AA | west Columbia |
| Luckenbach, Fritz, Ir. | | Menard |
| Luse, Willard Oscar | | Bellville |
| McAdams Carroll Gordon | | Bedias |
| | | |
| McBride, Gerald Crews | 3 CE | Leonard |
| McBride, Gerald Crews McBurnett, Cecil Frederick | 3 CE | Leonard Mount Sharp |
| McBride, Gerald Crews McBurnett, Cecil Frederick McCain, Jared Jay | 3 CE | Leonard Mount Sharp Somerville |

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UNDERGRADUATE STUDENTS

| McCalman, Rosco Dow | I EE | .Caddo, Okla. |
|--|-------------|-----------------|
| McCann Kenneth Gale | 105 | Houston |
| McCarthy George Patrick | 2 4 4 | Ennis |
| McCarty, Edward Lynn | 2 CE | Dallas |
| McCarty, Edward Lynn | | Chilas |
| McClendon, Frank Candler | 4 AA | Cleburne |
| McClister, James Oliver, Jr. | I LA | .Krum |
| McClure, Reuben Hugh | .1 CM | .Pittsburg |
| McClister, James Oliver, Jr. McClure, Reuben Hugh McCollom, Robert Noel | 4 EE | Lubbock |
| McCollum, John L. | 3 4 4 | Haskell |
| McCollum, Justin Pearman | 2 4 4 | Valley View |
| McConaughey, Hugh Donald | 4 IE | |
| McConaugney, Hugh Donald | | Houston |
| McCoy, Lewis Ewell | 2 Ar | Brady |
| McCoy, Vernon Orville | 4 Ag | .Lubbock |
| McCoy, Vernon Orville McCrea, William Wilson | 3 EE | .Dallas |
| McCune, Elton Lewis | 2 M F | Dallas |
| McCune, Elton Lewis McDaniel, Eugene William McDaniel, Hugh Hines McDonald, Andrew Hughes | 1 4 4 | Hubbard |
| McDaniel Hugh Hines | 376 | Hillshoro |
| McDonald Androw Hughos | 165 | Dilot Doint |
| McDonald, A. P. | 2 E E | Fliot Fond |
| McDonald, A. P. | | Leesville, La. |
| McDonald, Byron Amos | I ChE | .Dallas |
| McDonald, Charlie Cleveland | 3 CE | .Fort Worth |
| McDonald, Claude Worley McDonald, Edward Owen | 4 Ag | .Coleman |
| McDonald, Edward Owen | .1 M.Ĕ | . Jefferson |
| McDonald, James Albert | 2 FF | Cuero |
| McDougal Tom Henry | 2 A g | Tyler |
| McDougal, Tom Henry McDowell, William Kenneth | 105 | Polton |
| McDowen, William Keineth | | Denon |
| McElroy, Walter D. | 4 Ag | Wilssion |
| McFarland, Clay | | .San Antonio |
| McFatridge, Robert Frank, Ir | | .Roxton |
| McGee, Allie Granville | 4 AA | .Plainview |
| McGinney, Henry Frederick | l Ar | Houston |
| McGinnis, Charles Taylor, Ir. | | Terrell |
| McGlaun, Weldon | 4 M F | Sweetwater |
| McGowen, Edward Leroy | 166 | Capos |
| McCrath John Joseph | | Son Antonio |
| McGrath, John Joseph McGraw, L. G. | 1 EE | .San Antonio |
| McGraw, L. G. | | Center |
| McIver, Alton Brooks | I Ag | .San Antonio |
| McKain, Albert Gilchrist McKennon, William Douglas | l Ar | .Greenville |
| McKennon, William Douglas | 1 EE | .Schulenburg |
| McKenzie, Harold Jackson McKinley, Dewitt | 4 Ar | Houston |
| McKinley Dewitt | 2 M E | Fort Worth |
| McKinley, William Wallace | 1 4 4 | Pearsall |
| McKinney, Leo. T. | 1 A - | Marlin |
| Malliney, Leo. 1 | S | Comison |
| McKittrick, Julius Michael McKnight, Cyrus | .5p Ag | .Garrison |
| McKnight, Cyrus | <u>2 EE</u> | .Pampa |
| McKnight, Lawrence Earnest | .1 M E | .El Paso |
| McLamore, John T McLeilan, George Sands, Jr McLeod, Gordon West | 4 EE | .Westover |
| McLellan, George Sands, Jr. | 2 CE | Amarillo |
| McLeod, Gordon West | 3 F F | San Antonio |
| McMahan, Allen George McManus, Dudley Cullen | 2 T F | Whitney |
| McManus Dudlay Cullen | 1CM | Kenedy |
| McMath, Charles Wallis | | Donton |
| McMain, Charles wains | 2 CnE | Changen |
| McMillan, Thomas Joseph McMillian, Robert Lee | | Chenango |
| McMillian, Robert Lee | 4 CE | Crystal City |
| McMurrey, Milton | I AA | .Yoakum |
| McNaughton, Alexander Hamilton. | 4 Sci | Palestine |
| McNeill, Albert Raymond | 1 EE | .Dallas |
| McNess, George William | 4 EE | College Station |
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|---|---------------|------------------|
| McWhirter, Henry Calvin | I LA | Fort Worth |
| McWhirter, Jim Ned | 2 Ar | Roby |
| McWhorter James Henryson | 1 EE | Childress |
| Mabry Frank Merriwell | 2 E E | San Antonio |
| Machen Henry Bailey | 1 CE | Seymour |
| Machen, Henry Bailey Machemehl, Louis Arnold | 1 A A | Bellville |
| MacMillan, Elbert Theo | 1 4 4 | Lockhart |
| Maddox, Leon Holt | I AA | Vallas Vision |
| Maddox, Leon Holt | | valley view |
| Maddox, Warner Vance | I CM | Era |
| Maedgen, Robert Delane | I ME | Brownwood |
| Maggard, Howard Stewart | 1 EE | Midlothian |
| Magill, James Rankin | 2 ME | Dallas |
| Mahaffey, Collins Oran | 3 I.A | Sulphur Bluff |
| Maher, Lawrence Warren | 2 MF | Laredo |
| Majorhofor Budy William Ir | 105 | San Antonio |
| Maierhofer, Rudy William, Jr Mainer, Nicholas Jackson Majors, Williford Horace | | Weee |
| Mainer, Nicholas Jackson | | |
| Majors, Williford Horace | I AA | Port Arthur |
| Mallory, Cecil Fieldon | IIE | Dallas |
| Mangum, Bruce Robert | 1 CE | Poteet |
| Manly Clarence Edward Ir | 1 4 4 | Cotulla |
| Mann, Dudley Thomas Manton, William James | 2 Ag · | Taylor |
| Manton William James | 3 M F | Bellevue |
| Maples, Homer D. | 1 <i>C</i> hE | Dallas |
| Markle, Walter Hoarce | 1 M E | Dort Nochoo |
| Markle, Walter Hoarce | | Port Necnes |
| Marshall, Berry Luther | I AA | Gilmer |
| Marshall, Cliff Benton | 2 AA | Silsbee |
| Marshall, Carroll Laverne | 1 ME | Ennis |
| Marshall, Robert Theodore | 3 EE | Houston |
| Marshall William Neill | 1 AA | Gilmer |
| Martin, Albert Dow, Jr. | 2 FF | Bryan |
| Martin Arthur Edward | 1 4 - | San Antonio |
| Martin, Arthur Duward | 2 E E | |
| Martin, George Washington | | bryan |
| Martin, Harvey Bedford | I AA | Bryan |
| Martin, John Albert | | San Antonio |
| Martin, George Washington Martin, Harvey Bedford Martin, John Albert Martin, June Travis | I EE | Three Rivers |
| Martin Llovd Farl | INE | Humble |
| Martin, Marion Frank | | Stephenville |
| Martin, Prentice Leroy, Jr. | 1 EE | Fort Worth |
| Martin, Prentice Leroy, Jr. | 114 | Dallas |
| Martin, Ralph Walter Martin, Thomas Frank | 1 66 | Lampaga |
| Martin, Thomas Frank | | Lampasas |
| Massey, Reid Anderson | 4 EE | Walnut Springs |
| Mather, George Albert, Jr | I Sci | San Antonio |
| Mathews, Clarke Aubrey | | Fort Worth |
| Mathews, Charles Thurman | 2 Sci | Texarkana |
| Mathews, Walter Preston, Jr | 1 Ar | Dallas |
| Mathis, John A., Jr. | 1 FF | Gilmer |
| Mathis, Raymond Hicks | 2 1 ~ | Bruan |
| Mathis, Raymond micks | | Durant Oldahama |
| Matthews, James | 4 AA | Durant, Oklanoma |
| Matthews, Joe Walter | I EE | Kaufman |
| Matthews, Thomas Lewis | 4 Ag | Chapel Hill |
| Matthews, Thomas Lewis | SpAg | Eagle Lake |
| Mauldin, Raleigh Cecil | 3 Ag | Milford |
| Maxwell, Curtis Fred | 1 FF | Corsicana |
| Maxwell, Robert Davisson | 1 ^ ^ | San Antonio |
| Mayon Harold | | Tyler |
| Mayes, Harold | | |
| Mayo, Clyde Culberson | Z AA | Kobstown |
| Meador, Jack Ralph | 4 EE | Dallas |
| Meason, John William | l Ag | Cotulla |
| | | |

| 2 1 E 2 Ar 3 LA 2 AA 1 Sci Land 1 Sci | Lockhart Lockhart Waco Kerrville San Antonio |
|---|--|
| | |
| .3 LA .2 AA .1 Sci | Kerrville San Antonio |
| .2 AA 1 Sci | San Antonio |
| I Sci | |
| | San Antonio |
| Land | Crockett |
| .I RE | C!arendon |
| 1 Sci | Ecleto |
| 3 Ag | Del Rio |
| 1 Sci | Deep Water |
| 4 I E | Velasco |
| | |
| .1 EE | lago |
| 3 Ar | Nacogdoches |
| 3 ME | Nacogdoches |
| 3 ME | Placedo |
| .2 CE | Mineral Wells |
| .2 CE | Fort Worth |
| 2 AA | Coleman |
| C 2 | Harlingen |
| 1 ME | West Columbi |
| 3 L.A | Amarillo |
| 1 M E | Utley |
| | |
| 3 A A | Beeville |
| 1 A A | Kvle |
| 4 FF | San Antonio |
| 4 A g | Beeville |
| 1 4 4 | San Augustine |
| 2 Δσ | San Gabriel |
| 3 50 | Crockett |
| 1 C M | Groesbeck |
| | Laredo |
| 2 CF | Lasper |
| C 2 | Fort Worth |
| | Murchison |
| 3 CE | Orango |
| 1 66 | Dallac |
| 2 EE | Childrose |
| 1 Sci | Shorman |
| 2 CE | San Antonio |
| 1 D C | College Station |
| 4 EE | Ballvilla |
| 1 Sci | Hodloy |
| Sn A a | Austin |
| .spAg | Austin Bosonborg |
| | Whanton |
| I Af | Wharton |
| .I EE | wharton |
| .I CE | Cameron |
| .I EE | Beeville |
| | Center |
| .I EE | i exarkana |
| .4 AA | Corsicana |
| ChE | Chattield |
| .I AA | Donna |
| .1 LA | Whitewright |
| .1 EE | Donna |
| | 1 EE. .3 Ar. 3 ME |

| Marda Durisha I | | Tabaaaaa |
|---|--------------|---------------------|
| Moody, Dwight L. | | Ienuacana |
| Moon, Lemuel Harold Moore, Edwin Mathes | ! <u>I E</u> | I roup |
| Moore, Edwin Mathes | IIE | Houston |
| Moore, George Harvey | 2 CE | Dallas |
| Moore, Jacob Elson | 1 См | Waco |
| Moore, Joe Weldon | 1 AA | Rogers |
| Moore, Samuel Ausburn | l Ag | Mount Vernon |
| Moore, Samuel Ausburn Moosberg, Carl A. | 1 Ag | Wills Point |
| Mora, Adan | | Salvador, C. A. |
| Mora, Adan | | Saltillo, Coah |
| | | Mexico |
| Morgan, Albert Elanzo | 2 I A | Longview |
| Morgan Charles McRae | 2 C F | Campien Arkansas |
| Morgan, Charles McRae Morgan, Jonn Caleb | 2 Che | Eart Worth |
| Morgan T A Ir | 1.50 | Houston |
| Morgan, T. A., Jr Morgan, William Cari | I SU | West |
| Morgan, william Cari | | |
| Morgan, William Edgeworth | I AA | Fort worth |
| Morris, Cline Eugene Morris, John Allison Jr., | I Ag | Seymour |
| Morris, John Allison Jr., | | Beaumont |
| Morris, Orvilie Dennis | 4 Ag | Winnsboro |
| Morris, Roger Jose, Jr Morris, Thomas Erl | I EE | Dallas |
| Morris, Thomas Erl | l Ar | Granbury |
| Morris. W. C., Ir. | 2 LA | Forreston |
| Morrison William Arthur Ir | 114 | Cameron |
| Morrison, Waiter Durrell Morrison, Waiten Steve Morriss, Gimer Airs | 1 CM | Los Angeles, Calif. |
| Morrison, Waiton Steve | 1 LA | Big Spring |
| Morriss Gilmer Airs | 4 A A | Kerrville |
| Morrow, W. Jack | 11.A | Ladonia |
| Morse, Everent Dean | 21 an i | Houston |
| Morse, George Wesley | | Linden |
| Morteilra, Noss Lee | 1 4 4 | Houston |
| Mostery, Sam Leon | | |
| Mosher, Euwaru Joseph | | Dallaa |
| Mosner, Euward Joseph | | Dallas |
| Moss, Davis Jackson Moudy, James irvin | I ME | Cisco |
| Moudy, James Irvin | 2 CE | Stamford |
| Mount, Giynn O. | i LA | Crystal City |
| Mowery, Charles Leslie Muckleroy, William Boggs | I Ag | Almeda |
| Muckieroy, William Boggs | I Sci | lerrell |
| Muenzenberger, Carl Munn, Corger Cole | т Ло | San Antonio |
| Munn, Corder Cole | 4 EE | Bertram |
| Munson, George Poindexter | 3 CE | Columbia |
| Munson, Hillen Armoor | I CE | Angleton |
| Murchison George Marshall | 2 M E | Graneland |
| Murchison, Weldon Octavious | 2 Ar | Grapeland |
| Murchison, Weldon Octavious | I LA | Grapeland |
| Murchison, William Polk | 1 LA | Corsicana |
| Murphy James Alton | 1 Ar | Mineral Wells |
| Murphy, James Albert | 2 F F | Marlin |
| Murphy, Leland Taylor | 1 Ar | Llano |
| Murphy, William Bond | 114 | Mavia |
| Murphy, William Bond Muzzy, Benjamin Dale, Jr | 216 | Calveston |
| Myers, Carl Willie | 1 ChE | Uumbla |
| Myers, Kenneth Leonard | | |
| Myers, Kenneth Leonard | I <u>EE</u> | Cleburne |
| Myers, Samuel Benjamin | 2 501 | San Antonio |
| Myers, Willie Homer Myrick, James Leonard Nail, Max Robert | | Valley View |
| Myrick, James Leonard | I AgEd | Ierrell |
| Nail, Max Robert | I ME | Memphis |
| Nall, Jerrald Hubert Nance, Alton Alonzo | I EE | Palestine |
| Nance, Alton Alonzo | I Sci | Houston |
| | | |

| Nanney, Nunan Henry | 1 Ar | Breckenridge |
|---|----------------------|--------------------|
| Neale John I | 2 I A | Denton |
| Neal, Raymond Edwin | . I AA | lemple |
| Nedbalek, Albert George | 1 M E | Brvan |
| Nedbalek, Ben William | 1 ME | Brvan |
| Nedbalek. Louis Edward | 1 M E | Brvan |
| Needham Earlie Buren | I Ch F | Coleman |
| Neeley, Frederick Earl Neff, Judson | .3 EE | Ouanah |
| Neff. Judson | 3 M E | Laredo |
| Neff, William Deverle | 2 E E | Dallas |
| Neff, William Deyerle | 2 ChE | Tyler |
| Neilson, Howard | 1 EE | Spearman |
| Nelson, Harve Preston | 1 ČĚ | Greenville |
| Nelson, Paul Allen | 4 T E | Pittsburg |
| Nelson Robert Hatton | 1 I A | Hutto |
| Neubauer, Theodore Albert | 3 A A | Taylor |
| Neuman Etmar Arthur | lAr | Gonzales |
| Neuman Erwin Keinhard | 1 Ασ | Perry |
| Neuman, Erwin Keinhard Newberry, James Presnall Newman, Çarl Armand | 2 M F | San Antonio |
| Newman Carl Armand | 2 Tex | Houston |
| Newnam, Joe Farr, Jr. | 1 4 4 | San Antonio |
| Newsom, Allan Earl | 1 4 4 | Llano |
| Newsom Frank Nach | ΔΔΔ | Llano |
| Newsom, Frank Nash Newton, James Boswell | 1 ^ ^ | Rockdale |
| Newton, Ross James | 2 \ a | Cross Cut |
| Nichols, Arthur Edgar | 2 C C | Columbus |
| Nichols, Clyde Russell | .) <u>CC</u> 1 CC | Timeon |
| Nichols, Elmar Clauton | .4 EE 4 ME | Bonumont |
| Nichols, Elmer Clayton Nichols, George Butler | 2 E E | San Antonio |
| Nicholson, Alfred Oscar | | Shamroel |
| Nickle, Fern Lawrence | .4 AA | Coincouille |
| Nieleen Elmen Westengend | | Dont Anthun |
| Nielsen, Elmer Westergard Noel, Marshall Lee | . ГАА Эмг | Port Artnur |
| Norman Ban Caraly In | 2 M E | Delection |
| Norman, Ben Frank, Jr. | 2 M C | Vaufman |
| Norman, George Henry Norred, Harlan Clayton | .1 1 E | Mount Colm |
| Northan Claud Drawing In | . I АА | Delles |
| Northrup, Claud Browning, Jr | 2 M E | Dallas |
| Norton, Clarence A. | .I EE | Mission |
| Norton, Jesse Leo | I Ar | Greenville |
| Norvell, Roy | .) EE | |
| Nunez, Edward | .3 AA | Grand Chenier, La. |
| Oaks, Robert Quincy | .3 AA | Dallas |
| O'Bannon, Lucius Edwin | 2 Ar | Dallas |
| O'Brien, William Barnette | .I LA | Amarillo |
| Odom, William , rederick | .I AA | Kurten |
| Ohls, William Arthur | I AA | Mercedes |
| Olivarri, William Henry Oliver, Gale, Jr. | 4 Ag | San Antonio |
| Oliver, Gale, Jr. | .2 AA | San Antonio |
| Oliver, John Calvin | -! <u>C</u> E | San Angelo |
| Oliver, James Edward | 1 EE | Hillsboro |
| Oliver, James Parker | 1 CM | Caldwell |
| Olivey, Harold Arthur4 Olsen, Robert Franklin | ChE | Fort Worth |
| Olsen, Robert Franklin | 4 M.E | Clifton |
| Olson, Gustava Robert O'Neal, Walter Barnes | 2 Ar | Waco |
| O'Neal, Walter Barnes | 1 ME | Port Arthur |
| O'Neil Dan Heath | 1 I A | Greenville |
| Orchard Charles David | ChE | San Antonio |
| Ordonez ,Carlos C. | 2 Ar | Colombia, S. A. |
| Orem, Arthur Buckanan | .1 Sci | Houston |
| | | |

| Orme, William Phillip | 4 Ag | Frost |
|--|--------------|----------------------|
| Orr, John Edward | .3 M.E | .Waco |
| Orr. Robert Windham | | .Dallas |
| Ortolani Lawrence | 3 CF | Fort Worth |
| Osborne, ·Russell | 21 A | lefferson |
| Owen, John Meredith | 1 A A | -Jerrerson Hamlin |
| Owens, Raymond Barton | 2 | Development |
| Owens, Raymond Barton | 1.CM | Johnann V |
| Pace, Milton Hudspeth | | valley view |
| Padgett, Herbert Augustus, Jr | I Ar | Fort Worth |
| Paez, Alexander | | San Antonio |
| Page Leo Harem | IAA | Silshee |
| Paga Malvin Cleo | 1 [] | Fort Worth |
| Pantaze Vick Charles | 1 EE | Dallas |
| Parish, Henry Everette Parker, Ace Green | 3RE | Beaumont |
| Parker Ace Green | 1 CM | Atlanta |
| Parker, Aubrey Leo | 1 CM | Cainesville |
| Parker, Clinton Dewitt | 1 ^ ^ | Maupoort |
| Parker, Chinton Dewitt | | Maypeart |
| Parker, Ernest Jr. Parker, Finley Murdall | 4 CE | Fort worth |
| Parker, Finley Murdall | .I ME | Lexas City |
| Parker, Weldon scott | 1 CE | Lavon |
| Parks, Frank Wells | l Ar | .Rosebud |
| Parks John Martin | 4 A g | Farmersville |
| Parman, Richard Tandy | 1 LĂ | Fort Worth |
| Parman, Richard Tandy Parr, Joe Bailey Parrott, Arthur Edger | 2 L A | Sabinal |
| Parrott Arthur Edger | 2 Δ Δ | Mart |
| Parsons, Walter Herbert, Jr. | 1 Ar | Delectine |
| Parten, Leo Winn | 2 M E | Delles |
| Parten, Leo winn | .) INIE | Dallas |
| Pate, George Richard | I Ar | .Conroe |
| Patrick, John Ernest | I AA | .Houston |
| Patterson, James Alexander | I Sci | .Dallas |
| Patton Lames Lawner | 2 Ar | Dallas |
| Patton, William Pannell | 2 Ag | .Lockhart |
| Patton, William Pannell Pausewang, Harold Meyer Payne, Rufus Terrell | 2 M Ĕ | Marion |
| Payne Rufus Terrell 1 | AgEd | Mount Pleasant |
| Pearson Elma Price | 7 Δσ | Denton |
| Pearson, Elma Price Pearson, Lawrence William | 1 M F | Arcadia |
| Pearson, Morse Samuel | 1 A - | Houston |
| | | |
| Pearson, Robert Franklin Pearson, Kichard O'Neale Peary, Claude Clinton Peeples, Rufus Rodrick Peets, George Halsey, Jr Pendleton, Hugh Halsell Peoples, Allen Harlan Perdue, Lovic Pierce Perkins Alvin C | Sp EE | .College Station |
| Pearson, Richard O'Neale | 4 EE | .Colorado |
| Peavy, Claude Clinton | 2 Ch E | Garland |
| Peeples, Rufus Rodrick | 3 Ag | Tehuacana |
| Peets, George Halsey, Jr. | 1 LA | Galveston |
| Pendleton, Hugh Halsell | 2 LA | Dallas |
| Peoples, Allen Harlan | 31.A. | Dallas |
| Perdue Lovic Pierce | 2 FF | Texarkana |
| Perkins, Alvin C. | 1 66 | Barkedale |
| | | |
| Perkins, Freeman Ellsworth Perry, Emory Lee | 1 EE | Mantana |
| Perry, Emory Lee | I EE | Mertens |
| Perry, William Leroy | 4 <u>C</u> E | Wills Point |
| Peters, Rogers Eugene | 4 EE | Pilot Point |
| Petrie, Benjamin Russell | 1 CE | Elkton, Ky. |
| Petty, Joe Winston, Jr Petty, S. J., Jr. | 1 CE | Tulsa, Okla. |
| Petty, S. L. Ir. | 2 EF | Decatur |
| Petzing, William Norman | 4 F F | Dallas |
| Peyton, Andrew Hollingsworth | 1 4 4 | Marlin |
| Peyton, Cnester Alan | 10bE | Corpus Christi |
| Deuten Lance William 1 | | Shawonort La |
| Peyton, James William, Jr. | | |
| Pteutter Lug Somers | ZAA | New Brauntels |
| Phelps, Henry Truman, Jr. | I Ar | San Antonio |
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|---|-------------|-------------------|
| Phillips, Henry Lemle | | Dallas |
| Phillips, Hiram Montague | I <u>Ar</u> | San Angelo |
| Phillips, Hiram Montague Phillips, John Oran | I EE | Kirbyville |
| Phillips, J. R. Philp, James William | 1 Ag | Marble Falls |
| Philp, James William | 1 EE | Houston |
| Philp, William Merrill | 1 ME | Caldwell |
| Pianta, Emanuel Nathan | 4 Ar | San Antonio |
| Pickett, Moran Johnson | 4 FF | Milford |
| Pickett, Reavis William | 1 Sci | Milford |
| Pike, Robert Lee | 2 E E | Big Spring |
| Pilcher, Mason Johnson, Jr. | 1 C C | Movia |
| Piller, Mason Jonnson, Jr | | |
| Plikey, Orrin Hendren | 4 CE | Dallas |
| Pilkey, Orrin Hendren Pilkey, Thomas Alexander | | Dallas |
| Pink lack Lipman • | 4 M F | Wichita Falls |
| Pipes, Claude Felix Pipkin, James Harold | 3 TE | Grandview |
| Pipkin, James Harold | 2 LA | Bryan |
| Pirie James Edward | 150 | Albany |
| Pirtle, Murray Lee Pistole, Louie Leigh Plott, Bobby Rush | 1 I.A | Belton |
| Pistole Louie Leigh | 11.4 | Big Spring |
| Plott Bobby Rush | 1 4 4 | Marlin |
| Pochyla, Benjamin Henry | 2 M E | Waco |
| Pogue, Guy | 1 EE | Coder Hill |
| Pollet There I and I | I EE | |
| Pollet, Thomas Joseph, Jr |] <u>EE</u> | Lutcher, La. |
| Polzer, Frank Joseph | I IE | Cameron |
| Pomeroy, George Steven | 2 ME | Galveston |
| Pool, Walter Crawford Poole, Donald Gilmore | 3 AA | Fort Worth |
| Poole, Donald Gilmore | 1 CM | Houston |
| Pope, William Buddy | 1 TE | Dallas |
| Pope, William Buddy Porter, Earl Boswell Porter, Granville Loomis | 2 Ag | Caldwell |
| Porter Granville Loomis | 2 FF | Cason |
| Porter, Marvin Milton | 1 CF | Caldwell |
| Porter, William Albert | 100 | Terrell |
| Pos Walter Henry | | Drugo |
| Pos, Walter Henry | I LA | Division |
| Pos, william Jonn | Aged | bryan |
| Potter, Charles Frances | .I ChE | Gainesville |
| Pos, William John | 3 МЕ | Dallas |
| Powell, Harold Davis | 1 ME | Fort Worth |
| Powell, Jerrell Raymond Powers, Waldo Willie | 3 EE | Red Oak |
| Powers, Waldo Willie | 4 IE | Fort Stockton |
| Pratt. Arnold Delbert | | Dublin |
| Pratt, Arnold Delbert Pratt, John Louis | 3 E Ĕ | Commerce |
| Prewitt, Joseph Kemper Price, Charles Gordon | 1 ChF | Elgin |
| Price Charles Gordon | 2 FF | San Antonio |
| Price, Phillip Middleton Privette, William Palmer | 4 Ar | Honey Grove |
| Privotto William Palmor | 205 | Howe Howe |
| Prude, George Faris | 1 4 4 | - Dalmar |
| Prince, George Faris | I AA | |
| Puryear, Oney Pinkney | .4 ChE | Beaumont |
| Pyeatt, Charles Delbert | 2 EE | .Handley |
| Pyland, George Alvin | I AA | Marlin |
| Quisenberry, John Carl | 3 AA | Seymour |
| Ragsdale Lewis George | 3 Sci | McAllen |
| Rainey, Anson, Jr. Ralph, Willard Gray | 3 Ar | Dallas |
| Ralph, Willard Grav | 4 Ag | Farmersville |
| Ramirez, Guadalupe Ramos, Francisco Mellado Ramsey, Louis Weete | 1 Ag | Mackay |
| Ramos, Francisco Mellado | 2 TF | Saltillo Coah Mey |
| Ramsey Louis Wests | 4 FF | San Antonio |
| Randolph, Frederick Hunter | 1 A A | Laredo |
| Randow Moluin Harris | 1 M E | Uumblo |
| Randow, Melvin Henry Raney, Joe Ernest | I IVI II | Spanne - |
| Naney, Joe Ernest | i Agea | spearman |
| | | |

| Rawlins, Francis Marion | 1 Ar | Paris |
|---|-------------|-----------------|
| Rankin, Emmett Robert | | |
| Ray, Avriett Thomas | 2 CE | Temple |
| Ray, Henry Samuel | 1 Sci | Fort Worth |
| Ray, John Allen | IFF | San Antonio |
| Ray, William Oliver | 1 FF | Hereford |
| Ray, Oscar L | 1 Sci | Clifton |
| Ray, Oscar J. Rea, Wayne Lee | 1 ME | Sweetwater |
| Read Arthur Edwin | 176 | Silshee |
| Reagan, Eugene Powell | 2 Ag | Beeville |
| Redden, Clarence Rudolph, Ir. | 2 EE | Del.eon |
| Redfearn, Percy Randolph | 2 TE | Mount Pleasant |
| Reagan, Eugene Powell Redden, Clarence Rudolph, Jr Redfearn, Percy Randolph Reed, Louis Phelps | 1 CE | Dallas |
| Reese, Burton C. | IME | Ballinger |
| Reese, Charles Keller, Ir. | 2 CE | Houston |
| Reese, F. P. Ir. | 1 A A | Sweetwater |
| Reese, John Wallace | 1 AgEd | Marlin |
| Reeve, Theodore Wilbur | 1 ChE | Galveston |
| Reichert, Fred Henry | l Ar | San Antonio |
| Reid, Raymond Hubert | I AA | Dublin |
| Reitch, Ioseph Louis | 4 AA | Marshall |
| Rektorik, Icrome Alouis | Sp AA | Violet |
| Renfro. John Edwin | 1 AA | West Columbia |
| Renfrow, William Hamlett | 2 CM | Dallas |
| Resley, George | 1 Ag | Clint |
| Rettiger. William Charles Revak. Joseph Anthony | 4 CF | Temple |
| Revak. Joseph Arthony | <u>1 FF</u> | Beaumont |
| Reynolds, Horace LaFayette Revnolds, James Arthur | 4 EE | Pittsburg |
| Revnolds Jamas Arthur | | Bastrop |
| Reynolds, Jordan Kennon Reynolds Bichard Wyatt | I <u>EE</u> | Pittsburg |
| Reynolds Bichard Wyatt | | Ioshua |
| Rhymes. William Lacy | I GM | Pittsburg |
| Rice, Albert Murray Rice, Edward Burns | I Ar | Austin |
| Rice, Eugene Herbert | | Oklahoma City |
| Rice, Eugene Heibert | | Oklahoma |
| Rice, Walker William | 1 66 | |
| Richards, Charles William | 1 FF | Woodville |
| Richards, Harvey Loa | | |
| Richards, John Wallace | Ι Δσ | Waco |
| Richards, Phil T | 1 C M | Port Arthur |
| Richardson Charles Aaron Ir | IIA | Beaumont |
| Richardson, William Raymond . Richie, Silas Monroe | 2 ChF | Dallas |
| Richie, Silas Monroe | 2 EE | San Antonio |
| Richmond, Paul Gilmore | 2 M E | Houston |
| Richter Charles Edward | 1 FF | Laredo |
| Richter, Gerald Glenn | 1 M F | Nixa. Missouri. |
| Ricks Sam Boall | 2 C F | Pleasanton |
| Riley, Clyde Fontaine | 2 EE | Lake Dallas |
| Riley Jewell B | 2 C M | Burkhurnett |
| Riley John William | 2 ChE | Hazlehurst Miss |
| Rippy, Ben Ramey Rippy, Charles Calvin | C1 | Sulphur Springs |
| Rippy, Charles Calvin | 2 ME | Sulphur Springs |
| Risien, Raymond Stanley | I LA | Fort Worth |
| Risinger, Brady Franklin | 4 AA | Brvan |
| Riveire, Newell H. | 4 Ag | Palestine |
| Robbins, Cooper Polk | | Son Antonio |
| Robbins, George Delbert Roberson, Clarence Wilbur, Jr | I MIC | |
| Roberson, Glarence wildur, Jr | AA | |
| | | |

292

| Roberson, Tim | 1 AA | Terrell |
|--|--------|--|
| Roberts, Clarence Hubert | I ChE | El Paso |
| Roberts, John Lemuel | 1 M E | Brvan |
| Roberts, Raymond Rudolph | | Goose Creek |
| Roberts, Virgil Clayton | 1 RĒ | Dallas |
| Robertson, Arthur Clyde | 1 F F | Abilene |
| Robertson, Clint Shorter | 3 FF | Denton |
| Robertson, Clint Shorter | 1 Ag | Forney |
| Robinson, Delbert Warren | 1 A A | Tuleta |
| Robinson, Delbert Warren Robinson, Eugene N. | 1 C M | Athens |
| Robinson, Howard Grey Robinson, Harry James Robinson, Jed Neal Rock, Frank Edwin | ΙΑσ | Walder |
| Robinson Harry James | 1 Sci | Beavillo |
| Robinson Led Neal | 3 C F | Athons |
| Rock Frank Edwin | 1 66 | Cotulla |
| Rodgers Austin Paul | 1 E E | MaAllan |
| Rodgers, Austin Paul | I EE' | |
| Rogers, Almoth Dowden, Jr | 4 Ageu | |
| Rogers, Ben Thompson | 1 4 4 | |
| Demonstration Definition Demonstration | I AA | Austin |
| Rogers, Rufus H | Agea | Hillsboro |
| Rogers, William C. | | Marlin |
| Rogers, William Edward | I AA | Center |
| Rohde, Clyde Nelson Roland, Charles Albert | ! LA | Hearne |
| Roland, Charles Albert | 2 AA | Ennis |
| Rollins, John Benton Romero, Carlos Manuel | I LA | Frankston |
| Romero, Carlos Manuel | Г МЕ | San Antonio |
| Ronshausen, Francis Jackson Rosales, Raymond Herbert | 2 AA | Port Arthur |
| Rosales, Raymond Herbert | 2 ME | Pachuca, Hgo |
| | | Morriso |
| Ross, George William Ross, Robert Stevens | 1 CE | Fort Worth |
| Ross, Robert Stevens | 4 ChE | Gainesville |
| Ross, Thomas M Rothe, Reinhart Louis | 1 CE | Waxahachie |
| Rothe, Reinhart Louis | 2 Ar | Hondo |
| Rowe, Leslie Manly Rowe, Marcus Gilbert | 2 EE | Wharton |
| Rowe, Marcus Gilbert | 2 M E | .Sour Lake |
| Rowell, Joe Henry Rowland, Marshall Muriel Rowland, Marvin Thompson | 1 AA | lefferson |
| Rowland, Marshall Muriel | 1 AA | Donna |
| Rowland Marvin Thompson | 2 CE | Houston |
| ROWIADO WINAM COIL | / FP | PORT WORth |
| Russell, Ernest Morton | 11A | Fort Worth |
| Russell, Hewlett Ausborn | 3 Sci | San Antonio |
| Russell Howard Thomas Ir | Sn A A | Handley |
| Rvall Noel Edwin | 2 | |
| D D M'1-1 | | lasper |
| | 1 FF | Jasper Beaumont |
| Rylander Ray Robert | | Jasper Beaumont Buda |
| Rylander, Ray Robert | | Buda Chillicotha |
| Rylander, Ray Robert | | Buda Chillicotha |
| Rylander, Ray Robert | | Buda Chillicotha |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons | | Buda Chillicothe Fort Worth Austin |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons | | Buda Chillicothe Fort Worth Austin |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons | | Buda Chillicothe Fort Worth Austin |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons | | Buda Chillicothe Fort Worth Austin |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons | | Buda Chillicothe Fort Worth Austin |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons Samford, Thomas Clifton Sanders, Preston Randolph Saray, Rafael Sawyer, Ralph Mershon Scales, Arden Lee | 3 Ag | Buda Chillicothe Fort Worth Austin Wills Point Big Spring Colombia, S. A. Beaumont San Antonio |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons Samford, Thomas Clifton Sanders, Preston Randolph Saray, Rafael Sawyer, Ralph Mershon Scales, Arden Lee | 3 Ag | Buda Chillicothe Fort Worth Austin Wills Point Big Spring Colombia, S. A. Beaumont San Antonio |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons Samford, Thomas Clifton Sanders, Preston Randolph Saray, Rafael Sawyer, Ralph Mershon Scales, Arden Lee | 3 Ag | Buda Chillicothe Fort Worth Austin Wills Point Big Spring Colombia, S. A. Beaumont San Antonio |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons Samford, Thomas Clifton Sanders, Preston Randolph Saray, Rafael Sawyer, Ralph Mershon Scales, Arden Lee | 3 Ag | Buda Chillicothe Fort Worth Austin Wills Point Big Spring Colombia, S. A. Beaumont San Antonio |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons Samford, Thomas Clifton Sanders, Preston Randolph Saray, Rafael Sawyer, Ralph Mershon Scales, Arden Lee | 3 Ag | Buda Chillicothe Fort Worth Austin Wills Point Big Spring Colombia, S. A. Beaumont San Antonio |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons Samford, Thomas Clifton Sanders, Preston Randolph Saray, Rafael Sawyer, Ralph Mershon Scales, Arden Lee | 3 Ag | Buda Chillicothe Fort Worth Austin Wills Point Big Spring Colombia, S. A. Beaumont San Antonio |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons Samford, Thomas Clifton Sanders, Preston Randolph Saray, Rafael Sawyer, Ralph Mershon Scales, Arden Lee | 3 Ag | Buda Chillicothe Fort Worth Austin Wills Point Big Spring Colombia, S. A. Beaumont San Antonio |
| Rylander, Ray Robert Ryon, Alton Hoyt Sain, Earl Salazar, Hollis Lyons | 3 Ag | Buda Chillicothe Fort Worth Austin Wills Point Big Spring Colombia, S. A. Beaumont San Antonio |

| Schiwetz, Preston George | 2 ChE | Dlaasda |
|--|--------------|----------------|
| Schlather, Harold August | 1 A A | Karpas Citu |
| | | |
| Schiemmer, Herman Fred Schmidt, Carl Otto Schnable, Joyce Andrew Schorlemer, Royal Charles Schow, O. E., Jr. | | Masan |
| Schmidt, Call Otto | 2 6 | |
| Schnoble Levies Andrew | | Shamman Olda |
| Schadle, Joyce Andrew | 4 AA | |
| Schorlemer, Royal Charles | 2 M E | I IVOII |
| Schow, U. E., Jr. | | Clifton |
| | | |
| Schuh, Frederick | I ME | Port Arthur |
| Schuhmann, Willard Gus | I AA | Rowena |
| Schuitz, David Bright | | Houston |
| Schultz, David Henry Schultz, William Kopple | I LA | Houston |
| Schultz, William Kopple |] EE | Columbus |
| Schulz, James Gerald | 3 LA | I hree Rivers |
| Schumacher, Raymond Isadore | 4 AA | San Antonio |
| Schumann, Gerald Robert | I AA | Bellville |
| Schutz, Theodore | 4 EE | Robstown |
| Schutze, Walter | 2 AA | Austin |
| Schweers, Chester William | 2 EE | San Antonio |
| Scoggins, Aurby Kelmar | 2 ME | Dorchester |
| Scott. Joe Edwin | 1 EE | Plainview |
| Scott John Richard | Cl | Beeville |
| Scott John William | 2 A A | Denison |
| Scott, Kirk Hamilton Scott, Richard Wells | 4 Ag | Floydada |
| Scott, Richard Wells | 1 СМ | Dallas |
| Scott Robert Wilkes | 21 A | Gatesville |
| Scott William Winfield | 1 CF | Dallas |
| Scovell, John Field | 1 LA | Dallas |
| Carddan Edward Danial | 1 B.1 | Decommence |
| Seefeldt, Harvey Ralph Seewald, Fredric H Segers, Joe William Seidengianz, Charles Barrett Seidengianz | 1 A A | Houston |
| Seewald Fredric H | 11.A | Amarillo |
| Segers Loe William | 2 MF | Texarkana |
| Seidengianz Charles Barrett | 4 A A | Dal'as |
| Seifer Loe Dunlan | 3 ChF | Temple |
| Self Benjamin Franklin | LCE | Crockett |
| Seifer, Joe Dunlap | 4 V M | Dalias |
| Selman George Ir 4 | AgEng | Dallas |
| Selman, George, Jr | 3 4 9 | League |
| Servello, Thomas Angel | 4 5 | Corpus Christi |
| Sessions, Hugh | 1 4 4 | Webe |
| Sessions, Tom Lee | 11.6 | Dallas |
| Sessions, Tohn Lee | ACE | Dallas |
| Sessuins, Channe Mino | 4 CE | Dallas |
| Sessums, Harry J. Sewell, James Leslie | 4 ME | Dallas |
| Sewen, James Lesne | 1 CE | Dallas |
| Shaffer, Thomas Dayton | I CE | Danas |
| Sharp, Jim Houston | <i>2</i> M.E | Crockett |
| Shaver, Raymond Elbert | | I olar |
| Shaw, Carroll Wiley | I <u>I E</u> | Henderson |
| Shaw, Fowler Edwin | I EE | Abilene |
| Shawwaf, Mahmud Saleb | l Ag | Beirut, Syria |
| Shawyaf, Mahmud Saleb Sheckles, Loyd Webster | 3 Sci | . Yoakum |
| Shelby everent lames | 4 () F | Muneral Wells |
| Shelton, Cecil | 1 CE | Dallas |
| Shelton Horace Woodrow | 1 EE | Tvler |
| Shelton James Hovt | 4 M F | Houston |
| Shelton, John Lockett | 4 I.A | Abilene |
| Shelton Morris Wilson | 1 E E | Tvler |
| Shelton, Thomas James | | Plainview |
| Chercon, Thomas Junico himinin | | |

UNDERGRADUATE STUDENTS

| Shelton, William Byron | 1 Δ σ | Berclair |
|--|--|-------------------------|
| Shepard, William Edwin | 1 Ασ | Plano |
| Shepardson, Frank Albert | ICE | Corpus Christi |
| Sherman. Frantz Herman | 2 C F | Whitney |
| Shilling, William Henry, Jr. | 2 CM | Mart |
| Shivel, Robert Lee | 2 / / | Shorman |
| Shoemaker, Clarence Young | | Laskasnuilla |
| Shook, Helbert Ben | I AA | Jacksonvine |
| Shook, Helbert Ben | | Ft. Stanton, N. M. |
| Shortal, Joe Adams | Z ME | Luikin |
| Shuffler, Ralph Henderson | | Olney |
| Shull, James Serge | 4 LA | Durant, Okla. |
| Shults, Floyd Alton | 3 EE | Kingsville |
| Shumate, Bruce Emmet | 1 ME | Houston |
| Siddall, Cameron | I TE | Anderson |
| Sikes, Jules Verne | 2 RE | Leonard |
| Silva Ignacio Ioaquin | 1 CF | Oaxaca Mexico |
| Simank, Kermit Ernst | l Ag | Ellinger |
| Simmons, James Albert | 2 AA | Denton |
| Simmons, Loster K. | 1 CE | San Antonio |
| Simmons Milton | SpCM. | Hartford Ala |
| Simon, Barney B. | 1 A A | Dallas |
| Simpson, Benjamin Charles | l Ar | Marlin |
| Simpson, Edward McGregor | 1 Ar | Dallas |
| Simpson, Jack | 1 C M | Caldwell |
| Simpson, Lee Edwin | 1 EE | Iustin |
| Simpson, Stephen Harbert, Jr | I DC | justin Hollottovilla |
| Simpson, Stephen Faibert, Jr | 2 EE | Callatin |
| Simpson, Thomas Mattison Simpson, Walton | ······································ | Gilmon |
| Simpson, waiton | I AA | Gimer |
| Sims, Francis Able | I EF | Jefferson |
| Sims, Rufus Jackson | ICE | Kingsville |
| Singleton, John William Singleton, William Daniel | | Dallas |
| Singleton, William Daniel | 2 ME | Dallas |
| Sisson, Homer Lee | 2 CE | Jasper |
| Skains, Jack Charner | 2 Ar | Franklin |
| Skelton, Herbert Jefferson | 3 ME | Jacksonville |
| Skinner, Lanoar | 4 LA | West |
| Skipwith, Harold James | 3 ChE+ | Ardmore, Okla. |
| Skipwith, Harold James Slaughter, James Harold | 2 M E | Dallas |
| Sloan, John James | 3 Sci | San Saba |
| Sloan Robert Oldfield | 4 Ageng | San Saha |
| Smiley, Frank Andrew | 1 EE | Waco |
| Smith Allen Lamar | SpMF | Beaumont |
| Smith, Bellwood Lister | 1 CE | Gainesville |
| Smith, Charles Allen | 2 Ch F | Henderson |
| Smith, Charles Douglas | 1 Ar | Dallas |
| Smith, Clair Edgar | 2 M F | Sour Lake |
| Smith, Curtis Kenneth | 1 F F | Louann Ark |
| Smith, Cecil Ray | 3 M E | Boscon |
| Smith, Charles William | 1 CE | Amarilla v |
| Smith, Edward William | 1 CL | Vorktown |
| Smith Examit Millan In | | Device |
| Smith, Frank Miller, Jr Smith, George Daniel | 4 CE | Bryan |
| Smith, George Daniel | I Sci | San Antonio |
| Smith, George Garrette | I Ar | San Antonio |
| Smith, George Henry | 1 CE | Bryan |
| Smith Gorgon Morse | 4 Ar | San Antonio |
| Smith, Herschel De Vane, Jr. | 2 Ar | Dallas |
| Smith, Hunter Lesije | 1 E E | Dallas |
| Smith, John Herbert | 1 EE | Weatherford |
| · · · · · · · · · · · · · · · · · · · | | |

| Contail Index II damage | 1.00 | Colomon |
|--|-------------|----------------------|
| Smith, John Holeman Smith, John Lawrence | | Coleman |
| Smith, John Lawrence | ! /\r | Fort worth |
| Smith, John Paul | | Granbury |
| Smith, Jim Spencer | Spee | Alice |
| Smith, Kenneth Campbell | I Land | Bonham |
| Smith, Leonard Clifton | | Beeville |
| Smith, Louis Dale | | lyler |
| Smith, Melvin Avery Smith, Ralph | 3 MP | Del Valle |
| Smith, Ralph | 2 AA | Palestine |
| Smith, Ralph Tyler Smith, Thomas Field | 4 CE | Temple |
| Smith, Thomas Field | 1 <u>TF</u> | Dallas |
| Smith Travis Logan III | ICE | Houston |
| Snead Isaac Cureton | l Ar | Waco |
| Spelling Will Dick | 4 F F | Mooringsport I a |
| Sommers, Otto Wahrmund | 2 EE | San Antonio |
| Sommers, Otto Wahrmund Sonntag, Adolph Ludwig | 2 I E | Gainesville |
| Soosa, Nasim | 2 CE | Baghdad, Mesop. |
| Sorrells Buel, Cecil | 1 Ag | Gilmer |
| Sorrells, Rufus Ford | 3 M E | Beaumont |
| Sory, Elmer March | 3 A A | Brvan |
| Souther, Robert Elwin | 1 A A | Rosebud |
| Sowell, Joe Lawson | 7 Ασ | Midway |
| Spahr Howard Harry | 2 Δ σ | Bonhame Va |
| Spahr, Howard Harry Sparkman, Willard Riley | 3 E E | Minoral |
| Sparks, Vesta Ralph | | Dublin |
| Spence, Robert Joseph | 2 M E | Creakett |
| Spence, Robert Joseph | | Neeedoeboo |
| Spradley, Edward James Sprott, Alton Conrade | | Livingston |
| Stafford, Jay Dunlap | | Tennesson Colony |
| Stafford, James Knight | | Pohetown |
| Stafford, Ralph Leonard | | Robstown · |
| Stahl, Marvin Winston | 1'A A | Conzoloo |
| Stalcup, Louis Hull | I AA | Sinton |
| Staples, William Duncan | 1 C L | San Antonio |
| Stappes, William Duncan | 1 CM | |
| Stark, Gordon Floyd | | IOakuili Dortland |
| Stark, Wilfred Richard | | Fortland |
| Starling, Cecil Gordon | | New Willerd |
| Starmes, Mervyn Benson | 1 ME | |
| Stedman, Greer Pope, Jr. | 2 Ch E | Dallas |
| Steele, Henry Benton, Jr. | 1 E E | I laurate a |
| Stegall, Howard Arthur | | Ener I. in |
| Stegall, Howard Arthur | I AA | |
| Steinle, John Henry, Jr Steinman, Frank Creighton | ICE | Austin |
| Steinman, Frank Creighton | | Harrold |
| Steinmann, Chris August |) EE | LaGrange |
| Stephens, Turney Vertrees | I CE | Hcarne |
| Stephens, Walter McLean | 4 ME | Kingsville |
| Stephenson, Felix Lee | | Whitesboro |
| Stephenson, Irving Newton | I Ar | Kennedale |
| Stern, Raymond Louis | 4 AA | Rosenberg |
| Stetson, Thomas, Jr. | I LA | Hebbronville |
| Stevens, Edward Howard | | Slagle, La. |
| Stevens, James Abner | 4 AA | Gainesville |
| Stevens, John Meredith | | |
| Stevens, Kenneth D. | I Ar | Dublin ' |
| Stewart, Curtis | I ME | Hull . |
| Stewart, Harper Cole | IEE | Hearne |

296

| | ~ 1 | |
|--------------------------------|--------------|-------------------|
| Stieler, Bernard Herman | C I | Comfort |
| Stieler, Roland Emil | | Comfort |
| Stine, Gordon Ray | I EE | Amarillo |
| Stine, Walter Douglas | | Beaumont |
| Stogner, Ben T. | 3 CE | Saint Jo |
| Stone, Lindell Theodore | | Wichita Falls |
| Storey, Augustus Alexander | | Lockhart |
| Storey, Arthur Lipscomb | I CE | Houston |
| Storey, Joe Kirby | | Grand Cane, La. |
| Storrie, Carl R. | | Denton |
| Stout, Charles Lew | l էէ | Memphis |
| Strader, Otto Roy | 3 ChE | Corsicana |
| Stransky, Jason Upson | I LA | Savanna, Illinois |
| Stratton. Samuel Irwin, Jr | 4 Ag | Freeport |
| Street, Thomas Atkins | I EE | Waco |
| Stribling. Sloan. Hodges | I ME | I hrockmorton |
| Strickland, C. H. | I CE | Garrison |
| Strickland, George Washington | I CM | Dallas |
| Strieber, Alton LeRoy | 4 ME | Yorktown |
| Striegler, Harvey Riley | 2 EE | Fredericksburg |
| Strode, Royall Maurice | 2 Ar | McKinney |
| Stromberg, Roland E. | 2 I E | Lockhart |
| Stromberg, Weldon Bailey | 2 Ag | Lockhart |
| Stromberger, Herman Gus | I LA | San Antonio |
| Strong, Walter Garland | l <u>EE</u> | Beaumont |
| Strumquist, Jolney Edgar | 1 EE | Harlingen |
| Struwe, Earl Lee | 3 AA | Caldwell |
| Stuckert, William Albert | l Ar | San Antonio |
| Stuermer, Henry James | 1 <u>TE</u> | Nordheim |
| Sudderth, Earle Ward | 1 CE | Leonard |
| Sullivan, Denney Owen | I AA | Comstock |
| Sullivan, Orville Hugh | 2 AA | Silsbee |
| Sullivan, Robert Augustus, Jr. | 1 EE | Texarkana |
| Surovik, Fred Andrew | l AA | Caldwell |
| Surovik, John Henry | 3 AA | Caldwell |
| Susen, William | l Ar | Dallas |
| Sutherlin, Jack | 2 LA | Haskell |
| Sutton, Bruner King | 1 EE | Corsicana |
| Sutton, Charles Douglas | 1 Sci | Beaumont |
| Sweatman, Robert House | l Ag | Ennis |
| Swengel, George Melvin | I ME | Houston |
| Tabor, Rex Raoul | 1 CE | Pasadena |
| Tabor, Sam Henry | 4 LA | Lockhart |
| Tanner, Burford Maurice | 2 CE | Electra |
| Tanner, Paul Octave | 1 AA | Mission |
| Tarver, John Albert, Jr. | I AA | Rosebud |
| Tate, Paul Byron | I AA | DeLeon |
| Tate, Robert Bradshaw | 4 AA | Kingsland |
| Tatum, Joseph Edward | l Ag | Dublin |
| Tatum, Robert Bruce | 4 CE | Clarendon |
| Taylor, Benjamin Gilder | I <u>M</u> E | Houston |
| Taylor, Erroll James | l EE | Snyder |
| Taylor, Flanoy Curtis | 2 EE | Cooper |
| Taylor, Joseph Harry | 2 EE | Dallas |
| Taylor, Johnnie Roscoe | 4 EE | Corsicana |
| Taylor, Lewis Everett | 4 ME | Thurber |
| Taylor, Lott Lanham | l Ar | Laredo |

| Taylor, Oliver Byrd | I LA | Nixa, Mo. |
|---|--------------|----------------|
| Taylor, Roy Lee | 2 Ar | Wichita Falls |
| Taylor, William Arlington | 2 Sci | Mount Pleasant |
| Taylor, Winston Francis | I LA | Burleson |
| Teague, James Eldric | I Ar | Fort Worth |
| Teasley, Samuel A. | I <u>Sci</u> | Dallas |
| Teekell, Orda Areous | 1 EE | Honey Island |
| Teer, Howard Lee | :1 CM | Mart |
| Temple, Alvin George | 1 Sci | Palestine |
| Templeton, William Henry, Jr. | 1 TE | Cleburne |
| errell George Irvin | 3 ME | Paris |
| lerry, William Graves | · I A A | Lockhart |
| Thaison. John Andrew | 1 E E | McAllen |
| Thalmann, Victor Waldo | 2 Ag | Bandera |
| Thames, William Rouse | I CF | Beaumont |
| Theuman, Reuben Adam | 1 A A | Eagle Lake |
| Thomas, Charles Edward | 1 ChF | Chillicothe |
| Thomas, Earl | 1 MF | Maypearl |
| Thomas, Frank | 2 4 4 | Hillsborg |
| Thomas, George Edwin | 1 66 | Favnt |
| Thomas, William Borden, Jr | 2 Sci | Rogers |
| Thomas, Robert Hendon | 4ΙΔ | Hunteville |
| Thompson, Alton Columbus | 2 L A | San Antonio |
| Thompson, Ed, Jr. | 1 A A | Cameron |
| Thompson, James McKinzie | 2 E E | Groesback |
| Thompson, Oliver Webb | | Winnshore |
| Thompson, Onver webb | I Ag | East Wasth |
| Thompson, Ralph Nelson | I ME | Son Antonio |
| Thompson, Thomas Bunnell | | |
| Thompson, William Henry | I ME | Dallas |
| Thornal, Reuben Bruce | 1 Sci | |
| Thornhill, Otto Mackensen | Z ME | Lamesa |
| Thornton, William Dillard | | Dallas : |
| Threadgill, John Thomas Threadgill, Truman Edwin | I Ar | Bellevue |
| Threadgill, Truman Edwin | | Bellevue |
| Tibbals, Luther Monroe | 4 <u>M</u> E | Gainesville |
| Timmerman, Walter C. J. | 3 EE | Wharton |
| Tinus, William Cornelius | 3 EE | Waco |
| Tipton, Arthur Wilmore | l Ag | Fort Worth |
| Tipton, Eugene Colston | 3 EE | Fort Worth |
| Tipton, Leonard Lafayette | l Ar | Troup |
| Tisdale, Clarence Elwood | 2 Ag | Coleman |
| Todd, Charles Judson | 4 Ag | Pecos |
| Todd James Samuel | IAA | Fort Worth |
| Todd, Lawrence Courtney Todd, Marvin Cullen | 2 CM | Austin |
| Todd, Marvin Cullen | l Ag | Austin |
| loepperwein. Herman William | I.A | Menard |
| Toland, Merit Batson | 1 Ar | Houston |
| Tolson, Eugene Oswald | 1 C.F | Sevmour |
| Tolson, Lester Bunion | 2 ME | Mexia |
| Tom. Oscar Stanley | 1 C.M | Runge |
| Tomek, Frank Felix | 2 AA | Houston |
| omkins, Daniel David | 1 Ar | Corpus Christi |
| Torian, William Harold | | Waco |
| Torn, Elmore Rudolph | 4 A A | Taylor |
| Townsend; Fredric Hunsaker | 4 ChF | Corpus Christi |
| Townsend, Henry Web | 4 R F | Del Rio |
| Tracy, norton Harold | 2 4 4 | Tulia |
| Trail, James Arthur | 2 M F | Ballinger |
| iran, james citilar | | Duninger |

298

| Trapp, Wallace William | 1 4 4 | Mission |
|---|-------------|----------------|
| Trice Barnie Amos | 305 | Dublin |
| Trice, Bernie Amos Triplett. Samuel Dodd, Jr | 4 TE | Miami Elorida |
| Truitt, William Alton | 1CM | Dittohung |
| Tudit, willia Harry | 2 D C | Pittsburg |
| Tucker, Homs Harry | | Houston |
| Tucker, Henry Leo | | Ovalo |
| Tucker, Ralph Eugene | 2 ME | Sour Lake |
| Tucker, Hollis Harry Tucker, Henry Leo Tucker, Ralph Eugene Tucker, Robert Lee | 2 ME | Fort Worth |
| Tunstall, David Perry Turbeville, Arthur Roy Turbeville, Boyd Franklin | ! <u>EE</u> | Waco |
| Turbeville, Arthur Roy | ICE | Yoakum |
| Turbeville, Boyd Franklin | 4 IE | Yoakum |
| Turbeville, Lester Edwin | I AA | Yoakum |
| Turner, Donald | 4 Ag | Levelland |
| Turner, Drexyle Huger | 3 ME | League City |
| Turner, John Henry Turner, Ralph E. Turner, John Garrett | 2 Ar | San Antonio |
| Turner, Ralph E. | 2 AA | Brvan |
| Turner, John Garrett | 4 CE | Jasper , |
| Tutt, Fehrlin E. Umlang, Emil_Edward | 4 Ag | Meridian |
| Umlang, Emil Edward | 4 EE | Litopia |
| Urbanovsky, Elo Joe | l Ar | West |
| Utay, Simon | 2 T F | Dallae |
| Vaden Frank Samuel Ir | 2 I A | San Antonio |
| Valle, Calixto C., Jr Vance, Estell Augusta | 1 CF | Pio Grando |
| Vance Estell Augusta | I <u>CL</u> | Tavarlande |
| Vandervoort, Randolph Usher | 21 4 | Texarkana |
| Van Nest, Arden LaVergne | 2 M F | La Porte |
| Van Nest, Arden Lavergne | - 5 ME | Burkeburnett |
| Vannoy, Thomas Howard | I ME | Belton |
| Van Steenbergh, Samuel Kermit | | East Bernard |
| Vantine, J. T., Jr | AgEng | Quanah |
| Van Valkenburgh, John Carson | 2 Land | Dallas |
| Varley, Logan |] AA | Whitesboro |
| Varley, Noland Varnell, John Roy | 4 AA | Whitesboro |
| Varnell, John Roy | I AgEd | Barry |
| Varner, Ben Claiborne, Jr. Vaughan, James Waverly Vawter, Clyde Emmitt | 2 LA | Dallas |
| Vaughan, James Waverly | 3 CE | Ardmore, Okla. |
| Vawter, Clyde Emmitt | 1 EE | Genoa |
| Vertrees William Campbell | 1 Sci | Brownsville |
| Vest, Billy Battile Via, Raymond Marion | 1 Sci | Bay City |
| Via Raymond Marion | 1 ĒĒ | Bartlett |
| Vick Gilbert Martin | 1 M F | Houston |
| Vitopil John Louis | 1 MF | Bryan |
| Vitopil, John Louis Voelkel, Kermit Ernest Vogel, Werner Franz | 1 4 4 | Shelby |
| Vogel Werner Franz | ASci | Publor |
| Vogel, Weiner Franz | | Switzenlag |
| Vogt, Clifford Charles | 1 66 | Switzerland |
| Volkman, Walter Gruman | 1 CE | |
| Volkinan, watter Grunian | I CE | Wenard |
| Von Rosenberg, Charles Wilburn Wade, William Emil | 2 LA | Hallettsville |
| Wade, William Emil | I EE | Iemple |
| Wagers, Lester Lee | I ME | Weslaco |
| Wagstaff, Stuait Reed Waide, John B., Jr. Waisman, Sammie | 4 CE | Abiicne |
| Waide, John B., Jr. | 2 Ag | Sanger |
| ·Waisman, Sammie | 1 EE | San Saba |
| Wakefield, Robert Clinton | 4 AA | Midway |
| Walker Marcellus Agustus | 3 Sci | Paris |
| Walker, Ryland Wilcox | . 1 ME | Bremond |
| Walker, Ryland Wilcox Wall, Robert Felix | 2 AA | Silsbee |
| Wallace, Raddie Martin | 2 ChF. | Dallas |
| Wallace, Wilbur Victor | C I | Garland |
| | | |

x

| NY IC NOT MARK'S | 1 4 4 | Consisens |
|--|-------------|-----------------|
| Walton, Marion Martin Walton, Robert Orand | I AA | Dallas |
| Walton, Robert Orand | I ME | |
| Ward, John Franklin Ward, James William Ward, Thomas Allen Ward, William Lewis Warren, John Harold | I CM | Dallas |
| Ward, James William | I EE | Amarillo |
| Ward, Thomas Alien | | Jacksonville |
| Ward, William Lewis | 2 I.E | Alvin |
| Warren, John Harold | : 3 Ag | Houston |
| | | |
| Warrick, Thomas Roscoe | 1 EE | Pittsburg |
| Warrick, Thomas Roscoe Washburn, Gene Benjiman | 2 AA | LaFeria |
| Waterfield James Bruce | 4 A A | Canadian |
| Wathen Ben Southern Ir | 2 EE | Dallas |
| Wathen, Ben Southern, Jr Wathen, Luther James, Jr | 1 Ar | Dallas |
| Watkins, Davis | 1 FF | Bay City |
| Watkins, James Elmo | | Denton |
| Watson, Arthur James | 1 CM | Mothio |
| Watson, Charles Lewis | I C/M | |
| watson, Charles Lewis | I AA | |
| Watson, Ivan | | Coleman |
| Watson, James Thomas | I AgEd | Lewisville |
| Watson, Leonard Joseph Watson, Walter Watt, Terrence Neal | Sp AA | |
| Watson, Walter | l Ag | Dallas |
| Watt, Terrence Neal | 2 Sci | Austin |
| Wattinger Kalph Henry | l Ar | Austin |
| Watts, Claude DeVan | Sp LA | Austin |
| Watts, Claude DeVan Weatherby, Hurshel Heywood . | 2 Ag | Hillsboro |
| Webb, Hiram Cyrus | 1 ChF | Poolville |
| Webb, James Carson | 4 FF | Itasca |
| Webb, Lemuel William | 4 FF | Comanché |
| Webb, Robert Barron | | Diano |
| Webb, Thomas Maddox | | Fidilo |
| webb, I nomas Maddox | I LA | Palestine |
| Webber, Lester Francis | ICM | Houston |
| Webster, Norman Allen | 2 EE | lexarkana, Ark. |
| Weddle, Arthur Leland | Sp AA | Lubbock |
| Weddle, Arthur Leland Weinke, Oscar A. | Sp AA | Bryan |
| Weise, John Hardy | l Ar | Menard |
| Weise, John Hardy Weldon, Kennedy Costello Welgehausen, Kurt August Welsch, Alvin Ben Welsh, Kenneth Ronie | l Ag | Mineral Wells |
| Welgehausen, Kurt August | | Fredericksburg |
| Welsch Alvin Ben | 4 T F | New Braunfels |
| Welsh Kenneth Ronie | 2 M F | Lafavette La |
| Wenck, August William | 1 66 | Hearne |
| Wendlandt, Ted | ILL | Austin |
| Wendt, Pier Ernest | 1 A A | Bronham |
| Wendt, Mer Ernest | I AA | Drennam |
| Wendt, William, Jr. | | Brennam |
| Werner, Elmer Charles | I LA | San Antonio |
| Wesley, Marvin William | 3 AA | Austin |
| West, Reginald Jesse | 4 Ag | Waco |
| West, Thurmond Baltzar | 3 EE | Columbus |
| West, Reginald Jesse West, Thurmond Baltzar West, William Thomas | 1 EE | Kingsville |
| Westley Lawrence (| 3 6 6 | Clitton |
| Weston, Fred Herman | l Ar. | San Antonio |
| Weyrick, Frederick Felix | 2 AgEng | Fagle Pass |
| Whalen, Herbert William | 3CF | Palacios |
| Whaley Andrew M | 10M | Coinesville |
| Whaley, Andrew M Wharton, Hugh Ernest | I CIYI | Son Antonio |
| wharton, Hugh Ernest | | San Antonio |
| Wharton, Harry Graham Wheat, Daniel Patrick | l <u>Ar</u> | San Antonio |
| Wheat, Daniel Patrick | 3 CE | Beaumont |
| Wheat, John Veale Wheeler, Elmo Skardon | 1 LA | Seymour |
| | | |

| Wheeler, James Tillman | 3 IE | Fort Worth |
|---|------------------|------------------|
| Wheeler, John William White, Calvin Marvin | I CE | Henryetta, Okla. |
| White, Calvin Marvin | 1 LA | Beaumont |
| White. Harold Frank | 1 Sci | Edinburg |
| White, Lionel Stuart | 1 CE | Pharr |
| White, Morris Eugene | l AA | Corpus Christi |
| White, Turner D. | .2 AgEd | Uvalde |
| White, Theron Festus |] EE | College Station |
| White Herbert Wood | I CE | |
| Whitney, Herbert Wood | | Big Spring |
| Whitener, George Rupert | | Burton |
| Whitten, A. N., Jr. | I ME | Dublin |
| Whitten, Dudley Earl Whitten, Marion Eugene | I ME | Galveston |
| Wick, Ronald Foster | 2 UNE | Corsicana |
| Wigging Wiley Wagner | | Abilono |
| Wiggins, Wiley Wagner Wilbeck, Sidney Anton | 2 C M | Wharton |
| Wilcox Curtis Occar | 1 4 4 | Bryan |
| Wilcox, Curtis Oscar Wilcox, Leon Allen | 3 M E | Bryan |
| Wilcox, Robert Dwight | 4 A A | Waco |
| Wilcox, Robert Reynolds | 1 ChF | Bryan |
| Wilcox, Walter Wallace | 1 CF | Brvan |
| Wilder Eugene Hill | 2 FF | lefferson |
| Wilder, James Eugene | 2 EE | Houston |
| Wilkes, Robert Bolen | l Ag | Bastrop |
| Willard, Fred Crawford | 3 AA | Giddings |
| Williams, Carroll Lee | 1 Sci | San Antonio |
| Williams, Doyle | 2 ME | Mauldin, Ark. |
| Williams, Doyle | SpAg | College Station |
| Williams, Emmett Eugene Williams, Herschel Goodnight, Jr Williams, Henry Lanham | 1 Ag | Longview |
| Williams, Herschel Goodnight, Jr | 'I LA | Dallas |
| Williams, Henry Lanham | .1 AgEd | Rule |
| Williams, Henry Swan Williams, Jack Brandon | 2 <u>EE</u> : | San Antonio |
| Williams, Jack Brandon | I EE | Denison |
| Williams, Joseph Edgar | I AA | Hamilton |
| Williams, Luther Chilord, Jr | | |
| Williams, Marvin Reuben Williamson, Laurence Malcolm Willis, James Errol Willis, William Darrell | 1 UNE | Houston |
| Willis James Errol | 2 C E | Kirbyville |
| Willis William Darrell | 2 Δ Δ | Dallas |
| Willke Herbert Louis | | Boerne |
| Willman, Walter Clarence Willoughby, Roy Lynn Wilmore, Burks Wilmoth, George Warner | 1 Ag | Mason |
| Willoughby, Roy Lynn | 1 MĔ | Fullerton. La. |
| Wilmore, Burks : | 1 VM | Marshall |
| Wilmoth, George Warner | 2 AA | Diboll |
| | | |
| Wilson, Chester Layton | 3 Ag | Fort Worth |
| Wilson, Edward Wheelock | 1 ChĒ | Cleburne |
| Wilson Kov Altred | 4 A A | Farmersville |
| Wilson, Roger William | 1 <u>CE</u> | Normangee |
| Wilson, Wallace Lee | I EE | San Antonio |
| Wilson, Wallace Melgaard | I Sci | Houston |
| Wimberly, James Rector | I CE | Amarillo |
| Winchester, John Duke | I LA | Galveston |
| Winckler, Rudolph George | I EE | |
| Winder, Lafayette G Wingo, William Halbert, Jr | NIE 2 CM | Wills Point |
| Wingo, William Thomas | 1 E E | Sulphur Springe |
| wingo, winnam Thomas | ····· L/L/······ | |

| Wingren, Roy Matthew | 4 M E | Lampasas |
|--|---------------|---------------------|
| Winkler, Max Carl | 1 Sci | College Station |
| Winn, Theophilus Newton | 3 Ασ | Pearsall |
| Winter, William Douglas | 1 C M | Bryan |
| Wiseman James Presley | 2 4 4 | Covington |
| Wiseman, James Presley Witherspoon, Aaron | 1 CF | Ector |
| Witherspoon, Beryl William | 1 66 | Hereford |
| Witherspoon, John Alexander | 4ChE | Fort Worth |
| Witte, Herman Bryan | 1 M E | Voakum |
| Woltz, Robert P. | 1 Δr | Fort Worth |
| Wood John Fielding | .1 4 a | W/aco |
| Wood John Pobert | лі де И ТЕ | San Antonio |
| Wood, John Robert Wood, Mark Edward | 1 66 | Childress |
| Wood, Seth | I CC | Lilleboro |
| Woodard William Earl | 2 C C | Abilopo |
| Woodard, William Earl Woodlief, Wallace Hill |) EE 1 EE | Dallas |
| Woodman, Vernon Wilton | I EE | Austin |
| Woodruff, Joe Earl | 4 Ag | Karnaa Citu |
| Woodruff, joe Earl | | |
| Woodrum, Mack | 4 AA | Seymour |
| Woods, Herman H. | I EE | Dickinson |
| Woody, Robert Loyall | 4 AA | Fort worth |
| Wooldridge, Claren Elmer | 4 Ar | Dallas |
| Woolford, Charles Woodman | I Ar | Houston |
| Woolley, Herschel Pinkney | I EE | Houston |
| Woolsey, Wylie Jefferson Word, Karl Hazlewood | I ME | Karnes City |
| Word, Karl Hazlewood | 4 AA | San Angelo |
| Worden, Paul | I LA | Farmersville |
| Wren, Hermann | 1 LA | Normangee |
| Wrenn, George Manning | 2 LA | College Station |
| Wright Delbert Edwin | 2 ChE | Laredo |
| Wright Eugene Earl | 1 Sci | Garland, Ark. |
| Wright, James Audrey | IEE | Cooper |
| Wright, John Clark Wylie, Horace Pierson | 2 AA | Mission |
| Wylie, Horace Pierson | 3 ChE | Dallas |
| Wvlv. John Harrison | 2 M E | Fort Worth |
| Wyman, John Dickinson | | Cleburne |
| Yarborough, John Milton, Jr | 1 AA | Dallas |
| Yard, Cullen Edward | SpAr | Waco |
| Yeary, Maurice Frank | 1 FF | Fort Worth |
| Yeary, Orville Newton | 4 FF | Fort Worth |
| Yett, Ralph Phillips | 3 A A | Marble Falls |
| Young, A. Prentiss, Jr | 3 IF | Stephenville |
| Young, Anderson Vaughn | 4 V M | Marshall |
| Young, Ernest Edgar | 4 Δα | I aRue |
| Voung Leroy James | Δ Δ σ | Buda |
| Young, Leroy James Young, Ralph Harris | 1 Å a | San Antonio |
| Young, Winston Kyle | 1 /\g | Changida |
| Youngblood, Earl Owen | | Dort Arthur |
| Youngo Cilbert Air went | | |
| Youngs, Gilbert Ainsworth | 4 CE | Shdell, La. |
| Yung, Öwen Burke | I EE | San Antonio |
| Zak, Frederick Joseph | | Bryan |
| Zak, Freuerick Joseph Zapp, Erwin Julius Ernest Zeigler, Lundy Leroy | 4 CE | Houston |
| Zeigler, Lundy Leroy | 4 EE | Wichita Falls |
| Zellner, Roy Means | | Mart |
| Lesch, Militon | I AA | Mason |
| Zinn, William Ruffus | I AA | I emple |
| Zook, Maurice Boyer | 1 ME | Los Angeles, Calif. |
| | | |

302

SHORT COURSE IN HIGHWAY ENGINEERING

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(February, 1926).

| Austin, D. T | Houston |
|--|-------------------|
| Barker, W. E. | Chicago, Ill. |
| Barnum, W. H. | San Antonio |
| Bates, Clyde | Houston |
| Boyett Guy F | College Station |
| Boyett, Guy F Briggs, J. H | San Antonio |
| Brown, George R. | Houston |
| Colglazier, R. W Colston, Raleigh | San Antonio |
| Colston, Raleigh | Houston |
| Davidson, N. B. | Houston |
| Deen, H. E. | Austin |
| Deen, H. E Gemmer, Phil | Houston |
| Hoff, C. E. | San Antonio |
| Huffman, T. E. | Laredo |
| Jones, W. O Jowers, G. H | Fort Worth |
| Iowers, G. H. | San Antonio |
| Kemp, L. W | Houston |
| Kieser, J. F. | Austin |
| Leckie A R | Hearne |
| Lee, Don McClendon, W. W. Menger, E. R. Mitchell, A. F. | Austin |
| McClendon, W. W. | Corsicana |
| Menger, E. R. | .San Antonio |
| Mitchell, A. F. | Cameron |
| Pirie, I. E | Albany |
| Reinhart, John | Corsicana |
| Rollins, A. P. | Houston |
| Rollins, J. G. | Sevmour |
| Schiller, R. E. | LaGrange |
| Schiller, R. E Schlom, L. H. | Houston |
| Shafer, George E. | Middletown, Ohio. |
| Spence, E. V Stephens, G. R Stivers, A. D | San Angelo |
| Stephens, G. R. | Harlingen |
| Stivers, A. D. | Dallas |
| Stone, R. W. | Houston |
| Treadaway, S J. | Liberty |
| White, R. G | San Antonio |
| Wood, Charles A. | Houston |
| Woolsev. W. A. | Beeville |
| Wrigley, J. B. | Harlingen |
| | - |

SUMMARY OF ENROLLMENT, REGULAR SESSION 1926-27 <

By States and Foreign Countries

| | 390 | | 14 |
|----------------|-------|-----------------|------|
| Texas | 505. | Mexico | 14 |
| Oklahoma | 19 | Salvador, C. A. | 3. |
| Arkansas | 14 | Colombia, S. A. | 2 · |
| Louisiana | 13 | Mesopotamia | 2 · |
| Missouri | 8 | -Canada | 1 |
| California | 7 | China | 1 |
| New York | 3 | China | Ē. |
| Colorado | 2 | Honduras, C. A. | i. |
| Illinois | 2 | India | ř |
| Mississippi | 2 | Porto Rico | 1 |
| Alabama | ĩ | Switzerland | - i |
| Arizona | i | Syria | i |
| Florida | i | - Syna | |
| Kansas | i | | |
| Kantualuu | i | | |
| Kentucky | 1 | | |
| New Jersey | 1 | | |
| New Mexico | 1 | | |
| Ohio | 1 | | 1 |
| South Carolina | 1 | | ny i |
| Tennessee | 1 | | |
| · Total | ····· | 2417 2499 | |

SUMMER SESSION 1926

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| Λ —Auto Mechanics | E-Electric Me | |
|---|----------------|------------------|
| CCollege · | V-Veterinarian | i's Course |
| C-College CC-Cotton Classing | | |
| Acr.s, R. L Adams, E. V. | <u>.</u> C | .El Paso |
| Adams. E. V. | C | Brvan |
| Adams, F. L | Ē | Abilene |
| Adams Jack | F | Georgetown |
| Adkerson I R | Ĉ | Granger |
| Adkerson, J. R. Alexander, E. R. Allen, E. I. | .с. | College Station |
| Allen E I | C | San Angelo |
| Allen, H. J. | E | Liberty |
| Allen, W. R. | .С С | Bryan |
| Alvord, Mina Cook | <u>C</u> | College Station |
| Amend, J. D. | .C | Ideal |
| America, J. D. | .C | Dellas |
| Amsler, M. J. | <u>.</u> | Dallas |
| Anderson, C. B. | | |
| Anderson, L. | <u>.</u> C | Ardmore, Okla. |
| Anderson, L. Anderson, Tommie Arnold, R. W. Astin, Myrtle Bacher, P. M. | . <u>C</u> | Suverton |
| Arnold, R. W. | <u>.C</u> | .San Antonio |
| Astin, Myrtle | .C | Bryan |
| Bacher, R. M. | .C | .Houston |
| Bailey, J. L | C | .Bartlett |
| • Ball, Julia | .C | .College Station |
| Barmore I H | | Cameron |
| Barnett, P. E. Bartlett, R. W. | <u>.C</u> | .Lufkin |
| Bartlett, R. W. | .C | .Dallas |
| Bean G E | C | Liibbock |
| Roacon Laura Liliott | C | Brvan |
| Bector N R | C | Puniab India |
| | | |
| Bethel, M Bierschwale, A. J. | .с С | .Hext |
| Bierschwale A I | C | Segovia |
| Blanch, J. C Blanks, W. H. | C | Beaumont |
| Blanks W H | Č | San Angelo |
| Blevins, P. | C | El Camp.) |
| Bock Abe | Č | Dallas |
| Bock, Abe | <u>(</u> , | Dallas (|
| Boding W P | <u>C</u> | Temple * |
| Bohlmann O I | C | Schulenburg |
| Blevins, P. Bock, Abe Bock, George Bodine, W. R. Bohlmann, O. J Bolton, Mary Bell Bovell, W. T. Bowers, Robert | <u>C</u> | College Station |
| Powell W T | <u>C</u> | Taboka |
| Borrenze Dahart | <u>C</u> | Wheeler |
| Bowers, RobertC Boyett, T. P. Boyett, W. L. | C | Navasot |
| Doyett, T. P. | F | College Station |
| Boyett, W. L. Boyt, E. V. Brader, W. H. | <u> </u> | Chook Station |
| Boyt, E. V. | (, | Dealum and |
| Brader, W. H. | E | East Westh |
| Bradford, R. M. | Č | Codedar |
| Braswell, F. EC | (° | |
| Braunig, E. P. | Ç | Hallettsville / |
| Brehmer, Herbert | Ç | San Antonio |
| Britto, L. deC | С | rernambueo, |
| Bradford, R. M. Braswell, F. EC Braunig, E. P. Brehmer, Herbert Britto, L. deC | - | Brazil |
| Brown, G. M Brown, G. P | <u>C</u> | Houston |
| Brown, G. P | С | Seymour |
| | | |

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|--|---------------|--------------------|
| Brown, Joe_J. | C | Austin |
| Brown, J. T | C | El Paso |
| Brown, P. A. | C | Somerville |
| Brown, J. T. Brown, P. A. Brown, T. S. | CC | Fort Worth |
| Brummett I R | C | Dallas |
| Bryan, J. O. Bryan, Lilla Graham | CC | Timpson |
| Bryan Lilla Graham | <u> </u> | Bryan |
| Bryant, S. G. | ······Q······ | Movio |
| bryant, S. G. | | Mexia |
| Buchanan, Mrs. John Buchanan, L. O. Buchanan, R. J. Buescher, V. A. | Ç | Bryan |
| Buchanan, L. O. | C | Plainview |
| Buchanan, R. J. | C | Kurten |
| Buescher, V. A. | C | Smithville |
| Bujard, B. J | C | Vinton, La. |
| Burch, G. D. | C | Yoakum |
| Burford, B. W. | CC | Dallas |
| Burgess, J. S. | | Dallas |
| Durgess, J. S | | Dallas |
| Burks, S. V. | Ç | Poteet |
| Burnam, A. C. | È | Clarendon |
| Burnitt, K. W. | C | Calvert |
| Busby, E. M. | C | Calvert |
| Byars, R. H. | C | College Station |
| Cain, F. R. | Ē | Dallas |
| Callaghan, G. F. | C | Houston |
| Camp, S. D. | C | Weatherford |
| Cannon, C. W. | C | Stamford |
| Cannon, C. W. | | Stannord |
| Canterbury, Claude | Ç | Fort Worth |
| Caraway, S. W. | A | Silsbee |
| Carlisle, Guy | CC | Mineola |
| Carter, A. P. | C | Bryan |
| Carter, A. P Carter, J. L. | C | Stephenville |
| Carter, W. G Cashell, J. B. | Č | Port Lavaca |
| Cashell I B | C | Greenville |
| Cates, J. | | Huntsville |
| Catlin, J. A. | D | Kaufman |
| Caultin, J. A | | Crondell |
| Causby, J. A. | Ç | |
| Chandler, O. H | Ç | Dallas |
| Chaney, E. W. | C | College Station |
| Chapin, A. V Chapell, R. F. | C····· | Arlington |
| Chapell, R. F. | V | Navasota |
| Chase A | F | Waco |
| Cheaney F. H. | C | Dallas |
| Childers, A. B. | C | lasper |
| Childers, R. R. | F | lasper |
| Christenson W O | Ľ | Dailas |
| Christian, Lucy | Ç | Dallas |
| Christian, Lucy | Ç | bryan |
| Clark, W. T. | Ç | Weatherford |
| Clarke, I. D. | C | San Benito |
| Cline, Elizabeth Clute, W. B. | C | Bryan |
| Clute, W. B. | C | Schenectady, N. Y. |
| Cochran, F. D | Comment | Bryan |
| Coghlan, E. M | CC | aurel |
| Cole T S | | Bryan |
| Cole, T. S Coleman, J. S. | C | Wellington |
| Coloman W D | ······ | Dogiog |
| Commeller W I | | Dozier |
| Connally, W. L. | <u>C</u> | Sulphur Springs |
| Coleman, W. R. Connally, W. L. Cooke, W. E. | E | Ennis |
| Corman, A. J. Covacevich, N. S. | C | Dallas |
| Covacevich, N. S. | C | San Antonio |
| | | |

| | c | M4 Discout |
|-----------------------------------|------------|------------------|
| Covey, A. E. | C | Whitney |
| Cox, F. B. | C | Christman |
| Cox, RobertC Cox, W. B. | C | Lasticonvilla |
| Craddock, Frank, Jr. | C | Crockett |
| Crapp, J. B. | C | Orango |
| Creed, R. F. | С С | Brunn |
| Crenshaw, Mrs. E. W. | C | Bryon |
| Crook, G. C. | C | Austin |
| Crozier, J. B. | C | Cloburno |
| Crump, J. H. | C | Menard |
| Curry, G. W. | C | El Paso |
| Curtner, W. L. | C | Houston |
| Cuthrell, J. H. | C | Navasota |
| Dalton, L. A. | C | McGregor |
| Danhoff, Walter | C | Corpus Christi |
| Daniel, T. H. | C | Cleburne |
| Dansby, R. E. | C | Bryan |
| Darby, H. L. | V | Fort Worth |
| Dashiell, W. N. | , С | Mission |
| Davenport, H. E. | C | Minden La |
| Davis, C. C. | C | Waco |
| Davis, C. R. | C | Keltys |
| Davis, Dewey | Č | Morgan Mill |
| Davis, F. M. | Č | Hondo |
| Davis, PercyC | Č | Hallettsville |
| Davis W O | C | Quinton Okla |
| Day, A. E. | C | Center |
| Dean, J. R. | Č | Athens |
| DeBardeleben, J. M. | Č | Brownsville |
| Deen, W. A. | Č | Bryan |
| Deering, P. A. | Č | New Ulm |
| Deering, Mrs. P. A. | Č | New Ulm |
| Delaroderie A G | F | Baton Rouge La |
| Denton, I. I. | C | Eagle Pass |
| De Voke, J. A. Dielmann, S. J. | Ĕ | Brenham |
| Dielmann, S. I. | Č | San Antonio |
| Dillon, E. A. | Č | San Antonio |
| Disch, Oran D. | C | .Franklin, La. |
| Dixon, R. M. | C | .Aubrev |
| Dodge F K | C | lacksonville |
| Dorsey, J. W. | Č | Harlingen |
| Dorsey, J. W. Daughtrey, E. R. | C | .Pleasanton |
| Douglas, P. M. | (| Cleburne |
| Deuthitt, BC | C | .Flynn |
| Dowd, L. E | . <u>C</u> | Bryan |
| Dowling, H. S. | V | .Temple |
| Downs, L. H. | C | San Augustine |
| Duke, Mabel Ruth Duncan, O. D. | .C | .Claude |
| Duncan, O. D. | .C | .Mt. Pleasant |
| Dungan, H. L. | С | Ennis |
| Dunn, Sul Ross | V | .Houston |
| Dunn, Sul Ross Duplex, C. R | , | Youngsville, La. |
| Eckles, W. E. Eddins, C. W. | С | .Dallas |
| Eddins, C. W. | .C | .Kerrville |
| Eddins, I. M. | E | .Marlin |
| Eden. Nelle | C | .Brvan |
| Edge, C. H. | С | Bryan |
| | | |

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| Edge, J. H | <u>C</u> | Bryan |
| Eitt, H. W. | <u>C</u> | San Antonio |
| Elledge, J. O. | СС | El Paso |
| Ellis, H. R | C | College Station |
| Ellis, H. R. English, W. B. Epperly, Don | СС | Brownfield |
| Epperly, Don | C | Fort Worth |
| Ernest, L. B. | V | |
| Essary, E. E. | C | Pearsall |
| Evans, Avery | СС | Timpson. |
| Fagan, J. J. | C | Dallas |
| Falkenberg, R. T. | Č | Taylor |
| Fariss, A. | CC | Giddings |
| Farmer, W. H. | C | Wichita Falle |
| Farrell, J. T. | | Dario |
| Farrington W H | E | East Worth |
| Farrington, W. H Farris, P. C. | E | Level Ja |
| Farris, P. C. | | Uvalde |
| Feliczak, A. J. | UC | Brennam |
| Fern, G. H. | <u>C</u> | College Station |
| Fettas, R. D. | <u>E</u> | Calvert |
| Field, Eugene | СС | Calvert |
| Field, Tom | СС | Calvert |
| Figari, E. E. | C | Galveston |
| Fine. Carl | | Charloffe, N. C. |
| Fitzpatrick D B | V | Falfurrias |
| Fix. C. R. | CC | Galveston |
| Fix, W. A. | C | Terrell |
| Flato, H. W. | С | Monterrey Mex |
| Fleming, J. C. | C | Dublin |
| Flores, C. | | San Antonio |
| Flores, I. | <u> </u> | San Antonio |
| | C | San Antonio |
| Florey, A. J. | Ç | Brownwood |
| Flowers, R. G. | V | Fort Worth |
| Fory, H. K | CC | I impson |
| Fountain, Mary Lilly | <u>C</u> | Bryan |
| Fouraker, L. L. | C | Brvan |
| Foyler, D. G. | A | Richmond |
| Francez, Brice | СС | Carencro, La. |
| Frank, B. L. | C | lefferson |
| Frank M P | С | Dallas |
| Frank P H | С | Shreveport La |
| Fraser C K | C | Robstown |
| Freeman C | C | Kerrville |
| Froberg, J. A. Fuller, H. E. | V | Alvin |
| Fuller H E | | Commerce |
| Fultun, W. | CC | Corsicana |
| Gallaway, H. E. | | Cloburno |
| Ganaway, H. E Garcia, A | E | Esta Handuna |
| Garcia, A | | |
| | 0 | C. A |
| Gentry, P. C. | | Stephensville |
| Gibson, David, Jr. | <u></u> | Calexio, Calif. |
| Gibson, G. G. | C | Trinity |
| Gill, O. P Gillespie, J. G. | C | Bellevue |
| Gillespie, J. G. | C | Coleman |
| Glazener, V. R. Gleason, M. E. | C | College Station |
| Gleason, M. E. | V | San Ăntonio |
| Gnauck R E | C | El Paso |
| Gobmert S R | C · | Yorktown |
| Gomez, F. | Č | Linares Mex |
| | | in the set of the set |

| Goodwin, L. | C | Kyle |
|---|------------|------------------|
| Goodman W K | C | Houston |
| Goodman, W. K Gorman, C. F | Ċ | Winnshoro |
| Gorzycki Mary Marcella | Č | Brvan |
| Gorzycki, Mary Marcella Gottwald, N. H. | C | Harwood |
| Graham, H. G. | Č | Cameron |
| Graham, S. B. | Č | Galveston |
| Grant, R. B. | C | Brvan |
| Grav B H | C | Mesquite |
| Greenstreet, T. A | С | Laredo |
| Greenwade R P | () | Whitney |
| Gregory, W. G. | V | Fort Worth |
| Griffin, Dana Gove | С | Fort Worth |
| Gregory, W. G. Griffin, Dana Gove | С | Houston |
| Groves, C. B. | G | Matador |
| Guyler, R. L. | С | Laredo |
| Haidar, J. R. | С | College Station |
| Hale T. FC | С | Oakwood |
| Hallmark, O. C. | Ç | Belton |
| Hallum, F. E. | <u>C</u> | .San Antonio |
| Halm, O. H. | <u>C</u> | Kingsbury |
| Hamilton, L. W. | <u>C</u> | Stephenville |
| Hampton, L. H. | <u>C</u> | Bryan |
| Hanszen, O. J. | <u>C</u> | .Dallas |
| Hardin, H. H. Hardin, L. B. | C | Beaumont |
| Hardin, L. BC | .C | Georgetown |
| Harris, H. O. | C | Minden |
| Harris, N. | <u>C</u> | Dallas |
| Hart, I. A. | <u>C</u> | Fort Worth |
| Haskell, W. H. | V | Beaumont |
| Hasken, W. H | C | Mobeetie |
| Hayes, W. D Head, G. E | СЕ | . W nitesboro |
| Head, G. E | . Е С | |
| Head, O. E. Head, V. J. Hearn, J. L. Hegemann, O. H. | V | Houston |
| Hegemann O H | . ү С | San Antonio |
| Heim, J. L. | C | Paducah |
| Unigon W/ D | C · | Cronhum |
| Henderson, R. M. | . <u>С</u> | Honey Grove |
| Henderson R M | .с С. | Pharr |
| Henderson V R (| 1 | Rochelle |
| Loncarling Jucillo Kato | C . | Bruon |
| Hensarling, P. H. | .Č | Brvan |
| Hensarling, P. H. Herndon, Mrs. Maud W. Hicks, C. E. | .C | Brvan |
| Hicks. C. E. | .C | Conroe |
| Higgs, W. C Hightower, R. J. | .C | .Bryan |
| Hightower, R. J. | .C | .Madisonville |
| Hildebrand I K | (| San Antonio |
| Hill I G | C | Yoakum |
| Hill I M | C | Cooledge |
| Hiner T I | C | Granhury |
| Hinoiosa I H | C | Rio Grande |
| Hinn D G | C | Wavahachia |
| Hobbs, E. Hobdy, W. M. | <u>C</u> | :College Station |
| Hobdy, W. M | . <u>V</u> | San Antonio |
| Hogan A I | H |)21/20 |
| Holden, R. N. | <u>C</u> | Fort Worth |
| Holden, R. N. Hollingsworth, M. C. | | San Antonio |
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| Holt, G. H Holt, R. J | | |
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| Hopkins, B. H. | | Farwell |
| Hopkins, B. H Hopson, J. W., Jr Horning, J. G Horn, W. J Hosking, F. J Howison, H. L. | | Foreman |
| Horning, J. G | V | Houston |
| Horn, W. J | C | San Antonio |
| Hosking, F. J | C | Bryan |
| lowison, H. L. | CC | Bogota |
| Howison, H. L. Huckabay, F. L. Hudnall, M. R. Hudson, C. R. Hudson, L. R. Huggins, S. W. Hughes, A. H. Humphries, J. Hump | CC. | lacksford |
| Hudnall M R | Ċ | Teague |
| Hudson C R | C | College Station |
| Ludeon I P | Č | Langastar |
| Hudson, L. K | | Children |
| Huggins, S. W | | Critaress |
| Hughes, A. H | <u>v</u> | San Antonio |
| -lumphries, J. | <u>C</u> | Austin |
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| Hunt, Ö. J Hurlburt, H. W | C | Teague |
| Hurlburt, H. W. | | Houston |
| Jutchins R W | Ē | College Station |
| lutchins, R. W. ngraham, C. W. ngram, T. B. reland, G. | F | Beaumont |
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| Ingrain, T. D | ······································ | Viatoria |
| Γ | ······ V | Carros Chalati |
| rvin, F. V. | | Corpus Christi |
| ackson, D. S | <u>C</u> | College Station |
| Jackson, D. S Jackson, E. W James, G. N | CC | Houston |
| ames, G. N | E | Dallas |
| Lashaam II C | C | Lonoford |
| ames. W. H., Ir. | C | Greenville |
| lamison I P | Č | Sterling City |
| ames, W. H., Jr amison, J. P anuary, L | Δ | Center |
| elinek, E. A. | C C | Granger |
| lennings, M. R. Jennings, M. R. Jennings, R. N. Johnson, A. B. | ······ | Montindala |
| ennings, M. R | | Martindale |
| ennings, R. N. | Ç | Sanatorium |
| ohnson, A. B. | Ç | Waco |
| ohnson, H. E | C | Yoakum |
| ohnson, A. B. ohnson, H. E. ohnson, J. H. ohnson, W. T. ohnston, R. B. | CC | George West |
| ohnson, W. T | V | Galveston |
| ohnston, R. B. | CC | Spur |
| ones, B. L. | С | Ifouston |
| ones C S | F | Temple |
| ones, C. S ones, F. F ones, F. R | CC | Georgetown |
| ones, F. F. | V | Eort Worth |
| ones, Mary Medora | ······································ | |
| ones, Mary Medora | | Diyali |
| ones, W. E. | Ç | Hillsboro |
| Carner R H | Construction and and | College Station |
| Cascell F R | Δ | (astell |
| Keeton, W. E Keller, D. B. | C | Jewett |
| Celler D B | · C | Elm Mott |
| | F | Beaumont |
| (err (; | C C | Arlington |
| Kerr, J. G | | at mgtOn |
| Kerr, J. G Kiber, D. H | C | Cainosvilla |
| Kerr, J. G Kiber, D. H Kibler, James A | C | Gainesville |
| Kerr, J. G. Kiber, D. H. Kibler, James A. Kiegan, E. E. | C | Gainesville Houston |
| Kerr, J. G. Kiber, D. H. Kibler, James A. Kiegan, E. E. Kimbrell, R. | | Gainesville Houston Idalon |
| Kerr, J. G. Kibler, D. H Kibler, James A Kiegan, E. E. Kimbrell, R. King, A. S | C | Gainesville Houston Idalon Lake Charles, La |
| Kerr, J. G. Kiber, D. H Kibler, James A Kiegan, E. E Kimbrell, R King, A. S Kirk, E | | Gainesville Houston Idalon Lake Charles, La Arlington |
| Kibler, James A Kiegan, E. E. Kimbrell, R King, A. S Kirk, E | | Gainesville Houston Idalon Lake Charles, La Arlington |
| Xerr, J. G. Xiber, D. H. Xibler, James A. Xiegan, E. E. Ximbrell, R. Xing, A. S. Xirk, E. Xishi, Taro Xoch, T. A. Xoeng, L. A. | | Gainesville Houston Idalon Lake Charles, La Arlington |

| Koss, V. J. Kountz, W. C. | C | La Grange |
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| Kountz, W. C | CC | Balmorhea |
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| Krueger, A. T. | C | San Antonio |
| Krauel, T. A. Krueger, A. T. Kuehn, L. M. Kushal, C. L. | CC | Gainesville |
| Kuchal C I | C | Abmadgarh Pun- |
| Rushal, C. L | | jab, India |
| La Bauve, E. B | Б | Jab, mula |
| La Bauve, E. B | E | Edna |
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| Landon, James C. | C | San Angelo |
| Langford, John D. | С | Greenville |
| Langford, John D. Lanham, E. F. Lanham, S. W. T. Lanier, J. R. Lauraine, L. J. Lawhon, A. M. | Е | Amarillo |
| Lanham, S. W. T. | C | Waco |
| Lanier I R | CC | Texarkana Ark |
| Lauraina I I | V | Conzales |
| Lauranie, L. J. | | Curtar |
| Lawnon, A. M. | | Gunter |
| Lawrence, J. W. J. | Q | Hillsboro |
| Lawrence, J. W. J Lee, G | E | San Antonio |
| Lee, W. L. Lee Gear, N. G. | C | Weatherford |
| Le Gear. N. G. | V | Waco |
| Lesikar I I | C | Temple |
| LeVan G E | CC | El Reno Okla |
| Le Gear, N. J. Lesikar, L. J. LeVan, G. E. Lewis, Alf A. | () | Kaufman |
| Lewis, L_ | E | Daibart |
| Lewis, L | E | Dainart |
| Lind, A. F. | Q | Ganado |
| Little, V. A. | | College Station |
| Liveren D C | CC . | Horeman Arl |
| Llovd, F. A. | C | Ba morhea |
| Lloyd, F. A. Locke, G. W. Lockhart, H. L | C | Trinity |
| Lockhart H I | C | Plainview |
| | () | Beaumont |
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| Long, G. A. Long, W. E. Low, T. A. Luby, A. S. Luckenbach, F. McAdams, C. G. McBride, G. C. | C | Diyali Dooroo |
| Long, W. E. | C | Roscoe |
| Low, 1. A. | | Brennam |
| Luby, A. S | Q | Iom Bean |
| Luckenbach, F | Ç | Menard |
| McAdams, C. G. | C | Bedias |
| McBride, G. C. | C | Leonard |
| McBride, G. C McClain, J. M McClister, J. O McCorkle, B. R McCorkle, L. E | Е | Groveton |
| McClister 1 0 | С | Krum |
| McCarlela B R | Č | Comanche |
| Miccorkie, D. R | сС. | Brody |
| McCoy, L. E McCrary, J. R | C | Drady |
| McCrary, J. R. | | Calvert |
| McCrary, J. W. | Q | Millican |
| McCulloch, Pauline McCullough, W. L. McDonald, C. C. | <u>Ç</u> | Bryan |
| McCullough, W. L. | V | Bryan |
| McDonald, C. C. | C | Fort Worth |
| McDonald, C. C McDonald, C. W McDougai, T. H McDowell, M. O | C | Coleman |
| McDougal T H | C | Tyler |
| MaDawall M O | CC | Timpson |
| McDowell, M. O McFatridge, R. F | | |
| McFatridge, R. F. | С | Roiton |
| McGowan, C. | E | Dallas |
| McGowan, J. | E | Dallas |
| McGraw, J. L. | C | Center |
| McGuire, G. B. | CC | Lamesa |
| McGowan, C. McGowan, J. McGraw, J. L. McGuire, G. B. McKnight, L. E. | C | El Paso |
| McLeod G W | Ċ | San Antonio |
| McKnight, L. E McLeod, G. W McMillian, R. L | Č | Crystal City |
| wichtinian, R. L. | ······ | |
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| MeMiller T T | <u> </u> | 0 |
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| McMillan, T. J. | C | Chenango |
| McMurtray, H. D. | C | Bryan |
| McNaughton, A. H McNiell, A. R. | L | Palestine |
| McNiell, A. R. | <u></u> | Dallas |
| McNess, G. W. Mainer, N. J. | Ç | College Station |
| Mainer, N. J. | Ç | Waco |
| Manly, C. Ě. | С | .Cotulla |
| Marek, J. J. | V | Brenham |
| Marney, W. E. Martin, Ethel Elizabeth | V | San Antonio |
| Martin, Ethel Elizabeth | С | Brvan |
| Martin, I. M. | C | Brvan |
| Martin, R. L. Matejowsky, C. C. | Č | Fort Worth |
| Matejowsky C C | C | Criesman |
| Mathis, Lela Fay | C | Bryan |
| May, I. M. | C | Lacksonville |
| Mayes, H. | C | Tulor |
| Mayes, II. Melson, M. A. | C | . I ylei |
| Mensill E W | С г | Austin Deut Authorit |
| Merrill, F. W. | E | Port Arthur |
| Michma, E. J. | Ç | Kenedy |
| Mikeska, F. J. | C | .Placedo |
| Michma, E. JC Mikeska, F. JC Miles, F | C | .Mineral Wells |
| Miller, L. E. | V | .Corpus Christi |
| Miller, L. E Miller, R. C | C | Orange Grove |
| Miller, T. L. | С | .Coleman |
| Mims, R. B | Č | Laredo |
| Minkert, W. E. | Č | Brvan |
| Minor, W. S. | C | Lasper |
| Mitchell, C. A. | C | Orange |
| Mitchell I E | C | Fort Worth |
| Mitchell, J. E. Mitchell, R. H. | C | Collors Station |
| Mitchell, K. H. | <u>C</u> | Conege Station |
| Monk, R. M. Montes, E. T. | <u>C</u> | Center |
| Montes, E. I. | <u>C</u> | El Paso |
| Montfort, D. T Montgomery, E. L. | <u>C</u> | .Corsicana |
| Montgomery, E. L. | E | .Cleburne |
| Montgomery, J. FC Moore, E. C. | C | .Dallas |
| Moore, E. C. | С | Bryan |
| Moore, J. I. | .C | .Calvert |
| Moore, J. I. Moore, T. M. | <u>C</u> | .Canyon |
| Moosberg C. A | C | Wills Point |
| Morgan C McRea | C | Camden Ark |
| Morris, O. D. | C | Winnsboro |
| Morris, O. D Morris, W. C. | C | Forreston |
| Morse, E. D. | C | Houston |
| Mowrey, M. D. | E | Brownwood |
| Mullin, W. B. | С | Turkov |
| Muller A D | | Dont Anthum |
| Muller, A. B. | .E | Port Artnur |
| Munson, G. P. | <u>C</u> | Columbia |
| Muzzy, B. D., Jr. Neblett, W. P. | . <u>C</u> | Galveston |
| Neblett, W. P. | | Sweetwater |
| Nedbalek, A. G. | .С | Bryan |
| Nelson, P. A. | .C | Pittsburg |
| Newsom, F. N. | .C | Llano |
| Nichols, E. C. | .C | Beaumont |
| Nichols, G. B. | .C | San Antonio |
| Nickle E I | °C | Cainesville |
| Northway, J. K | V | Kingsville |
| Nott W F | F | Alvin |
| Oakes, J. D. | <u>С</u> | Elatonia |
| Junes, J. 17 | | iatoma |

| Oberholtzer, K. E. | С | Bellville |
|---|---------------------------------------|------------------|
| Olivarri, W. H. Oliver, C. S. Oliver, Jane Olivey, H A. | C | San Antonio |
| Oliver C S | C | San Antonio |
| Oliver Jane | C | Bruan |
| Oliver, Jane | C | East Westle |
| Olivey, H A. | | Fort worth |
| UISON UT K | | Waco |
| Ordonez, C. | С | |
| | | bia, S. |
| Orme, W. P | C | Frost |
| Orr, J. E. | C | Waco |
| Ortolani f | (C) - | Fort Worth |
| Outlaw W I | F | Conroe |
| Outlaw, W. L Park, D. M. | C | Dallas |
| Parker, E. | C | East Worth |
| Parker, Kate | C | |
| Parker, Kate | <u>C</u> | |
| Parkhill, Lena Lee | Ç | College Station |
| Parks, J. M | Ç | Farmersville |
| Parks, J. M. Parten, L. W. Patterson, F. H. Patterson, John B. Patterson, R. C. | C | Dallas |
| Patterson, F. H. | C | Carbon |
| Patterson, John B. | C | Morgan Mill |
| Patterson, R. C. | C. | Kyle |
| Patterson, R. C. (Mrs) | Ċ | Kyle |
| Patton, J. L. | Č | Dallas |
| Payne, D. W. | F | Tyler |
| Pearce, D. | U | l somend |
| Degree D. E. | ······ v | Leonard |
| Pearson, R. F. | | College Station |
| Peavey, H. D. | Ç | Stephenville |
| Peck, M. A | V | Houston |
| Pearson, R. F. Peavey, H. D. Peck, M. A. Perry, W. L. | C | Wills Point |
| Peters A F | • (() | lavior |
| Phillips, J. A. | V | Houston |
| Phillips, J. O. | C | Kirbyville |
| Phillips, J. A. Phillips, J. O. Phipps, T. E. Pickel, Una Tine, Pierce, F. C. | CC | Currie |
| Pickel Una Tine | F | Bay City |
| Pierce E C | C | Brownsville |
| Pilkey O H | C | Dallas |
| Pilkey, O. H Pingenot, F. E | C | Engle Dave |
| Pirtle, J. M. | | |
| Pirtie, J. M | | Quinton, Okla. |
| Pogue, J. J Porter, F. D. | <u>Ç</u> | Kenedy |
| Porter, F. D. | VV | Fort Worth |
| Price, P. M | C | Honey Grove |
| Price, P. M Quillan, W. L. | Е | Conroe |
| Ragsdale, L. G Ramos, F. M | C | McAllen |
| Ramos,, F. M. | C | Saltillo Mex |
| Randolf Lalla Dean | C | Brvan |
| Randow M H | C | Humble |
| Ranav \mathbf{F} \mathbf{R} | C | Collago Station |
| Randow, M. H Raney, E. R Rauhut, E. H | | Compared Station |
| Ray, J | | Comanche |
| Kay, J | | Port Worth |
| Reed, C. V. Reid, D. H. Reilly, J. M. Reitch, J. L. Rettiger, W. C. | Ç | Wortham |
| Reid, D. H | <u>C</u> | College Station |
| Reilly, J. M• | C | Dallas |
| Reitch, J. L | С | Marshall |
| Rettiger, W. C. | Č | Temple |
| Rhea R L | V | San Antonio |
| Richardson W I | , | Ruston La |
| Rhea, R. L. Richardson, W. L. Richter, C. E. Ricks, S. B | CC | Larodo |
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| NICKS, D. D | · · · · · · · · · · · · · · · · · · · | trieasanton |

| Ripple, H. J Risser, Irene E | F. | Port Arthur |
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| Risser, Irene E. | C. | Bonham |
| Riveire N H | C | College Station |
| Riv R A | C | Commerce |
| Robbins, C. P Roberts, S. E | С | Ennis |
| Roberts S F | CC | Sweetwater |
| Robertson, A. C Robertson, R. D. | Ċ | Temple |
| Robertson R D | C | Bryan |
| Robinson, J. N. | С С | Athens |
| Roger C. W | V | Groechack |
| Rogers, Virginia | с, ү | Bonham |
| Rogers, Virginia | С С | Port Arthur |
| Ronshausen, F. J | | Thorndale |
| Ross, H | C | Wharton |
| Rowley, W. F. | V | Delectine |
| Rudd, J. C. | ···· • ····· | Pagumant |
| Rudd, J. C | C | Portrom |
| Rutsen, | | Tamall |
| Rutledge, F. H Rylander, R. R | | Terren |
| Rylander, R. R | Ç | Buda |
| Ryon, Alton | <u>C</u> | Chillicothe |
| Samford, T. C. | | Wills Point |
| Samuel, R. E. | Ç | Huntsville |
| Sanders, J. L. | Ç | Lavernia |
| Sanders, Susie Mae | Ç | Bryan |
| Sanderson, W. R. | <u>v</u> | Brownwood |
| Santa Maria, L. | V | Mexico City, Mex. |
| Schaefer, C. J. | <u>C</u> | Schulenburg |
| Santa Maria, L. Schaefer, C. J. Schmidt, F. C. | <u>C</u> | Rosebud |
| Schnable I A | G | Shawnee Okla |
| Schrade, A. R. Schorlemer, R. C. | Ē | Waco |
| Schorlemer, R. C. | C | Tivoli |
| Schorlemer, R. C. Schumacher, B. H. Scott, T. A. Scott, W. W. Scott, V. A. Scruggs, W. E. Selman, G. | F | Caldwell |
| Scott, T. A. | V | Waco |
| Scott, W. W | C | Dallas |
| Scott, V. A. | V | Stephenville |
| Scruggs, W. E. | .CC | Shamrock |
| Selman, G. | C | Dallas |
| Senter, C. B | C | Teague |
| Sevem, S. S. | V | Seguin |
| Shaw, J. J. Shelby, E. J. | C | .Fort Hancock |
| Shelby, É. I. | C | Mineral Wells |
| Shell (C A | | Stamford |
| Changed II | V | Village |
| Sherrill, W. R. Shockley, C. W. Shofner, S. L. | C. | Lewisville |
| Shockley, C. W. | CC | Big Spring |
| Shofner S L | CC | Port Lavaca |
| Should 1 1 | | Lenana |
| Siddall C | ·C | Anderson |
| Silva I I | С | Oaxaca Mex |
| Simpson, S. H. | C | Hallettsville |
| Siccon (H) | C . | Lasper |
| Skelton H I | C | Jacksonville |
| Sisson, H. L Skelton, H. J Skiles, J. L | V | Denton |
| Skinnor | C | West |
| $Clean \mathbf{P} \in \mathbf{O}$ | Č | San Saha |
| Cloan, R. E. O | С С | Bryan |
| Simul, F. M., JL. | E | San Antonio |
| Smith, G. E. Smith, G. H. | С | Brysn |
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| Curith C. M | C | ** / |
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| Smith, G. M Smith, L. D | ······································ | waco |
| Smith, L. D. | | I yler |
| Smith, M. A Smith, N. R. | | Fouke, Ark. |
| Smith, N. R. Smith, N. R. Smith, R. T. Smotherman, F. C. Smotherman, W. M. Smyth, L. L. Sonsel, M. J. Sory, E. M. Stafford, J. D. Stafford, J. D. Stafford, J. D. Stafford, J. D. Stafford, J. C. Stafford, J. C. Stell, W. H. Stephenson, F. L. Stephenson, O. Stewart, L. C. Stigler, P. A. Stogner, B. T. Storrie, C. R. | C | Denton |
| Smith, K. I. | | I emple |
| Smith, W. B. | | Kyle |
| Smotherman, E. C. | V | Hillsboro |
| Smotherman, W. M. | V | McKinney |
| Smyth, L. L. | Ç | Navasota |
| Sonsel, M. J. | A | Kinney |
| Sory, E. M. | Č | Bryan |
| Stafford, J. D. | <u>C</u> | Palestine |
| Stansel, R. H | C | College Station |
| Steinman, F. C | C | Harrold |
| Stell, W. H. | CC | Longstreet, La. |
| Stephenson, F. L. | C | Whitesboro |
| Stephenson, O. | E | Sweetwater |
| Stewart, L. C. | CC | Houston |
| Stigler, P. A. | <u>C</u> | Morgan Mill |
| Stogner, B. T. | C | Saint Io |
| Storrie, C. R. | C | Denton |
| Stromberg, R. E. | Č | Austin |
| Stromberg, W. B. | Č | Lockhart |
| Stogner, B. T. Storrie, C. R. Stromberg, R. E. Stromberg, W. B. Stuermer, H. J. Stunkel, H. D. Sublette, G. C. | Č | Nordheim |
| Stunkel H D | F | Beaumont |
| Sublette G C | Č | Bryan |
| Sugg, H. P Summers, J. P | F | Waco |
| Summers I P | | Fouke Ark |
| Sumovile E A | | Caldwoll |
| Surovik, I. H | C | Caldwell |
| Summers, J. P. Surovik, F. A. Surovik, J. H. Sweatman, L. E. Swenson, B. E. | <u>C</u> | Ennie |
| Sweathlan, L. E | Λ. | Norso |
| Tabor, S. H. | | Lockhart |
| Tatum, R. B. | C | Claner |
| Tatum, K. D | C | Clarendon |
| Taylor, I. J., Jr | | Long de |
| Taylor, L. L. | | Mt Diamat |
| Taylor, W. A., Jr. | C | Dania Denis |
| Terrell, G. I. | ······ | Paris |
| lerry, R. C. | <u>C</u> | De Leon |
| Thalmann, V. W | | Bandera |
| Thomas, M. L. | | El Paso |
| Thompson, J. M. | Ç | Groesbeck |
| Tabor, S. H. Tatum, R. B. Taylor, I. J., Jr. Taylor, L. L. Taylor, W. A., Jr. Terrell, G. I. Terry, R. C. Thalmann, V. W. Thomson, J. M. Thomson, Mrs. J. C. Thornton, W. D. Threadgill, T. E. Tibbs, W. L. Tinus, W. C. Tolson, E. O. Tracy, H. H. Traylor, J. T. | <u>C</u> | College Station |
| Thornton, W. D. | <u>C</u> | Dallas |
| Threadgill, T. E | C | Bellevue |
| Tibbs, W. L | CC | Valley Mills |
| Tinus, W. C | C | Waco |
| Tolson, E. O | С | Seymour |
| Tracy, H. H | C | I una |
| Traylor, J. T. | VV | liaringen |
| Tracy, H. H. Traylor, J. T. Trice, B. A. Triggs, C. E. Tunnell, B. F. Turbeville, B. F. Turbeville, B. F. | C | Dublin |
| Triggs, C. E. | CC | Cameron |
| Tunnell, B. F. | C | Lewisville |
| Turbeville, B. F. | C | Yoakum |
| Turner. D. | C | Granger |
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| Turney I G | | Lasper |
| Turney, J. G Tutt, F. E | (j | Meridian |
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| Vaden, L. | | Wolfe City |
| Vance, F. M. | Ç | Bryan |
| Varnell, E. H. | C | l alco |
| Vaughan, J. W | C | Ardmore, Okla. |
| Vogel, W. F. | C | Buhler, Switz. |
| Vance, F. M. Varnell, E. H. Vaughan, J. W. Vogel, W. F. Wahrmund, G. A. | .CC | Melvin |
| Waldron A M | | Brvan |
| W-llT II | C | Crawburg |
| Wallace, T. H Walton, Ethyl Walton, T. T Ware, C. S | C | College Station |
| Walton, T. T. | C | College Station |
| Waiton, T. T | Č | Tomple |
| ware, C .S | | Temple |
| Warren, J. E. Warren, J. H. Watkins, J. E. | v | w aco |
| Warren, J. H. | <u>C</u> | Houston |
| Watkins, J. E | Ç | Denton |
| | | |
| Watson, J. L. Watson, J. S. Weatherly, S. E. Webb, G. | V | Mexia |
| Weatherly, S. E. | .CC | Whitsett |
| Webb G | A | Snvder |
| Webb S D | | UTOCKELL |
| Webster, N. A | Ĉ | Muskogee Okla |
| Welsch, A. B. | C | New Braunfele |
| Wenzel, Annie Lottie | | Comfort |
| Wenzel, Annie Lottle | | Comfort |
| Wenzel, Sophie Nina Wenzel, W. C. | C | Comfort |
| Wenzel, W. C West, R. J West, T. B Wheat, D. P | Ç | Comfort |
| West, R. J | <u>C</u> | Waco |
| West, T. B | <u>C</u> | Columbus |
| Wheat, D. P. | C | Beaumont |
| | | |
| White T D | | Valde |
| Willard F C | C. | Giddings |
| Willbarger A E | F · | Dallas |
| Williams, Alta L. | Ĉ | Bryan |
| Williams, C. C. | | Stephenville |
| | | |
| Williams, E. L. Williams, Jack Williams, L. C., Jr. Williams, N. F. Williamson, M. A. Williamson, M. A. | | College Station |
| Williams, Jack | | San Antonio |
| Williams, L. C., Jr. | | Galveston |
| Williams, N. F | <u>V</u> | .Fort Worth |
| Williamson, M. A. | V | .Fort Worth |
| Willis, J. E. | C | Kirbyville |
| Willis, J. E. Wilson, C. L. Wilson, J. C. Wilson, P. Winkler, M. C. Wiseman, H. W. Wolma, F. J. Wood, S. | C | .Fort Worth |
| Wilson I. C. | V | .Sherman |
| Wilson P | CC | Timpson |
| Winkler M C | C | College Station |
| Wiseman H W | C | Floresville |
| Wolma E I | V | San Antonio |
| Wolma, F. J. | | Lillehore |
| Wood, S | | |
| Woodman, V. W. Woody, R. L. Word, K. H. Word, Q. M. Wright, S. R. Wyatt, J. K. | | Austin |
| Woody, R. L. | | Fort Worth |
| Word, K. H | | Rowena |
| Word, Q. M | <u>_C</u> | .Quanah |
| Wright, S. R. | C | College Station |
| Wyatt I. K. | .E | Dallas |
| Wyatt, J. K Wyman, J. D Yeager, C. F | C | Cleburne |
| Vegger C F (| C | Mineral Wells |
| V II D D | | Manhla Dalla |
| Younge C A | Č | Morgan City I - |
| Yett, R. P Youngs, G. A Zapp, E. J | С | morgan City, La. |
| Lapp, E. J | | TIOUSION |
| | | |

SUMMARY OF ENROLLMENT, SESSION 1926-27

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(June 1, 1926 to April 1, 1927)

Regular Session 1926-27:

| Ag AA Eng Land LA 7 0 |
|---|
| 2 15 8 9 7 10 8 96 |
| |
| Non-Collegiate Two-year Course in Agriculture. 114 179 87 247 439 265 70 8 105 10 21 28 30 Non-Collegiate Two-year Course in Agriculture. Extension Courses in Industrial Education Education |
| Summer Session, 1926: |
| |
| |

SUMMARY OF ENROLLMENT

DEGREES AND CERTIFICATES CONFERRED AT THE FIFTIETH ANNUAL COMMENCEMENT

June 1, 1926

Master of Science

In Agriculture (6)

Chauncey B. Godbey B. S. in Agr., University of Kentucky, 1925

Beecher Calvin Jones

A. B., Baylor, 1921; B. S., A. and M. College of Texas, 1923

Aden Combs Magee B. S., Kansas State Agricultural College, 1924

Frank Homer Moon B. S., A. and M. College of Texas, 1925 Harris P. Smith

B. S., Mississippi A. and M. College, 1917 Roy Harrison Stansel

B. S., Louisiana State University, 1924

In Agricultural Administration (3)

George Lemuel Crawford B. S., Oklahoma A. and M. College, 1915 John Augustine Manawwar B.S. in Agr., Edinburgh, 1924; Master of Arts, Edinburgh, 1925 Walter Lee Porter B. A., Howard College, 1911

In Agricultural Education (3)

Hugh Aurelius Nelson B. S., Iowa State College of Agriculture, 1921 James Benford Pope B. S., Mississippi A. and M. College, 1922 Clarence Percell Vickery

B. S., Alabama Polytechnic Institute, 1925

In Civil Engineering (4)

Moses Eugene Cox B. S., Clemson Agricultural College, 1916 Estell L. Gibson B. S., A. and M. College of Texas, 1925 John Thomas Lamar McNew B S., A. and M. College of Texas, 1920

Verner R. Smitham

B. S., A. and M. College of Texas, 1915

In Electrical Engineering (1)

Allen Dale Howdeshell B S., A. and M. College of Texas, 1925

In Rural Education (1)

Otis Durant Duncan

B. A., East Texas State Teachers', College, 1924

Without Specification as to Course (1)

Te Jen Yu B. S., Norwich University, 1925

Bachelor of Arts

In Liberal Arts (2)

John William Braselton

B. Frank Harrison, Sr.

τ.

Bachelor of Science

In Agriculture (51)

J. Nealy Allison Wayne Barker Noah Ira Batis John Franklin Broad Lillard B. Coffin John Parker Curtis Vernor Curtis Norman John Dansby Steven Alva Debnam Julius William Dorsey Mahmoud Talat Fattah Curtis Marsh Foester Jesse Frank Ford A. W. Foskette James Gred Germany Adolph Hartung Giesecke James Gordon Gillespie G. H. Helweg Jack C. Idol E. C. Jameson Clyde Johnson William H. Karnes William I. Kuykendall Gustav Robert Krueger Samuel Willis Tucker Lanham Holly M. Lawrence, Jr. John Lloyd Lee Wilburn B. Locssin E. L. Lyles, Jr. Alexander William McIver Frank Foster McMordie Harold G. Mackechney Harry Mogford William Ford Munnerlyn Newell N. Newman Wilbur J. Ochterbeck Michael Leroy Paul Newton Edward Peak, Jr. Harry L. Peterson, Jr. William Meredith Pinson Raymond M. Priesmeyer Charles H. Quereau Roger V. Ray Leslie Abner Roberts Thomas H. Royder William Delma Seals Daniel Green Talbot Park Tipton Jack Turner Dave W. Williamson

In Agricultural Administration (44)

David Andrew Adam Will Baker Armstrong Gordon F. Baggett Roosevelt Ted Baggett Arthur Clytus Bayless Thomas Reaves Black Robert M. Campbell Peyton S. Carnes Edward Ross Caveness Robert Harold Chase Taylor A. Cliett Edgar C. Covey Robert H. Crawford Glenn Edwin Garrett Carl E. Gatlin Oliver Curtis Gentry Paul P. Granbery, Jr. John O. Hinton John Bryan Jones John E. Kasper William Ray Kerr Roland F. Knox Sid M. Kyle Larry F. Lightner Bennett B. McCutcheon, Jr. Ross Freeman Mayfield Irvin Ammons Mueller Edward John Novosad Erhard Pete Nowotny William Sidney Price Homer D. Roberts Rufus Hayden Rogers Robert F. Rosborough J. George Ross William F. Saage Frederick Linton Sawyer George W. Scott R. C. Soxman Carlton Donaldson Speed Thomas Jefferson Speed, Jr. John William Sprott Glen W. Stinnett James Branch Tartt Ellis M. Wilson ł

In Agricultural Education (3)

Louis Poindexter Merrill Marvin Hotchkiss Mimms Lonnie Irving Samuel

In Agricultural Engineering (6)

Nathan Morris Faulk Andrew Jackson Longley John V. Morton Wendel Lee Phillips Robert Bonaparte Reilly Earnest Floyd Roberts

In Architecture (12)

Frank Ray Bellomy Herbert W. Beutel George E. Christensen Russell G. Christopher John Bradfield Danna Philip Gardiner Norton John P. Oliver Raymond E. Skrabanek Hal Porter Spencer Charles Brunett Swanner Edward L. Wilson John Lea Wilson, Jr.

In Chemical Engineering (14)

Bernard Bernardoni C. Louis Brockschmidt William Asbury Brown Fred C. Burkhart Benjamin Whitaker Haywood Herman Alfred Liebhafsky Earl William McBurnett John Scott Mallory, Jr. Prentiss Buchanan Mayfield James F. Mayo Ellis Charles Pattee Charles J. Peterson Chester R. Rogers Collins R. Washburn

In Civil Engineering (26)

R. A. Bossy Edward D. Brewster Spencer Jennings Buchanan Chesley A. Chipley J. S. Clements, Jr. Charles Henry Dodson Stanton McNeal Field Edwin Glenn Franke Paul Marline Guyer Lon Cartwright Ingram, Jr. Martin Burger Killian Randolph S. King William Henry Knotts Thomas H. Milford J. T. Murrell George Truett Neal Walter H. Ochterbeck Phoeion S. Park. Jr. Leon S. Partridge William Edward Roberts John Martin Rollins Harold Marvin Sneed, Jr. J. Q. Vencil Emil Frederick Vogt Walter H. Wendler Russell Grant White

In Electrical Engineering (37)

George Perrin Adair Kiyo Ando Marill M. Barnard Clyde Calvin Bayley Philip R. Elackburn Eugene Wheelock Boehne Francis Copass Bowen Loye H. Cardwell Neill G. Carpenter Parks Cope Darrell M. Davis Waid H. Dean Charles Robert Dockum Thomas Alpin Dodson Robert K. Eason John Rufus Eddins George J. Eppright Charles S. Franklin Peter Guelfi

Robert Henley Berry

Ervin Oscar Buck Jesse Franklin Burt Thurman T. Cleaver Norman Fischer

Harry Benjamin Gerbens

Richard Hays Gilley Charles Kasper William Hull McChesney Clyde V. May Robert Marion Kenedy Clyde Keys Earl Wagner Lipscomb Robert H. McAteer Orin P. McCarty James T. McCluncy Joseph D. McGuire Bruce Vann Magee Guy B. Manning L. J. Mohler Carl E. O'Brien Claude Alvin Richardson J. William Ross, Jr. Adolph Joseph Rummel Ardis Nolen Saxon Hugh Miller Stewart Carl Marion Thorn David A. Washburn, Jr.

In Industrial Education (19)

Theodore Meyer Menke Marcus H. Muller Viron P. Parr William Collier Pate David Proctor Schiwetz Edgar F. Stieneker Victor G. Stindt Bert R. Tucker Bennie Ardist Zinn

320

DEGREES AND CERTIFICATES

In Mechanical Engineering (27)

Roy McDonald Blair Hardage Phillips Cooper Nathaniel Massie DeBruin Charles Rouse Dollinger Leonard Bernard Golasinski Gustav James Grun James Albert Hogue James Phil Holloway John Gill Humphrey, Jr. John G. Jensen Charles Wesley Johnson Jack C. Jones Frank Stephen Kelly, Jr. Elmo Henry Koehler John M. McCoy Arthur J. Moore Oran H. Moore Earl F. Patterson Charles William Pierce Howard S. Price James R. Simpson T. J. Skrabanek Julius A. Stein Frank Bailey Stuart Manning Eugene Tillery Edward R. Walker Hillsman Davis Wilson, Jr,

In Rural Education (3)

James Leslie Moore

Solon Nathaniel Blackberg Carl Eugene Bosshardt Edward Hughes Capers

Dewey Davis James Y. Forgasen

John Steven Cole Boo-Tsung Kwia In Science (5) John McCulloch Crawford Joseph Feilschmidt

In Textile Engineering (4) Arthur Louis Leman, Jr. Thomas A. Miller

Without Specification as to Course (1)

Broocke Knight Eubank

Paul P. Boriskie Frederick Putnam Jaggi, Jr.

Certificates in Two-Year Courses

In Agriculture (1)

Isham Harry Nelson, Jr.

Ralph McElroy Bourland Wince Lanier Connally John Lewis Haley Robert Frank Hughes

·~· .

In Cotton Marketing and Classing (7) rland James Russell Kennedy ally Marcial Sorrel Tom Edward Steen

DEGREES CONFERRED IN THE 1926 SUMMER SESSION August 28, 1926

Master of Science

In Agriculture (2) Irvin Marion May B. S., A. and M. College of Texas, 1923 James Irving Moore A. B., Simmons College, 1913; B. S., A. and M. College of Texas, 1922

In Agricultural Education (1) Elmer Ross Alexander A. B., Baylor University, 1919; B. S., A. and M. College of Texas, 1923

> In Rural Education (1) Clyde Vernon Reed B. S., A. and M. College of Texas, 1922

Bachelor of Science

In Agriculture (3)

Donald McKenzie Park

In Agricultural Administration (8)

 Charles Henry Belding
 Maurice Randolph Jennings

 Louis Harvey Hampton
 Taro Kishi

 Joel Franklin Hembree
 Thomas Louie Miller

 Jacob Russell Hildebrand
 Jack Williams

In Agricultural Education (2) Frank Hawkins Patterson

William Avery Fix

Juddy Marco Martin

Perry Allen Deering

Richard C. Miller

In Industrial Education (5)

Raymond Wesley Arnold Henry William Eitt Albert Theodore Krueger

In Rural Education (2)

Francis Vernon Irvin

L1 Textile Engineering (2)

Carl Fine

Joseph Clinton Rudd ering (2) William Hubert James, Jr.

Perry Allen Stigler Charles Somerville Ware

SUMMARY OF DEGREES CONFERRED

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(June 1, 1926 to August 28, 1926)

| Advanced: Master of Science | 23 |
|-------------------------------------|-----|
| Baccalaureate Degrees: | |
| Bachelor of Arts | 2 |
| Bachelor of Science: In Agriculture | |
| In Agricultural Administration | |
| In Agricultural Education | |
| In Agricultural Engineering | 6 |
| In Architecture | |
| In Chemical Engineering | |
| In Civil Engineering | 26 |
| In Electrical Engineering | |
| In Industrial Education | |
| In Mechanical Engineering | 27 |
| In Rural Education | 5 |
| In Science | 5 |
| In Textile Engineering | |
| Without Specification | |
| Doctor of Veterinary Medicine | |
| - | |
| TOTAL | 103 |
| | v |

DISTINGUISHED STUDENTS

Session 1925-26

At the end of each session, students who have failed in no subject and who have accumulated a total of at least sixty grade points during the session are designated as "Distinguished Students."

| Andrews, E. L. Ashcraft, E. B. Beams, G. W. Coleman, W. T., Jr. Fritze, H. A. L. Gudger, G. B. Hargis, P. M. Hoff, S. S. | Freshman Class (24) Howard, H. L. Keith, J. R., Jr. Kunitz, R. A. Martin, A. D., Jr. Morgan, J. C. Neff, W. D. Neighbors, C. C. Obenhaus, V. M. | Patton, W. P. Redden, C. R., Jr. Reese, C. K., Jr. Rowland, W. C. Sawyers, A. B. Schiwetz, P. G. Sommers, O. W. Wallace, R. M. | |
|---|---|---|--|
| | Sophomore Class (21) | | |
| Alexander, T. M. Babcock, R. M. Bowlin, B. T. Brown, J. T. Carpenter, F. R. Cromack, F. D. Dexter, F. F., Jr. | Dietert, M. E. Fontaine, J. E. Gerdes, F. L. Haile, J. B. Honnel, P. M. Howard, H. E. Kincaid, J. I. | Krauel, T. A. McBride, G. C. Neff, J. Scott, K. H. Self, R. A. Thalman, V. W. Wylie, H. P. | |
| Junior Class (30) | | | |
| Altenbern, C. A. Blair, H. H. Brewster, S. F. Chambers, B. R. Corns, J. B. Cunyus, P. A. Donges, N. A. Francis, J. F. Franke, L. J. | And the second in the second is a second | Martin, J. M. Mittanck, E. H. Opryshek, C. Pianta, E. N. Pilkey, O. H. Pink, J. L. Terry, R. C. Tutt, F. E. Umlang, E. E. Young, L. J. | |
| Senior Class (24) | | | |
| Baggett, G. F. Bayless, A. C. Bernardoni, B. Blair, R. M. Boriskie, P. P. Capers, E. H. Cardwell, L. H. Cooper, H. P. | Giesecke, A. H. Jensen, J. G. Jones, J. D. Kennedy, R. M. Leman, A. L., Jr. Liebhafsky, H. A. Lipscomb, E. W. McCarty, O. P. | Mallory, J. S., Jr. Merrill, L. P. Miller, R. C. Peterson, C. J., Jr. Samuel, L. I. Schiwetz, D. F. Sherrill, W. R. Simpson, J. R. | |

ORGANIZATION OF THE ASSOCIATION OF FORMER STUDENTS

| A. P. Rollins, '06, Houston | President |
|---------------------------------------|----------------|
| Julius Schepps, '14, Dallas | Vice-President |
| Temple B. Hoffer, '04, Fort Worth | Vice-President |
| George P. Knox, '14, San Antonio | Vice-President |
| E. E. McQuillen, '20, College Station | Secretary |

INDEX '

----- . ·

| | PA | GE |
|---|---|----------------|
| | Absences | 38 |
| | AdministrationAdministration of State Laws | 34 |
| | Administration of State Laws | 29 |
| | Admission | 62 |
| | Advanced Standing Agricultural Experiment Sta- tion21, 2 Alumni Organization | 64 |
| | Agricultural Experiment Sta- | |
| | tion21, 2 | 248 |
| | Alumni Organization | 325 |
| | Athletic Trips | 39 |
| | Athletics | 39 |
| | | |
| | Band Board of Directors | 30 |
| | Board of Directors | 12 |
| • | Books | 42 |
| | Buildings | 43 |
| | Dunungs | ر ۲ |
| | Cadet Exchange | 12 |
| | Changes in Appouncements | 12 |
| | College Colondar | 42 |
| | Contege Calendar | 0 |
| | Contents | 7 |
| | Changes in Announcements College Calendar Contents Courses of Instruction | 130 |
| | Courses of Study, Four Years- | |
| | Agricultural Administration | /4 |
| | Agricultural Education | 22 |
| | Agricultural Engineering | 17 |
| | Agricultural Administration Agricultural Education Agricultural Engineering Agricultural Engineering Architecture | 74 |
| | Architecture | 78 |
| | Chemical Engineering Civil Engineering Electrical Engineering Industrial Arts | 79 |
| | Civil Engineering | 79 |
| | Electrical Engineering | 80 |
| | Industrial Arts | 85 |
| | Industrial Education | 85 |
| | Landscape Art Liberal Arts Mechanical Engineering Rural Education | 75 |
| | Liberal Arts | 77 |
| | Mechanical Engineering | 81 |
| | Rural Education | 86 |
| | Science Textile Engineering | 77 |
| | Textile Engineering | 82 |
| | veterinary Medicine | 84 |
| | Curricula | 93 |
| | | |
| | Degrees and Honors3 | 18 |
| | Degrees · Offered | 41 |
| | Degrees Offered Departments of Instruction Departments of | 34 |
| | Departments of- | |
| | Accounting and Statistics 1 | 26 |
| | Accounting and Statistics Agricultural Economics Agricultural Education Agricultural Engineering | 30 |
| | Agricultural Education | 41 |
| | Agricultural Engineering | 12 |
| | Agronomy | 42 |
| | AgronomyI Animal HusbandryI | 47 |
| | Architecture | 4/ |
| | Architecture | 24 |
| - | Biology | 22 |

| | PAGE |
|--|---------|
| Department of-continued | |
| Chemistry and Chemical E | n- |
| Chemistry and Chemical E gineering | 161 |
| Civil Engineering Dairy Husbandry | 167 |
| Dairy Husbandry | 173 |
| Drawing | |
| Economics | 176 |
| Electrical Engineering English | |
| English | 182 |
| Entomology | 184 |
| Farm and Ranch | |
| Management | 187 |
| Forestry | 188 |
| Genetics | 189 |
| Geology | 191 |
| History | 193 |
| Horticulture | 195 |
| Industrial Education | 198 |
| Landscape Art Marketing and Finance | 202 |
| Marketing and Finance | 203 |
| Mathematics | 205 |
| Mechanical Engineering | 206 |
| Military Science and | |
| Military Science and Tactics Modern Languages | 212 |
| Modern Languages | 218 |
| Municipal and Sanitary Engineering Physical Education | |
| Engineering | 220 |
| Physical Education | 222 |
| Physics | |
| Poultry Husbandry | 225 |
| Rural Education Rural Sociology | 228 |
| Rural Sociology | |
| Textile Engineering | |
| Veterinary Anatomy | 233 |
| Textile Engineering Veterinary Anatomy Veterinary Medicine and | |
| Surgery Veterinary Pathology | 234 |
| Veterinary Pathology | |
| Veterinary Physiology and | • • • • |
| Pharmacology | |
| D'all | 3.4 |
| Discipline Distinguished Students | |
| Distinguished Students | |
| Dormitories | 47 |
| Elective Studies | 20 |
| Elective Studies Engineering Experiment | 38 |
| Engineering Experiment | 240 |
| Station25 Entrance Examinations | , 249 |
| Entrance Examinations | 04 |
| Equipment | 4/ |
| Expenses Expulsions26 Extension Service26 | 0/ |
| Expuisions | - 41 |
| Extension Service26 | , 270 |

INDEX

INDEX—Continued

| | PAGE |
|---|------|
| Faculty | _ 14 |
| Fellowships | - 91 |
| Fertilizer Control Service | 255 |
| Forest Service | 252 |
| 1 01032 001 1100 | 2/2 |
| General Information | 33 |
| General Information | - 34 |
| Government | - 17 |
| Graduate School | |
| Graduation | _ 41 |
| | 24 |
| Hazing | - 34 |
| Health | - 38 |
| Historical Sketch | 33 |
| Honors | 41 |
| т. | |
| Library | 40 |
| Location | 33 |
| | |
| Method and Scope of | |
| Instruction | 57 |
| Instruction Military Organization | - 11 |
| Military Organization | - 20 |
| Non-Resident Lecturers | - 28 |
| | |
| Officers of Administration | 13 |
| Organization11, | - 34 |
| | |
| Petitions | _ 38 |
| Professional Degrees | - 91 |
| Publications | 40 |
| | |
| Register of Students | 259 |
| Registration | 66 |
| Registration Religious and Moral Culture | 20 |
| rengious and moral culture | 79 |

٨

| | PAGE |
|-----------------------------|------|
| Demande | |
| Reports | 20 |
| Reserve Officers' Training | ÷. |
| Corps | 34 |
| | |
| Scholarships | 91 |
| School of Agriculture | - 74 |
| School of Arts and Sciences | 77 |
| School of Engineering | 78 |
| School of Veterinary Medi- | 10 |
| | |
| cine | 04 |
| School of Vocational | 05 |
| Teaching | |
| Session | 66 |
| Special Students | 65 |
| State Entomologist | |
| Student Labor | 42 |
| Summary of Enrollment | 317 |
| Summer Session | 254 |
| Summer Session | |
| Teachers' Appointment | |
| reachers Appointment | 10 |
| Service | 42 |
| Teachers' Certificates | 86 |
| Trips of Inspection | 38 |
| Two-year Courses- | |
| Agriculture | |
| Textile Engineering | 82 |
| Two-year Course in Cotton | 04 |
| Marketing and Classing | 93 |
| Marketing and Classing | 0) |
| Uniform | 60 |
| Uniform | 69 |
| N N O I | |
| Y. M. C. A. | 40 |