BULLETIN

OF THE

AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS

Third Series, Vol. 14

APRIL 1, 1928

NO. 4

FIFTY-SECOND

ANNUAL CATALOGUE

SESSION 1927-28

WITH ANNOUNCEMENTS FOR 1928-29



COLLEGE STATION, TEXAS

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.

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COLLEGE CALENDAR

1928

Entrance examinations, September 13, 14, 15.

First term begins Wednesday, September 19.

Registration of new students, September 19.

Registration of old students, September 20.

Registration of graduate students, September 21.

Recitations begin September 21, 8:00 a. m.

Opening exercises, September 21, 10:00 a. m.

November 11, 11:00 a. m., observance of Armistice Day.

Thanksgiving Recess, November 29, 30, December 1.

Christmas holidays begin Wednesday, December 19, at noon.

1929

Christmas holidays end Wednesday, January 2, at reveille.

Recitations resumed, Wednesday, January 2, 8:00 a. m.

First term ends Friday, February 1.

Second term begins Saturday, February 2.

Registration for second term, January 31, February 1, 2.

Spring Recess, April 18, 19, 20.

Commencement sermon, Sunday, June 2.

Exhibition of departments and of work of students, Monday, June 3.

Commencement Day, Tuesday, June 4.

Part I

OFFICERS OF ADMINISTRATION AND OF INSTRUCTION

BOARD OF DIRECTORS

1.1.1.18

F. M. LAW, President BYRD E. WHITE, Vice-President

TERMS EXPIRE 1929

		9	
			Houston
			Lancaster
			Waco
TERMS	EXPIRE	1931	•
			San Antonio
			Houston
TERMS	EXPIRE	1933	
••••••			Dallas
••••			Temple
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S. G. BAILEY, Secretary

ORGANIZATION

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

RESEARCH

THE AGRICULTURAL EXPERIMENT STATION
THE ENGINEERING EXPERIMENT STATION

EXTENSION

THE EXTENSION SERVICE

FORESTRY

THE FOREST SERVICE

OFFICERS OF ADMINISTRATION

- THOMAS OTTO WALTON, LL.D., President.
- CHARLES PURYEAR, M.A., C.E., LL.D., Dean of the College, Dean of the Graduate School.
- *B. YOUNGBLOOD, M.S., Ph.D., Director of the Agricultural Experiment Station.

EDWIN JACKSON KYLE, B.S., B.S.A., M.S.A., Dean of the School of Agriculture.

- M. FRANCIS, D.V.M., Dean of the School of Veterinary Medicine.
- F. C. Bolton, B.S., Dean of the School of Engineering.
- C. H. Winkler, B.S., A.M., Ph.D., Dean of the School of Vocational Teaching, Director of the Summer Session.
- CHARLES E. FRILEY, B.S., M.A., Dean of the School of Arts and Sciences, Registrar.
- F. E. GIESECKE, M.E., B.S., in Arch., Ph.D. Director of Engineering Experiment Station, College Architect.
- O. B. MARTIN, Director of the Extension Service.
- E O. Siecke, B.A., B.S., Director of the Forest Service.
- A. B. Conner, M.S., Acting Director of the Agricultural Experiment Station.

CHARLES J. NELSON, B.S., Lieut. Colonel, U. S. Army, Commandant.

- *THOMAS F. MAYO, M.A., Librarian.
- C. S. FRAPS, Ph.D., State Chemist.
- F. L. THOMAS, Ph.D., State Entomologist.
- J. E. MARSH, B.A., M.D., College Physician.
- B D. MARBURGER, B.S., Superintendent of Buildings and College Utilities.

MRS. W. H. THOMAS, Acting Librarian.

- B. SBISA, Advisory Supervisory of Subsistence.
- W. A. Duncan, Supervisor of Subsistence.
- W. H. HOLZMAN, Comptroller of Accounts.

^{*}On leave, 1927-28

FACULTY

- THOMAS OTTO WALTON, LL.D., President. CHARLES PURYEAR, M.A., C.E., LL.D., Dean of the College.
- CHARLES PURYEAR, Dean of the College, Dean of the Graduate School, Professor of Mathematics.

 M.A., Richmond College, 1881; C.E., Virginia, 1885., LL.D., Daniel Baker, 1914.
- Mark Francis, Dean of the School of Veterinary Medicine, Professor of Veterinary Anatomy.
 D.V.M., Ohio, 1887.
- OSCAR MELVILLE BALL, Professor of Biology. B.A., Virginia, 1897; M.A., Ph.D., Leipzig, 1903.
- EDWIN JACKSON KYLE, Dean of the School of Agriculture, Professor of Horticulture.
 - B.S., Agricultural and Mechanical College of Texas, 1899; B.S.A., Cornell, 1901; M.S.A., 1902.
- *EMILE JEROME FERMIER, Vice-Dean of the School of Engineering, Professor of Mechanical Engineering
 B.S., Valparaiso University, 1887; B.M.E., Purdue, 1894; M.E., 1895.
- JOHN BREWER BAGLEY, Professor of Textile Engineering. B.A., Wake Forest College, 1900.
- FRANK CLEVELAND BOLTON, Dean of the School of Engineering, Professor of Electrical Engineering.

 B.S., Mississippi A. and M., 1905.
- James Oscar Morgan, Vice-Dean of the School of Agriculture, Professor of Agronomy.
 B.Agr., North Carolina State College, 1905; M.S.A., Cornell, 1907; Ph.D., 1909.
- ALVA MITCHELL, Professor of Drawing.

 B.C.E., Agricultural and Mechanical College of Texas, 1894.
- CHARLES CLEVELAND HEDGES, Vice-Dean of the School of Engineering, Professor of Chemistry and Chemical Engineering. B.S., Kentucky, 1906; A.B., Cornell, 1908; Ph.D., 1912.
- CHARLES BOYLE CAMPBELL, Professor of Modern Languages. Ph.B., Depauw, 1900; Ph.D., Chicago, 1912.
- Ross Perry Marsteller, Professor of Veterinary Medicine and Surgery. D.V.M., Ohio State, 1905.
- OSCAR WILLIAM SILVEY, Professor of Physics. A.B., Indiana, 1907; A.M., 1910; Ph.D., Chicago, 1915.
- FLOYD BARZILIA CLARK, Professor of Economics. B.A., Richmond College, 1907; M.A., 1908; Ph.D., Johns Hopkins, 1914.
- ERIC OTTO SIECKE, Professor of Forestry. B.A., Nebraska, 1904; B.S.F., 1905.
- SHERMAN WEAVER BILSING, Professor of Entomology. A.B., Ohio State, 1912; M.A., 1913; Ph.D., 1924.
- Daniel Scoates, Professor of Agricultural Engineering. B.S., Iowa State College, 1910; A.E., 1915.
- JOHN JEFFERSON RICHEY, Professor of Civil Engineering. B.S., Illinois, 1903; C.E., 1910.

^{*}Died December 19, 1927.

- GEORGE SUMMEY, JR., Professor of English.
 A.B., Southwestern Presbyterian University, 1897; M.A., 1898; Ph.D., Columbia,
- DAVID WILLIAMS, Professor of Animal Husbandry. B.S., Ohio Sta 1915; M.S., Illinois, 1916.
- EUGENE PETER HUN:BERT, Professor of Genetics. B.S., Iowa State College, 1906; M.S., Cornell, 1908; Ph.D., 1910.
- CHARLES HERMAN WINKLER, Dean of the School of Vocational Teaching, Professor of Agricultural Education.

 B.S., Texas, 1904; M.A., 1914; Ph.D., Missouri, 1916.
- DUNCAN HENRY REID, Professor of Poultry Husbandry. B.S., Wisconsin, 1919; M.S., 1922.
- CHARLES EDWIN FRILEY, Dean of the School of Arts and Sciences, Registrar, Secretary of the Faculty.

 B.S., Agricultural and Mechanical College of Texas, 1919; M.A., Columbia, 1923.
- WILLIAM LYCURGUS HUGHES, Professor of Rural Education.
 B.A., Howard Payne College, 1920; B.S., Agricultural and Mechanical College of Texas, 1921; M.S., 1922.
- DANA XENOPHON BIBLE, Professor of Physical Education. A. B., Carson Newman College, 1912.
- SAMUEL RHEA GAMMON, JR., Professor of History.
 A. B., Washington and Lee, 1911; A.M., 1913; Ph.D., Johns Hopkins, 1921.
- James Harold Hance, Professor of Geology. B.S., Northwestern, 1901; B.S., Washington, 1908; E.M., 1910; Ph.D., Chciago, 1918.
- ERNEST WILLIAM STEEL, Professor of Municipal and Sanitary Engineering. C.E., Cornell, 1920.
- EDWARD LAFAYETTE WILLIAMS, Professor of Industrial Education. B.S., Pittsburgh, 1925.
- FREDERICK WILLIAM HENSEL, JR., Professor of Landscape Art.

 B.S., Agricultural and Mechanical College of Texas, 1907; M.S., Cornell, 1915.
- VIRGIL PORTER LEE, Professor of Marketing and Finance. B.A., Texas, 1918; M.A., 1919; Ph.D., Wisconsin, 1923.
- THOMAS WILLIAM LELAND, Professor of Accounting and Statistics. B.A., Wisconsin, 1921; M.A., 1922.
- SAMUEL AUGUSTUS McMillan, Professor of Farm and Ranch Management. B.S., Agricultural and Mechanical College of Texas, 1909; M.S.A., Cornell, 1917.
- Daniel Russell, Professor of Rural Sociology. A.B., Baylor, 1922.
- FREDERICK ERNEST GIESECKE, Professor of Architecture.

 M.E., Agricultural and Mechanical College of Texas, 1890; B.S. in Architecture,

 Massachusetts Institute of Technology, 1904; Ph.D., Illinois, 1924.
- CHARLES JOHNSTON NELSON, Lieutenant Colonel, U. S. Army, Professor of Military Science and Tactics, Commandant.
 B.S., Alabama Polytechnic Institute, 1897.

OTHER MEMBERS OF THE TEACHING STAFF

Professors

- ROBERT FRANKLIN SMITH, Professor of Mathematics.
- MARMADUKE K. THORNTON, JR., Professor of Industrial Chemistry. B.S., Mississippi A. and M., 1909; A.M., Columbia, 1914.
- GILBERT ALLEN GEIST, Professor of Architecture. B.S., St. John's Episcopal College, 1899.
- WILLIAM HENRY THOMAS, Professor of English. B.Lit., Texas, 1902; M.A., Columbia, 1920.
- HAROLD RENSHAW BRAYTON, Professor of Inorganic Chemistry. A.B., Wisconsin, 1914; M.S., 1915.
- C. WINFIELD BURCHARD, Professor of Organic and Physical Chemistry. A.B., Allegheny College, 1908; M.A., Wisconsin, 1911.
- DAVID BROOKS COFER, Professor of English. A.B., Centre College, 1907; M.A., Wisconsin, 1927.
- MARTIN COLLINS HUGHES, Professor of Electrical Engineering. B.S., Illinois, 1917; E.E., 1926.
- ALBERT MICHAEL GUIDERA, Captain, U. S. Army, Professor of Military Science and Tactics.
- EDWARD HILTNER BERTRAM, Major, U. S. Army, Professor of Military Science and Tactics.
- JOHN WEEMS MITCHELL, Professor of Mathematics. A.B., Maryville College, 1904.
- James Aulder Clutter, Jr., Professor of Dairy Husbandry, Acting Head of the Department. B.S., Iowa State College, 1913; M.S., 1924.
- HILLEL HALPERIN, Professor of Mathematics. E.E., Liege, 1908; A.M., Columbia, 1915.
- ALBERT LAURIE DARNELL, Professor of Dairy Husbandry. B.S., Mississippi A. and M., 1918; M.A., Missouri, 1916.
- JOHN THOMAS LAMAR McNew, Professor of Civil Engineering. B.S., Agricultural and Mechanical College of Texas, 1920; M.S., 1926.
- RAY FLAGG, Professor of Mechanical Engineering, Acting Head of the Department.

 B.S., Purdue, 1905.
- ERNEST LANGFORD, Professor of Architecture.

 B.S., Agricultural and Mechanical College of Texas, 1913; M.S., Illinois, 1924.
- Daniel Cobb McIntosh, Professor of Agricultural Education.
 A.B., Indiana, 1913; A.M., 1916; B.S., Iowa State College, 1920; Ph.D., Indiana, 1924.
- ARTHUR EMIL MICKELSEN, First Lieutenant, U. S. Army, Professor of Military Science and Tactics.
 Graduate, U. S. Military Academy, 1918.
- RICHARD HERMON WILLIAMS, Professor of Animal Husbandry. B.S.A., Toronto, 1905; M.S., Illinois, 1907; Ph.D., 1912.
- THURMOND ARMOUR MUNSON, Professor of Railroad Engineering.
 B.S., Agricultural and Mechanical College of Texas, 1910; C.E., Iowa State College, 1924; M.S., 1925.
- DUDLEY JAMES PRATT, Professor of Biology. A.B., Washburn College, 1913; A.M., Kansas, 1916.
- LUTHER GOODRICH JONES, Professor of Agronomy.

 B.S., Princeton, 1917; M.S., Agricultural and Mechanical College of Texas, 1921;

 Ph.D., Cornell. 1927.

- CHARLES JASPER McLaughlin, Acting Professor of Architecture.
- JOHN EMMITT SLOAN, Major, U. S. Army, Professor of Military Science and Tactics. Graduate, U. S. Naval Academy, 1910.

- DAVID CLUIE JONES, Professor of Mathematics. B.A., Emory, 1908.
- *Walter Lee Porter, Professor of Mathematics.
 A.B., Howard College, 1911; M.S., Agricultural and Mechanical College of Texas.
- CLARENCE CARPENTER YATES, Professor of Electrical Engineering. B.S., Agricultural and Mechanical College of Texas, 1917.
- GEORGE BARTON WILCOX, Professor of Rural Education. B.S., Agricultural and Mechanical College of Texas, 1923; M.A., Columbia, 1926.
- ELMER ROSS ALEXANDER, Professor of Agricultural Education. A.B., Baylor, 1919; B.S., Agricultural and Mechanical College of Texas, 1923; M.S., 1926.
- VANGEL KONSTANTINE SUGAREFF, Professor of History. A.B., Syracuse, 1917; A.M., Harvard, 1918.
- GUY WEBB ADRIANCE, Professor of Horticulture. B.S., Agricultural and Mechanical College of Texas, 1915; M.S., California, 1917.
- Frank Gist Anderson, Professor of Physical Education. B.S., Mississippi College, 1916; M.A., 1917.
- EDWARD ARCHIBALD MACLEAN, Professor of Civil Engineering. B.S., Maine, 1920; M.S., Illinois, 1926.
- CHARLES ORVINE Spriggs, Professor of Public Speaking. A.B., Indiana, 1924.
- Albert Lloyd Seeman, Professor of Economics. A.B., Morningside College, 1921; M.B.A., Northwestern, 1924.
- CHARLES LOUIS STEVENSON, Major, U. S. Army, Professor of Military Science and Tactics.

Associate Professors

- AUGUST ALBERT LENERT, Associate Professor of Veterinary Medicine. B.S., Agricultural and Mechanical College of Texas, 1914; D.V.M., Kansas City Veterinary College, 1917.
- HARRIS PEARSON SMITH, Associate Professor of Agricultural Engineering. B.S., Mississippi A. and M., 1917; M.S., Agricultural and Mechanical College of Texas, 1926.
- FREDERICK ARTHUR BURT, Associate Professor of Geology. B.S., Colgate University, 1908.
- PERCY GLYNDON GUNTER, Associate Professor of English. A.B., Elon College, 1909; M.A., North Carolina, 1910.
- FRED ERNEST LICHTE, Associate Professor of Textile Engineering. B.S., Agricultural and Mechanical College of Texas, 1905.
- ELIAS WARD MARKLE, Associate Professor of Electrical Engineering. B.S., Pennsylvania State College, 1913.
- RALPH CLARK DUNN, Associate Professor of Veterinary Medicine and Surgery. D.V.M., Ohio, 1911.
- WALTER RAWLINGS HORLACHER, Associate Professor of Genetics. B.S., Kansas State Agricultural College, 1920; M.S., 1922.

^{*} On leave, 1927-28.

- *THOMAS FRANKLIN MAYO. Associate Professor of English. B.A., Mississippi, 1913; A.M., Oxford, 1922.
- ALEXANDER VAN BREWER, Associate Professor of Mechanical Engineering. B.S., Purdue, 1913; M.E., 1925.
- CHARLES WILLIAM CRAWFORD, Associate Professor of Mechanical Engineering. B.S., Agricultural and Mechanical College of Texas, 1919.
- FREDERICK WILLIAM JENSEN, Associate Professor of Chemistry. B.S., Nebraska, 1920; M.S., 1923; Ph.D., 1925.
- JOSEPH SAYERS MOGFORD, Associate Professor of Agronomy. B.S., Agricultural and Mechanical College of Texas, 1916; M.S., 1920.
- ALBERT Dow MARTIN, Associate Professor of Mathematics. B.S., Gunter Bible College, 1908; B.A., Texas Christian University, 1920.
- PATTON WRIGHT BURNS, Associate Professor of Veterinary Physiology and Pharmacology.

 B.S., Agricultural and Mechancial College of Texas, 1923; D.V.M., 1926.
- PENNOYER FRANCIS ENGLISH, Associate Professor of Biology.
 B.S., Oregon Agricultural College, 1919; M.S., Agricultural and Mechanical College of Texas, 1925.
- RALPH THOMAS STEWART, Associate Professor of Agronomy. B.S., Iowa State College, 1924; M.S., 1925.
- ARTHUR EDWARDS WHARTON, Associate Professor of Veterinary Pathology. D.V.M., Colorado Agricultural College, 1925.
- EDWARD EARL VEZEY, Associate Professor of Physics.

 B.S., Oklahoma A. and M., 1910; M.S., Agricultural and Mechanical College of Texas, 1927.
- LEROY LEVI FOURAKER, Associate Professor of Electrical Engineerinf.
 B.S., Agricultural and Mechanical College of Texas, 1914; M.S., 1927.
- Fred Rufus Jones, Associate Professor of Agricultural Engineering. B.S., Wisconsin, 1915.
- Donald Freeman Irving, Associate Professor of Poultry Husbandry. B.S., Rutgers, 1922.
- VAN ALLEN LITTLE, Associate Professor of Entomology.

 B.A., Sam Houston Normal College, 1922; M.S., Agricultural and Mechanical College of Texas, 1925.
- CARL EDWARD SANDSTEDT, Associate Professor of Civil Engineering.
 A.B., Leland Stanford, 1910.
- NORMAN FREDERICK RODE, Associate Professor of Electrical Engineering. B.S., Clemson College, 1919.
- ARTHUR KAPP MACKEY, Associate Professor of Animal Husbandry. B.S., Purdue, 1921; M.S., Illinois, 1923.
- FRED ROBERT BRISON, Associate Professor of Horticulture. B.S., Agricultural and Mechanical College of Texas, 1921.
- WALTER LAWREN PENBERTHY, Associate Professor of Physical Education. B.S., Ohio State, 1926.
- ISAAC CHRISTOPHER SANDERS, Associate Professor of Physics. B.A., Rice Institute, 1917; M.A., Texas, 1925.
- CHARLES FRANCIS BASSETT, Associate Professor of Physical Education. B.S., Michigan, 1927.
- RALPH BATES WAITE, Associate Professor of Analytical Chemistry. B.S., Dakota Wesleyan, 1915; M.S., Iowa State College, 1922; Ph.D., 1927.

^{*} On leave, 1927-28.

Assistant Professors

- *DRINKARD BLOCKNALL MILNER, Assistant Professor of Drawing. B.S., Agricultural and Mechanical College of Texas, 1917.
- STEWART SAMUEL MORGAN, Assistant Professor of English. B.A., Cincinnati, 1926; M.A., Ohio State, 1927.
- Louis Adolph Koenig, Assistant Professor of Chemistry. B.A., Texas, 1917.
- LLOYD ROSS BESSE, Captain, U. S. Army, Assistant Professor of Military Science and Tactics. Graduate, U. S. Military Academy, 1910.
- MURRAY MATTHEWS MONTGOMERY, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.
 B.M.E., Kentucky, 1917.
- RALPH LEROY WARE, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.
- ERNEST KENNETH SPAHR, Assistant Professor of English. B.A., Milligan College, 1919; M.A., Virginia, 1921.
- George Henry Fern, Assistant Professor of Mechanical Engineering and Industrial Education.
- Edwin Ernest Aldridge, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.
 B.S., Agricultural and Mechanical College of Texas, 1916.
- JOHN HENRY BINNEY, Assistant Professor of Mathematics. B.S., Sam Houston State Teachers College, 1924; M.A., Texas, 1925.
- THOMAS FORREST LIMBOCKER, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

 B.S., Colorado Agricultural College, 1915.
- THOMAS ROBERT NELSON, Assistant Professor of Mathematics. B.A., East Texas State Teachers College, 1917; M.A., Texas, 1922.
- Russell Dean Powell, First Lieutenant, U. S. Army, Assistant Professor of Military Science and Tactics.
- VIRGIL MORING FAIRES, Assistant Professor of Mechanical Engineering. B.S., Colorado, 1922; M.E., 1926.
- CHAUNCEY BARGER CODBEY, Assistant Professor of Genetics.
 B.S., Kentucky, 1925; M.S. Agricultural and Mechanical College of Texas, 1926.
- WALTER KRAUSNICK, Assistant Professor of Electrical Engineering. B.S., Missouri, 1909.
- MILAN FRANK THURMOND, Assistant Professor of Agricultural Engineering.
 A.B., Baylor, 1919; B.S., Agricultural and Mechanical College of Texas, 1922.
- WALTER EYSTER BUCHLY, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

 A.B., Leland Stanford, 1913.
- BEECHER CALVIN JONES, Assistant Professor of Chemistry.
 A.B., Baylor, 1921; B.S., Agricultural and Mechanical College of Texas, 1923;
 M.S., 1926.
- EDWARD LIN HARTER, Assistant Professor of Chemistry.
 A.B., Missouri Wesleyan, 1919.
- GEORGE CHILDS BAUER, Assistant Professor of Chemistry. B.S., Kentucky, 1920; M.S., Iowa State College, 1927.
- ELDRED HARRIS GIBBONS, Assistant Professor of Biology B.S.A., Tennessee, 1925.

^{*} On leave, 1927-28.

- PERCY CLARK KEY, Assistant Professor of English.

 A.B., Texas Christian University, 1917; M.A., Vanderbilt, 1918.
- OSCAR ARNOLD WEINKE, Assistant Professor of Accounting and Statistics. B.A., Wisconsin, 1921.
- FLOYD JAMES HOSKING, Assistant Professor of Accounting and Statistics. B.S., Minnesota, 1924; M.S., Agricultural and Mechanical College of Texas, 1927.
- Frank Stover Jamison, Assistant Professor of Horticulture. B.S., Pennsylvania State College, 1924; M.S., Iowa State College, 1925.
- JOSEPH JOHN WOOLKET, Assistant Professor of Modern Languages. A.B., Oberlin College, 1924; M.A., 1925.
- CHESTER PETER FREEMAN, Assistant Professor of Biology.

 B.S., Mississippi A. and M., 1921; M.A., Peabody, 1922; M.S., Chicago, 1926.
- ERNEST GIBBENS, Assistant Professor of Animal Husbandry. B.S., Agricultural and Mechanical College of Texas, 1914.
- ROSWELL GUNBY HIGGINBOTHAM, Assistant Professor of Physical Education.
- ROBERT LEE HUNT, Assistant Professor of Marketing and Finance.

 B.S., Agricultural and Mechanical College of Texas, 1924; M.S., North Carolina State College, 1927.
- JOHN GRAHAM POWERS, Assistant Professor of Textile Engineering. JOHN HARVEY KNOX, Assistant Professor of Animal Husbandry. B.S., Ohio, 1921; M.S., Illinois, 1924.
- Horace Greeley Johnston, Assistant Professor of Entomology. B.S., Mississippi A. and M., 1926.
- LELAND SHUMWAY PAINE, Assistant Professor of Agricultural Economics. B.A., Nebraska, 1922; M.A., Wisconsin, 1926.

Instructors

- RICHARD WALTER DOWNARD, Instructor in Mechanical Engineering.
 WILLIAM WARREN McCarter, Instructor in Mechanical Engineering.
- *Francis Frederick Bishop, Instructor in Chemistry. B.S., Clarkson College, 1922.
- SAMUEL ROBERT WRIGHT, Instructor in Civil Engineering. B.S., Agricultural and Mechanical College of Texas, 1922.
- Frank Ayres, Jr., Instructor in Mathematics. B.S., Washington College, 1921; S.M., Chicago, 1927.
- ALBERT ASA BLUMBERG, Instructor in Mathematics.
- MARION THOMAS HARRINGTON, Instructor in Chemistry.

 B.S., Agricultural and Mechanical College of Texas, 1922; M.S., 1927.
- WILLARD HOMER McCORKLE, Instructor in Physics. B.A., Iowa, 1924.
- ELMER GILLAM SMITH, Instructor in Physics.

 A.B., Amherst College, 1919; M.S., Agricultural and Mechanical College of Texas,
 1925.
- ROLAND EDWARD SNUGGS, Instructor in Chemistry.
 A.B., Georgetown College, 1920; M.S., Florida, 1923.
- MADISON B. STURGIS, Instructor in Agronomy.

 B.S., Agricultural and Mechanical College of Texas, 1924; M.S., Iowa State College, 1927.
- *Herbert C. Tidwell, Instructor in Chemistry. A.B., M.A., Baylor, 1919.

^{*} On leave, 1927-28.

CHARLES LORIN BAKER, JR., Instructor in Textile Engineering.

JOSEPH JONATHAN DAVIS, Instructor in Drawing. B.S., North Carolina State College, 1924.

FRANK RAY DEFOREST, Instructor in Agricultural Engineering. B.S., Iowa State College, 1919.

CARL TYLER SPRAGUE, Instructor in Physical Education. B.S., Agricultural and Mechanical College of Texas, 1922.

HENRY BRONISLAU STENZEL, Instructor in Geology. Ph.D., Breslau, 1924.

RICHARD STEPHENSON, Instructor in English. B.A., Tulane, 1924; M.A., 1927.

ROBERT PAGE WARD, Instructor in Electrical Engineering. B.S., Agricultural and Mechanical College of Texas, 1924.

JORDAN RUFUS McKee, Acting Instructor in Mathematics. B.S., Louisiana State, 1925.

JOHN PAUL ABBOTT, Instructor in English. B.A., Vanderbilt, 1925.

THOMAS HENRY CHAPMAN, Instructor in English.
B.A., North Texas State Teachers College, 1925; M.A., Texas, 1926.

CLIFTON CHILDRESS DOAK, Instructor in Drawing. B.S., North Texas State Teachers College, 1922.

JOHN WARREN GALBRAITH, Instructor in Drawing. B.S., Agricultural and Mechanical College of Texas, 1926.

HARRY C. GILL, Instructor in Mechanical Engineering.

ALBERT HARRISON KERNS, Instructor in Electrical Engineering. B.S., Kansas State Agricultural College, 1926.

ERROLL BATHURST MIDDLETON, Instructor in Chemistry. B.A., Illinois, 1919; M.S., 1921.

ELLIS HAMILTON MORGAN, Instructor in Civil Engineering. B.S., Agricultural and Mechanical College of Texas, 1923.

CLARENCE WILFRED NOSTER, Instructor in Mechanical Engineering. B.S., Agricultural and Mechanical College of Texas, 1923.

Gus Oncken, Instructor in Mechanical Engineering.

CARL CAMERON PALMER, Instructor in Electrical Engineering. B.S., Purdue, 1926.

Frank Willis Plunkett, Instructor in English. B.S., Missouri, 1906; A.B., 1907; M.A., Rice Institute, 1926.

WILLIAM McDaniel Potts, Instructor in Chemistry. B.S., Chicago, 1921; M.S., 1927.

JOHN WENDELL Ross, Instructor in Mathematics. B.A., Texas, 1923.

ALFRED BELL STREHLI, Instructor in Modern Languages. B.A., B.S., Ohio State, 1925; M.A., 1926.

Edison Huxley Thomas, Instructor in Mathematics. B.A., Texas, 1920; M.B.A., 1921.

GROVER CLEVELAND VAUGHN, Instructor in Economics. B.A., Texas, 1921; M.A., 1925.

IRA BISHOP BACCUS, Instructor in Drawing.

B.S., Agricultural and Mechanical College of Texas, 1924.

IRA GILLISPIE ADAMS, Instructor in Economics.
A.B., Evansville College, 1923; A.M., Minnesota, 1927.

WALTER JOSEPH BENTLEY, Instructor in Accounting and Statistics P.S., Oklahoma A. and M., 1925; M.S., 1926.

BLAKE MARABLE CALDWELL, Acting Instructor in Chemistry. B.S., Agricultural and Mechanical College of Texas, 1927.	
RICHARD ARTHUR EADS, Acting Instructor in Chemistry. B.L., B.S., East Texas Normal College, 1917; B.S., East Texas State Teac College, 1923.	chers
DAVID WINSTONE FLEMING, Instructor in Mechanical Engineering.	
ULYS ROY GORE, Instructor in Biology. B.S., Arkansas, 1925; M.S., Iowa State College, 1926.	
CLARENCE ALFRED JOHNSON, Instructor in Architecture. B.A., Rice Institute, 1925; B.S. in Architecture, 1927.	
STANLEY ARMSTRONG McCosh, Instructor in Civil Engineering. B.S., Iowa State College, 1923.	
ERVIN RUSSELL SPENCER, Instructor in Mechanical Engineering. B.S., Washington State College, 1926.	
WELDON STONE, Acting Instructor in English. A.B., Baylor, 1926; M.A., Southern Methodist University, 1927.	
CLYDE HAROLD TARNEY, Instructor in Physics. Ph.B., Ph.M., Wisconsin, 1927.	
GEORGE EDMOND TOMLINSON, Instructor in Drawing. B.A., Mississippi, 1926; B.E., M.A., 1823.	
JOHN LEROY WATSON, Instructor in Agricultural Economics. B.S., Agricultural and Mechanical College of Texas, 1915; M.S., 1927.	
ROBERT COUNTRYMAN, Instructor in Physical Education. SINCLAIR BAKER, Instructor in Dairy Husbandry. B.S., Agricultural and Mechanical College of Texas, 1927.	ž.
WILLIAM ALEXANDER FROMHERZ, Instructor in Mechanical Engineering. ROGER VALENTINE McGEE, Acting Instructor in Mathematics.	
B.S., Agricultural and Mechanical College of Texos, 1922.	
CLARKE AUBREY MATHEWS, Acting Instructor in Mechanical Engineering.	
B.S., Agricultural and Mechanical College of Texas, 1928.	
Assistants Winner Acous Pero Assistant in Mathematica	
WARREN ALONZO REES, Assistant in Mathematics. A.B., Southwestern, 1921; M.A., Texas, 1926.	
SAM HENRY TABOR, Assistant in History. B.A., Agricultural and Mechanical College of Texas, 1927.	
Student Assistants	
FREDERICK FENWICK DEXTER, Student Assistant in Architecture.	
THEODORE ALBERT LEON KRAUEL, Student Assistant in Architecture.	
SUMMARY OF TEACHING STAFF AS OF MARCH 15, 1928	
Heads of Departments	. 35
Other Full Professors	
Associate Professors	
Assistant Professors	. 35
Instructors Assistants	2
Student Assistants	12
1	
	198
Or Leave	
. –	
•	193
(22)	

THE AGRICULTURAL EXPERIMENT STATION

THOMAS OTTO WALTON, LL.D., President. STAFF (As of January 1, 1928)

Administration:

- *B. YOUNGBLOOD, M. S., Ph. D., Director.
- A. B. CONNER, M. S., Acting Director
- R. E. KARPER, B. S., Acting Vice-Director.
- J. M. SCHAEDEL, Secretary.
- M. P. HOLLEMAN, JR., Chief Clerk.
- J. K. Francklow, Assistant Chief Clerk.

CHESTER HIGGS, Executive Assistant.

C. B. Neblette, Technical Assistant.

Veterinary Science:

- **M. Francis, D. V. M., Chief.
- H. SCHMIDT, D. V. M., Veterinarian.
- J. D. Jones, D. V. M., Veterinarian.

Chemistry:

- G. S. FRAPS, Ph. D., Chief; State Chemist.
- E. C. CARLYLE, B. S., Chemist.
- S. E. Asbury, M. S., Assistant Chemist.

WALDO H. WALKER, Assistant Chemist.

VELMA GRAHAM, Assistant Chemist.

- R. O. BROOKE, M. S., Assistant Chemist.
- T. L. OGIER, B. S., Assistant Chemist.
- J. G. Evans, Assistant Chemist.

ATHAN J. STERGES, B. S., Assistant Chemist.

GEORGE SAMUEL CRENSHAW, A. B., Assistant Chemist.

JEANNE M. FEUGAS, Assistant Chemist.

Horticulture:

—, Chief.

H. NESS, M. S., Berry Breeder.

Range Animal Husbardry:

- J. M. Jones, A. M., Chief; Sheep and Goat Investigations.

Entomology:

- F. L. THOMAS, Ph. D., Chief; State Entomologist.
- H. J. REINHARD, B. S., Entomologist.
- R. K. FLETCHER, M. A. Entomologist.
- W. L. OWEN, JR., M. S., Entomologist.

FRANK M. HULL, M. S., Entomologist.

- J. C. GAINES, JR., M. S., Entomologist
- C. J. Todd, B. S., Entomologist.
- F. F. Bibby, B. S., Entomologist.
- S. E. McGregor, Jr., Acting Chief Foulbroad Inspector.
- A. B. Kennerly, Foulbrood Inspector.
- GILLIS GRAHAM, Foulbrood Inspector.

Agronomy:

- E. B. REYNOLDS, M. S., Chief.
- A. B. Conner, M. S., Agronomist; Grain Sorghum Research.
- R. E. KARPER, B. S., Agronomist; Small Grain Research.
- P. C. Mangelsdorf, Sc. D., Agronomist; in Charge of Corn and Small Grain Investigations.
- D. T. KILLOUGH, M. S., Agronomist; Cotton Breeding.
- H. E. REA, B. S., Agronomist; Cotton Root Rot Investigations.
- E. C. Cushing, B. S., Assistant in Crops.
- P. R. JOHNSTON, B. S., Assistant in Soils.

Plant Pathology and Physiology:

- J. J. TAUBENHAUS, Ph. D., Chief.
- L. J. PESSIN, Ph. D., Plant Pathologist and Laboratory Technician.
- W. J. BACH, M. S., Plant Pathologist.
- J. PAUL LUSK, S. M., Plant Pathologist.
- B. F. DANA, M. S., Plant Pathologist.

Farm and Ranch Economics:

- L. P. GABBARD, M. S., Chief.
- *B. YOUNGBLOOD, M. S., Ph. D., Farm and Ranch Economist.
- G. L. CRAWFORD, M. S., Marketing Research Specialist.
- V. L. Cory, M. S., Grazing Research Botanist.
- ***T. L. GASTON, JR., B. S., Assistant; Farm Records and Accounts.
- ***J. N. TATE, B. S., Assistant; Farm Records and Accounts.
- C. A. Bonnen, M. S., Farm Management Research Specialist.

Rural Home Research:

JESSIE WHITACRE, Ph. D., Chief.

Mamie Grimes, M. S., Textile and Clothing Specialist.

Soil Survey:

- ***W. T. CARTER, B. S., Chief.
- E. H. TEMPLIN, B. S., Soil Surveyor.
- T. C. REITCH, B. S., Soil Surveyor.

Botany:

H. NESS, M. S., Chief.

Publications:

A. D. JACKSON, Chief.

Swine Husbandry:

FRED HALE, M. S., Chiel

Dairy Husbandry:

-, Chief.

Poultry Husbandry:

R. M. SHERWOOD, M. S., Chief.

Agricultural Engineering:

----- --, Chief.

Main Station Farm:

G. T. McNess, Superintendent.

Apiculture:

H. B. PARKS, B. S., Chief.

A. H. Alex, B. S., Queen Breeder.

Feed Control Service:

F. D. FULLER, M. S., Chief.

S. D. PEARCE, Secretary.

J. H. Rogers, Feed Inspector.

W. H. Wood, Feed Inspector.

K. L. KIRKLAND, B. S., Feed Inspector.

W. D. NORTHCUTT, JR., B. S., Feed Inspector.

SIDNEY D. REYNOLDS, JR., Feed Inspector.

P. A. Moore, Feed Inspector.

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.

FRANK M. HULL, M. S., Entomologist.

No. 4, Beaumont, Jefferson County:

R. H. WYCHE, B. S., Superintendent.

No. 5, Temple, Bell County:

HENRY DUNLAVY, M. S., Superintendent.

H. E. REA, B. S., Agronomist; Cotton Root Rot Investigations.

B. F. DANA, M. S., Plant Pathologist.

No. 6, Denton, Denton County:

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, Superintendent.

FRANK GAINES, Irrigationist and Forest Nurseryman.

No. 9, Balmorhea, Reeves County:

J. J. BAYLES, B. S., Superintendent.

No. 10, Feeding and Breeding Station, near College Station, Brazos County:

R. M. SHERWOOD, M. S., Animal Husbandryman in Charge of Farm.

L. J. McCALL, Farm Superintendent.

No. 11, Nacogdoches, Nacogdoches County:

H. F. Morris, M. S., Superintendent.

** No. 12, Chillicothe, Hardeman County:

J. R. QUINBY, B. S., Superintendent.

*** J. C. Stephens, M. A., Junior Agronomist.

No. 14, Sonora, Sutton-Edwards Counties:

W. H. DAMERON, B. S., Superintendent.
————, Veterinarian.

V. L. Cory, M. S., Grazing Research Botanist.

***O. G. BABCOCK, B. S., Collaborating Entomologist.

O. L. CARPENTER, Shepherd.

No. 15, Weslaco, Hidalgo County:

W. H. FRIEND, B. S., Superintendent.

----, Entomologist.

W. J. BACH, M. S., Plant Pathologist.

No. 16, Iowa Park, Wichita County:

E. J. WILSON, B. S., Superintendent.

J. PAUL LUSK, S. M., Plant Pathologist.

Teachers in the School of Agriculture Carrying Cooperative

Projects on the Station

G. W. ADRIANCE, M. S., Associate Professor of Horticulture.

S. W. Bilsing, Ph. D., Professor of Entomology.

V. P. LEE, Ph. D., Professor of Marketing and Finance.

D. Scoates, A. E., Professor of Agricultural Engineering.

H. P. SMITH, M. S., Associate Professor of Agricultural Engineering.

^{*}On leave of absence.

^{**}Dean, School of Veterinary Medicine.

^{***}In Cooperation with United States Department of Agriculture.

THE ENGINEERING EXPERIMENT STATION

THOMAS OTTO WALTON, LL. D., President.

- F. C. Bolton, B. S., Dean, School of Engineering.
- F. E. GIESECKE, M. E., B. S., in Arch., Ph. D., Director.

ADVISORY COUNCIL

- J. B. BAGLEY, B.A., Professor of Textile Engineering.
- C. C. Hedges, A. B., Ph. D., Professor of Chemistry and Chemical Engineering.
 - J. H. HANCE, Ph. D., Professor of Geology.
 - J. J. RICHEY, C. E., Professor of Civil Engineering.
 - D. Scoates, A. E., Professor of Agricultural Engineering.
 - O. W. SILVEY, A. M., Ph. D., Professor of Physics.
 - E. W. Steel, C. E., Professor of Municipal and Sanitary Engineering.

THE EXTENSION SERVICE

THOMAS OTTO WALTON, LL.D., President.

STAFF (As of January 1, 1928)

Administration:

- O. B. MARTIN, Director
- D. L. WEDDINGTON, Chief Clerk.
- H. H. WILLIAMSON, Vice-Director, State Agent.

MISS MILDRED HORTON, State Home Demonstration Agent.

MISS BESS EDWARDS, Assistant State Home Demonstration Agen

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:

GEORGE E. ADAMS, District Agent.

GEORGE W. BARNES, Beef Cattle Specialist.

M. R. BENTLEY, Agricultural Engineer.

A. W. BUCHANAN, District Agent.

JOHN R. EDMONDS, District Agent.

JOHN T. EGAN, District Agent.

E. R. EUDALY. Swine Husbandman.

S. C. Evans, State Boys' Club Leader.

E. N. HOLMGREEN, Poultry Husbandman.

GEORGE W. JOHNSON, District Agent.

R. R. LANCASTER, Rural Organizer.

E. A. MILLER, Agronomist.

G. W. ORMS, District Agent.

R. W. PERSONS, District Agent.

R. R. REPPERT, Entomologist.

IC. IC. ICEPPERI, L'ILUMOTOGIST.

J. F. Rosborough, Horticulturist.

A. L. SMITH, District Agent.

J. L. THOMAS, Dairy Specialist.

C. B. Webster. Farm Forester.

T. B. Wood, District Agent.

Home Demonstration Work:

MRS. MAGGIE W. BARRY, Special Agent.

MISS LOLA BLAIR, Home Economics Specialist.

MISS GERTRUDE BLODGETT, District Home Demonstration Agent.

MISS JENNIE CAMP, District Home Demonstration Agent.

MISS BENNIE CAMPBELL, District Home Demonstration Agent.

MRS. BERNICE CLAYTOR, Home Improvement Specialist.

MISS MINNIE MAE GRUBBS, District Home Demonstration Agent.
MISS MAMIE LEE HAYDEN, Clothing Specialist.
MISS SALLIE F. HILL, District Home Demonstration Agent.
MISS MYRTLE MURRAY, District Home Demonstration Agent.
MISS ALTEE SMITH, District Home Demonstration Agent.
MISS JUANITA SPROTT, District Home Demonstration Agent.
MISS HELEN H. SWIFT, District Home Demonstration Agent.

Negro Extension Work:

C. H. Waller, State Leader.
II. S. Estelle, District Agent.
MRS. M. E. V. HUNTER, District Agent.

THE FOREST SERVICE

THOMAS OTTO WALTON, LL.D., President.

E. O. SIECKE, B.A., B.S., Director.

WM. A. NORMAN, Chief Clerk.

Division of Forest Protection:

- H. J. EBERLY, B.S., Lufkin, Chief.
- H. F. Munson, B.S., Lufkin, Assistant Chief.
- W. E. WHITE, B.S., Lufkin, Inspector.
- J. M. Turner, Kirbyville, Inspector.
- E. B. Long, Conroe, Inspector.
- B. D. HAWKINS, Woodville, Inspector.

Forty-three patrolmen on duty seven months annually.

Division of Forest Management:

- W. E. Bond, M.S.F., Chief.
- V. V. Bean, Kirbyville, Superintendent, Kirbyville State Forest.
- H. A. Budde, Conroe, Superintendent, Conroe State Forest.

Division of Farm Forestry:

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

^{*}In cooperation with the Extension Service.

ADMINISTRATION OF STATE LAWS

Fertilizer Law:

- G. S. Fraps, Ph.D., State Chemist.
- S. E. ASBURY, M. S., Assistant State Chemist.
- W. H. WALKER, Assistant Chemist.
- T. L. OGIER, B.S., Assistant Chemist.

Foulbrood Law:

- F. L. THOMAS, Chief of Division; State Entomologist.
- S. E. McGregor, Chief Foulbrood Inspector.
- H. G. GRAHAM, Foulbrood Inspector.
- A. B. Kennerly, Assistant Foulbrood Inspector.

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, Executive Secretary to the President, Secretary of the Board of Directors.

WALTER WIPPRECHT, B.S.A., Business Manager.

REV. M. L. CASHION, A.B., General Secretary, Y. M. C. A.

CURTIS VINSON, Publicity Secretary.

JAMES SULLIVAN, Business Manager of Athletics.

R. K. CHATHAM, Manager, Cadet Exchange Store.

G. A. Long, B.S., Auditor and Supervising Accountant, Branch Colleges.

J. E. WAGGONER, Research Agricultural Engineer.

. IVA WHITTAKER, B.A., Assistant Librarian.

BESS ALEXANDER, B.A., Assistant Librarian.

MIRIAM ROE, B.A., B.L.S., Cataloguer.

ERNESTINE SHOWALTER, B.A., Assistant Cataloguer.

V. B. Edge, Accountant.

C. C. EDGE, Cashier.

Louise Hillyer, B.A., Assistant Registrar.

JULIAN R. WRIGHT, Assistant Commandant.

Part II

GENERAL INFORMATION

GENERAL INFORMATION

LOCATION

The College is situated at College Station, in the County of Brazos, and is 350 feet above sea level. The Southern Pacific and the Missouri Pacific 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 its 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 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 at 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 b. anch 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."

For administrative purposes the departments of instruction are assigned to the several schools as follows:

School of Agriculture.—Accounting and Statistics, Agricultural Economics, Agricultural Engineering, Agronomy, Animal Husbandry, Dairy Husbandry, Entomology, Farm and Ranch Management, Forestry, Genetics, Horticulture, Landscape Art, Marketing and Finance, Poultry Husbandry, Rural Sociology.

School of Arts and Sciences.—Biology, Chemistry, Economics, English, Geology, History, Mathematics, Military Science and Tactics, Modern Languages, Physical Education, Physics.

School of Engineering.—Architecture, Chemical Engineering, Civil Engineering, Drawing, Electrical Engineering, Mechanical Engineering, Municipal and Sanitary Engineering, Textle Engineering.

School of Veterinary Medicine.—Veterinary Anatomy, Veterinary Medicine and Surgery, Veterinary Pathology, Veterinary Physiology and Pharmacology.

School of Vocational Teaching.—Agricultural Education, Industrial Education, Rural Education.

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 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 governs 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 defence.

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 Officers' 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 consists of units of the Infantry, Field Artillery, Air Corps, 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) The presentation of advanced credits in a considerable number of subjects.

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 \$7.15 per 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 uniform at the rate of \$7.15 per 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. Commutation 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 camp.
- (d) After graduation he may be eligible for appointment as an officer in the Reserve Corps.
- (e) Honor graduates applying for appointment as second lieutenants, U. S. Army, are exempt from the mental part of the examination for appointment.
- (f) Graduates may be given the opportunity to take competitive examinations for Regular Army commission and may be granted exemptions in some subjects.

ELIGIBILITY FOR DIFFERENT BRANCHES OF THE SERVICE

- 1. Signal Corps—Only students taking a four year course in Electri.al Engineering are eligible.
- 2. Students enrolling in Architecture, Chemical Engineering, Civil Engineering, Electrical Engineering, (except those electing Signal Corps), and Mechanical Engineering are required to select either the Air Corps or Field Artillery Unit.
- 3. Students enrolling in a four year course in Agricultural Engineering may select Infantry, Cavalry, or Field Artillery.
- 4. All other students taking military training are required to select either the Infantry or the Cavalry unit. No student weighing more than 180 pounds will be eligible for enrollment in the Cavalry Unit.

A special physical examination is required for all students enrolling in the Air Corps.

Written authority signed by parent or guardian must be presented at the time of registration for enrollment in this branch.

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 sub-divided 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 electives for any year must be made by April 15 of the preceding year. In case of failure to comply with this requirement,

the student's 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 substitution, 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.

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 special reference to the eradication of mosquitoes, flies and other disease 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 dormitories are inspected daily and are kept neat and clean throughout. The rooms are well lighted and comfortable.

Drill, field practice work, and outdoor athletic sports, furnish sufficient and varied exercises, 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 two-thirds 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 the mess hall, 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 religious 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 30,000 volumes 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.

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.

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.

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

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

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 Longhorn.

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.

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 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.

TEACHERS 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

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, Supervisor of Subsistence.

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, a large dining room, and a 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, a former president of the Board of Directors.

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 conveniences.

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, 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 Stadium.—The first unit of the concrete stadium at Kyle Field was erected in 1927. It is on the west side of the gridiron, 360 feet long, 55 feet wide, and has a seating capacity of 9,000. The steel stands are on the east side and on the north end of the gridiron. They were erected in 1922, and have a seating capacity of 9,000, giving a total seating capacity of 18,000.

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 completely 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. A grocery store, the telephone office and the 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 laboratories 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 stalis for 93 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 Poultry Administration Building, erected in 1925, contains egg candling rooms, baby chick brooding rooms, two class rooms for judging poultry.

The Science Building, erected in 1899, was used until 1922 as the Agricultural Building. It was remodeled in 1924 and is 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 room, feed rooms, medicine rooms, etc.

Francis Hall, erected in 1918, contains offices, c'ass rooms and laboratories for the School of Veterinary Medicine. It is named in honor of Dean 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.

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.

DOR MITORIES

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 and sixty-four 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 three-fourths 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 twenty-five acres of, lawn, shrubbery and flowers. The orchard, vineyard, nursery and garden are located north and east of the Academic Building.

FARM

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 160×100 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, harvestors, 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 aggregating 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 balances, 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 made up of five divisions and has rather complete equipment for instructional purposes in each as well as a large central judging arena and office building.

The division of Animal Nutrition maintains a laboratory for small animal work. These animals are used chiefly for deficiency disease, vitamin, mineral and unbalanced ration work. All of the animals in the department are available for other work.

The beef cattle division is equipped with barns, sheds and land suitable for fitting show animals as well as caring for commercial cattle. Excellent herds of Hereford, Shorthorn and Aberdeen Angus cattle are maintained together with a few representatives of the Brahman and Red Polled breeds. The Grand Champion steer over all breeds at the American Royal Live Stock Exposition in 1927 was bred and fitted by the division.

The horse division is equipped with representatives of the following breeds: Percheron, American Saddle, Standard bred, Morgan and Thoroughbred. It is a matter of some interest that there are also a fertile mule and two of her offspring being maintained for the purpose of further testing their breeding ability.

A large flock of Rambouillet sheep together with smaller flocks of Delaines, Hampshires and Southdowns is maintained by the Sheep and Goat division. There is also a splendid flock of grade and purebred Angora goats. This division is assigned a complete unit of land divided into small pastures for rotation grazing work. The goats are run in 125 acres of brush land. Magnifying glasses, micrometer calipers and scouring equipment are available for work on wool and mohair.

The hog division is built up with a complete unit of equipment consisting of numerous small lots and pastures, a central feeding and storage barn, colony houses, feeding floors, etc. Breeding herds of Durocs, Poland Chinas, Hampshires and Tamworths are maintained.

Herds of cattle, horses, sheep and hogs are fitted and exhibited at both fall and spring live stock shows. Practically all of the animals exhibited are bred by the department. These animals are used for instructional purposes in judging, feeding, fitting and exhibiting.

Commercial cattle, sheep and hogs are fed for instructional purposes. The number fed each year is varied according to the outlook for the particular class of livestock. An attempt is made to have representatives of the various market classes for this work.

In addition to the animals and equipment in the Animal Husbandry department, students specializing in this work also have available for use by arrangement, the swine herd of the Texas Experiment Station, and the wool and mohair equipment including the outstanding scouring plant used for shrinkage determinations.

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 drawings 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 history of art. The department subscribes to architectural magazines, among which are French and English All this equipment is being increased as the needs standard publications. Students of Architecture also have access to the of the department demand. 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 material.

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 lock-desk 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, planetables, 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 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 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 222 animals, including cows, calves and bulls, of which there are 110 pure-bred Jerseys, 90 pure-bred Holsteins, 11 pure-bred Ayrshires, and 11 pure-bred Guernseys. The milking herd usually includes about 90 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 tile-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 electric machinery laboratories, a measurements laboratory, a standardizing laboratory, a photometric laboratory, a storage battery room, a storage battery repair room, a

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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 Direct current is supplied by 220 volts is obtained through transformers. two motor-generator sets located in the machinery laboratory. set consists of a 2300-volt, 50-horse power induction motor direct connected to a 35 kw., 125-volt, compound wound direct current generator. set consists of a 2300-volt, 100-horse power synchronous motor direct connected to two 35 kw., 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 switchboard located in the other Throughout all laboratories the distribution of power is conlaboratories. trolled 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 1½ horse-power to 20 kilowatts and provided with various means of speed and voltage control; eight alternators ranging from 2½ K. V. A. to 30 K. V. A.; three convertors 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 maintains an insecticide laboratory equipped with the more important insecticides and spray machines, powder guns, etc.

The department has several insect models illustrating the anatomy 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.

EQUIPMENT 57

For life history work, the department has an insectory equipped with breeding cages, a hydrothermograph, and all necessary equipment 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.

GENETICS

The genetics department has a student laboratory equipped with tables and other general apparatus. A number of different strains of drosophila are kept for laboratory use. These are grown in a constant-temperature refrigerator which provides optimum conditions for their culture. This laboratory is also equipped with calculating machines and a Leitz compound microscope.

The genetics research laboratory consists of a stucco building 30x50, equipped with a large number of individual mating cages for pigeons and guinea pigs, a feed room, and an office. There are fifteen outside mating pens for use in studies in poultry genetics. Complete stocks of pigeons, guinea pigs and poultry are maintained. Investigations are being carried on with these at all times, thus giving the under-graduate and graduate student an opportunity for close acquaintance with research work in experimental breeding.

The department has a reference library consisting of books, periodicals and bulletins.

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 Several oil companies have contributed pieces of drilland rock specimens. ing 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, a 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 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 grinders 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 pumps, 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 1000-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 limbers, 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 bags, halter and halter tie rope. Two pack outfits complete, consisting of 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.

POULTRY HUSBANDRY

The Poultry Husbandry department operates a farm of thirty-nine acres with a total of sixty-one buildings. Forty of these buildings are used to house the Texas National Egg-Laying Contest composed of eighty pens with a total of one thousand forty bred for high production hens. The remaining twenty houses are used to house one thousand high producing hens of the three most popular breeds, Rhode Island Reds, Plymouth Rocks and White Leghorns. The department also owns and operates two mammoth incubators with several smaller ones. Every phase of poultry raising is actually carried out on the Farm for the instruction of students.

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, rallway 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 microscopes, microtomes, embedding apparatus, stains, 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 into a large pasture to permit occasional treatment 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, antogenous 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.

There is 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 clinic and many dead animals from Bryan and the surrounding country; also 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 record of the physiological processes 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 poisonous plants, which are used in the courses of instruction.

THE SCHOOL OF VOCATIONAL TEACHING

The School of Vocational Teaching occupies six rooms on the third floor of the Academic Building. 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

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 tree from contagious or infectious disease and must present a satisfactory certificate of recent vaccination against small pox 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. From seven to nine of these units are prescribed, depending on the course of study for which the student enrolls; the distribution of units is indicated in List A, below.

The units in Social Science, Natural Science, and in Elective Subjects are to be chosen from List B.

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. DISTRIBUTION OF UNITS

Number of Units Required in-

	-	·	01 0	JALLEON A	ecquire	u	
SCHOOL OF—	English	Algebra	Plane	Social	Natural	Elective	Total
Agriculture:			Geom.	Science	Science	Subjects	
All curricula except Agri-							
cultural Engineering.	3	1	1	1	1	8	15
Agricultural Engineering	g 3	2	1	1	1	7	15
Arts and Sciences:	3	2	1	2	1	6	15
Engineering:(Including Architecture)		2	1	. 2	1	6	15
Veterinary Medicine:	3	1	1	1	1	8	15
Vocational Teaching:	3	1	1	1	1	8	15

LIST B. ELECTIVE UNITS

English (4th unit)1 unit	Natural Sciences:
Mathematics:	Biology1 unit
Solid Geometry	Botanyl unit
Trigonometry	Chemistry1 unit
Advanced Arithmetic1/2 unit	General Science1 unit
Social Sciences:	Physicsl unit
Ancient History1 unit	Physiography
Modern Historyl unit	Physiology
English History	Zoology1 unit
Amer. History	Vocational Subjects:
Civics	Agriculture1 to 4 units
Economics	Bookkeeping1 unit
Foreign Languages:	Drawing1 to 4 units
	•
Latin2 to 4 units	Com. Arithmetic½ unit
French2 to 4 units	Com. Law
German2 to 4 units	Com. Geography
Spanish2 to 4 units	Manual Training1 to 4 units
	Stenography and
	Typewriting1 unit
	Pub. Speaking

NOTES

- (a) In the School of Engineering, candidates not presenting Solid Geometry for admission will be required to make up that subject before the beginning of the Sophomore year.
- (b) Students who plan to enter the School of Engineering are urged to complete Physics and Solid Geometry as a part of their course of study in high school.
- (c) A maximum of 4 units in vocational subjects will be accepted for admission to the School of Arts and Sciences, and the School of Engineering; for admission to the School of Agriculture, the School of Veterinary Medicine, and the School of Vocational Teaching, a maximum of 5 units in vocational subjects will be accepted.
- 2. Admission by Examination.—Any or all of the scholarship requirements for admission 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 Department of Education, Austin.

Fall entrance examinations will be held at the College September 13, 14, and 15, 1928, 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 13	September 14	Septemebr 15
8-10	Algebra, Agriculture,	Plane Geometry, Physiogra	Solid Geometry, Trigonom- etry, Drawing
10-12	Botany, English, Manual Training	Physics, Latin, Stenography and Typewriting	American History, Book- keeping, Com. Arith.
1-3	Ancient Hist., Physiology	Modern History, Biology, Psychology	English History, General Science, Com. Law
3-5	Civics, Chemistry, Public Speaking	French, Adv. Arithmetic, Economics	German, Spanish, Zoology, 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 necesary 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 credientials 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 character and extent to subjects included in the course of study to be pursued here. Credits given by transfer are provisional and may be cancelled at any time if the student's work here is unsatisfactory.

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

College credit for work done in secondary schools will be given only on the basis of 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 may be admitted to the College as special students, not candidates for a degree, subject to the following regulations:

- 1. The candidate must show good reason for not taking a regular course, and must submit satisfactory evidence that he is prepared to profit by the special studies he wishes to pursue.
- 2. 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 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 completion of the tenth grade of a clasified school, or its equivalent.

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

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.

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REGISTRATION

Upon arrival at the College young men intending to enter will report at once in 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.

SESSION

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

Wednesday and Thursday, September 19 and 20, will be devoted to the registration of new and old students respectively. Registrations will begin Friday, September 21.

EXPENSES

EXPENSES FOR THE SESSION

The fixed charges are:	
Maintenance, first term	125.00
Maintenance, second term	125.00
*Matriculation fee	17.00
Medical Service fee	10.00
Room key deposit, returnable	1.00
- \$	278.00

*For old students who for the first term do not register on the days set apart for that purpose the matriculation fee is \$22.00. For old students who for the second term do not register on the days set apart for that purpose, there is charged an additional matriculation fee of \$5.00.

Additional expenses include:

Laboratory fees, about	310.00
Text-books, from \$15.00 to	25.00
For Freshman engineering students, drawing instruments, about	15.00
Student Activities fee, voluntary	15.00
Post-office box rent, voluntary	.50

First year students taking Freshman Physical Training will be at an expense of \$3.75 for gymnasium suit and other necessary articles. Of this amount \$1.00 is returnable.

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.

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.

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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 attested by the College Surgeon before the student can receive the refund of the unused portion of his maintenance.

Matriculation Fee.—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.

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

Medical Service Fee.—The medical service fee 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 in the medical fee. For students entering at the beginning of the second term, the medical service fee is one-half the amount shown above.

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 is not compulsory. A student entering after the Christmas holidays will pay only \$9.25. On 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 Batallion, the student college publication, throughout the scholastic year.

Post-office Box Rent.—Mail for students who elect to pay this fee is distributed through the Students' Exchange. Other students get their mail through the United States Post-office.

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 Staff.—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.

Day Students.—Day students pay the matriculation fee, laboratory fees, and the medical service fee.

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 made in even dollars.

Checks.—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 of War with reference to the commutation of uniforms:

"Institutions authorized to draw the commutation will provide the uniforms for the students at a cost not less than the amount of commutation, and when they have been delivered to the students, vouchers. Standard Form No. 1034, will be duly accomplished."

Cadets will be required to have in their possession the following articles of uniform:

- 1 College regulation woolen uniform, complete.
- 1 Extra pair of woolen breeches.
- 1 Cap with insignia.
- 1 Regulation hat.
- 1 Silk hat cord.
- 3 Regulation o. d. shirts at least two of which are woolen.
- I soft white shirt with collar attached.
- 1 Sam Browne belt.
- 1 Pair spiral leggins; not required for cadet officers.
- 1 Pair canvas leggins; not required for cadet officers.
- 1 Pair russet service shoes.
- 1 Regulation waist belt.
- 1 Set collar insignia for shirt.
- 1 Set insignia 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.
- I Pair riding boots or leather puttees for cadet officers.

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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 \$7.15 per year from the United States Government the college must furnish to the student \$7.15 worth of uniform equipment. Students who do not buy at least \$7.15 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 purchased each year. Uniform dress is more economical than civilian dress if proper care is taken of the clothing, and articles left over from the first year may be used as long as serviceable.

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, 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 six-year course leading to the degrees of Bachelor of Science and of Doctor of Veterinary Medicine; (c) graduate courses and short courses as 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). 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 agricultural colleges. It also affords excellent preparation for young men who intend to follow business pursuits, especially for merchants and bankers. Systematic training is given in the sciences of biology, 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 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 measurements, 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 that of 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 inculeates, 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 out-door 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 talent to select and follow some particular subdivision of the work. Students whose primary qualification is a talent for drawing become designers, others are more interested in the horticultural side and become superintendents 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 offered the following fouryear 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 COURSE

Two-year course in Cotton Marketing and Classing.

COURSE IN ARCHITECTURE

The course in Architecture is planned to give thorough instruction in those subjects which are generally recognized as necessary in the preparation of students for working 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 application 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. 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 the 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.

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 immedately 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, structural engineering, highway engineering or municipal and sanitary engineering. In the highway group special work for these three groups is the same for all. emphasis is placed on pavements and highway materials, while in the structural 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 execution 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 to 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 electrial 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 of 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 Officers' 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 erect 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 folowing: railway motive power, automotive and marine transportation, refrigeration steam and oil engine power equipment, heating 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 a better 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 COTTON MARKETING AND CLASSING

The two-year course in Marketing and Classing is intended for the student who expects to enter the cotton business either as a buyer, or office man. The course of study is designed to familiarize 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 fouryear 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 disease. 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 that 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, it 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 curicula 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

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 science 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:

 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.)

- 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 of 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 certificte 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 radification.

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, Elctrical Engineer, Mechanical Enigneer,—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.
Science.
Veterinary Medicine.
Rural Education.

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 of 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.

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 partof his thesis work between summer sessions as stated above.

Short Unit Courses.—For the benefit of teachers of Vocational Agriculture whose summer vacation is limited to three weeks, provision is made by which they may take the first half of a course one summer and the second half another summer. The letters M and N written after a course refer respectively to the first and the second half of the course. Credit is not given until both halves have been completed.

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.

Special Opportunity for the Study of Cotton.—The College offers unusual opportunity for the thorough study of cotton in all its phases. The following graduate courses in that field are described under the respective departments: Advanced Cotton Production, Genetic Studies in Cotton, Research in Cotton Breeding, Research in the Physiology of the Cotton Plant, Cotton Insects, The Diseases of Cotton, Cotton Seed Oil, Cotton Machinery, Economics of Cotton Marketing. Undergraduate courses in this field include: The Cotton Plant, Origin, Classificiation and Breeding of Cotton, Fiber Crops, Cotton Insects, Cotton Research Problems, Cotton Machinery, Cotton Prices. The manufacture of cotton is covered in the courses offered by the Department of Textile Engineering.

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 8½ 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 all 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.

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 matriculation fee of \$5.00 is to be paid upon registration.

SCHOLARSHIPS AND FELLOWSHIPS

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

An applicant for a scholarship or a 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 fifty 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 99

CURRICULA

THEORY, PRACTICE, TERM-HOUR

In the curricula shown on the folowing 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 include 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 conference 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 afternoone in the second term of every year to target practice.
- 2. Junior and senior courses in Military Science are required of members of the advanced course in the R. O. T. C.; they are not open to other students.

THE SCHOOL OF AGRICULTURE

1.—COURSE IN AGRICULTURE

FRESHMAN YEAR

First Term Agricultural Economics 101 Agricultural Resources Animal Husbandry 107 General Animal Husbandry Biology 101 General Botany Chemistry 101 Inorganic English 103 Rhetoric and Composition Military Science	2 2 2 3 3 3	ek	Second Term Agricultural Economics 102. Agricultural Resources Agronomy 105 Crop Production Biology 102 General Botany Chemistry 102 Inorganic English 104 Rhetoric and Composition Military Science	3 2 3	
200	14	13		15	11
. ~	SOP	номо	RE YEAR		
**Biology 207 Zoology English 203 Composition and Literature Entomology 201 General Geology 201 General Horticulture 201 Plant Prop. and Orcharding Military Science *Elective	2 3 2 ~	2 2 2	Agricultural Eng, 201 Farm Machinery **Biology 206 Bacteriology Chemistry 206 Organic Dairy Husbandry 202 Dairying English 204 Composition and Literature Military Science *Elective	1 · 3 2 · 2	2 4 2 2 0 2 12 12
*To b	e chose	n fro	om the following:		•
Agricultural Eng. 203 Gas Engines Animal Husbandry 203 Market Classes and Grades Poultry Husbandry 201 Poultry Production	2 1	2 4 2	Agricultural Education 207 Educational Psychology Animal Husbandry 202 Breed Types Horticulture 202 Vegetable Gardening	2	0 2 2

**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 315, Plant Physiology (3-2) for Biology 207.

GROUP 2. AGRICULTURAL EDUCATION

JUNIOR YEAR

•					
First Term	Hours Wee	k	Second Term	Hours Wee	
	3		-Agricultural Education 308		0
Agronomy 301	3	2	Educational Psychology Economics 403	3	0
Soils Chemistry 309	3	.3	Principles English 303 Argumentation	2	0
*Elective	9		Argumentation *Elective	12	
	18	<u>-</u>			<u></u>
•	-0	•		20	
A-1-1- 1-71 - 1-70			YEAR	_	_
Agricultural Education 401 Teaching Vocational Agricul	3 Iture	2	Agricultural Education 402 Teaching Vocational Agricult	ture	2
Marketing and Finance 302	2 3	0	English 401 Public Speaking	2	0
*Elective	12.		Farm and Ranch Man-	_	_
	18	$\frac{}{2}$	agement 401	3	2
	10	-	*Elective	11	
				19	4
GROUP 3.	AGRIC	LILI:	TURAL ENGINEERING		
			R YEAR		
A:!	-			1. 2	4
Agricultural Eng. 305 Terracing and Drainage			Tractors		·
Agronomy 301			Economics 403	3	0
Chemistry 309	3	3	Principles English 303Argumentation	2 .	0
Agricultural Chemistry *Elective	7		*Elective	11	
•	 15	9		18	4
•				10	•
	-		YEAR		
Agricultural Engineering 41	3 2		Agricultural Enginerieng 402 Automobiles and Trucks		4
Marketing and Finance 302	2 3	0	English 401 Public Speaking	2	0
*Elective	13		Farm and Ranch Man-	_	
	18	3	agement 401	3	2
	, 10		*Elective	10	
0		1		17	6

GROUP 4. AGRONOMY

	J	UNIOR	YEAR		
First Term	Hours		Second Term	Hours We	per
First Term	Wed Th.			Th.	ek Pr.
Agronomy 301	3	2	Agronomy 308 Forage Crops Agronomy 314	2	2
Soils Chamistry 200	2	2	Forage Crops	2	2
Chemistry 309	3	3	Field Crops	9	۷.
Genetics 301	3	2	Field Crops Economics 403	3	0
Genetics *Elective			Principles English 303 Argumentation	2	0
Elective	9 		Argumentation	4	U
*	18	7	Genetics 304 Plant Breeding *Elective	3	2
			Plant Breeding	5	
*			· Elective		
				18	6
		ENIOR	YEAR ·		. •
Agronomy 413	3	0.	Agronomy 416 Soils and Crops Seminar English 401	1	0
Soil and Crop Problems Agronomy 415		0	Soils and Crops Seminar		0
Soils and Crops Seminar	I	U	Public Speaking	<i>L</i>	U
Soils and Crops Seminar Animal Husbandry 409	3	2	Public Speaking Farm and Ranch Man-		
Animal Nutrition and Feed		0	agement 401	3	2
Marketing and Finance 30		U	Farm Management *Elective	13	
*Elective	8		Elective	<u></u> -	_
·	10	_		19	2
	18	2			
GROUP 4a. COT	TON P	ROD	UCTION AND MARKET	ING	
	J	UNIOR	YEAR	•	
Agronomy 301	3	2	YEAR Agronomy 316	2	2
Soile			Fiber Crops Agronomy 413 Soil and Crop Problems Economics 403	2	0 -
Chemistry 309 Agricultural Chemistry Genetics 301	3	3	Agronomy 413	3	0
Genetics 301	3	2	Economics 403	3 2 -	0
Genetics			Principles English 303	2	0
*Elective	9		Argumentation	2	0
•	18	7	Argumentation Genetics 304	3	2
		•	Plant Breeding *Elective	7	
			*Elective		٠
·			•	19	4
	S	ENIOR	YEAR		
Agricultural Engineering 4	119 2	2	Agronomy 420	1	0
Cotton Machinery Biology 315 Botany of the Cotton Plant Entomology 411	17	_	Cotton Research Methods		U
Biology 315	2	2	English 401	2	0
Entomology 411	2.	2	Public Speaking Farm and Ranch Man-		
		_	agement 401	3	2
Marketing and Finance 302	3	0	Farm Management		-
Marketing Textile Engineering 413	1	2	Textile Engineering 414	0	2`
Cotton Classing		~	Cotton Classing *Elective	12 ·	
*Elective	5				
	15	8	¥	18	4
	1/			1	

GROUP 5. ANIMAL HUSBANDRY

JUNIOR YEAR

First Term	Hours We		Second Term	Hours Wee	
A aranamy 201	Th.	-	•	Th.	_
Agronomy 301		2	Principles English 303)	0
Animal Husbandry 303	3	2	English 303	2	0
Chemistry 309 Agricultural Chemistry	3	3	Genetics 306	2	2
Agricultural Chemistry Genetics 301	3	2	Animal Breeding Veterinary Anatomy 302	2	2
Genetics *Elective		-	Anatomy and Physiology		
		_	*Elective	9 —	·
,	, 17	9		18	4
•	5	SENIOR	YEAR		
Marketing and Finance 3	02 3	0	English 401	2	G.
Marketing Veterinary Medicine 403	3	2	Public Speaking Farm and Ranch Man-		
Animal Diseases *Elective		_	agement 401	3	2
Elective	<u></u>		*Elective	14	
	18	2		19	$\frac{}{2}$
				• •	_
			ves must include at least on	e cours	e in
Animal Husbandry each t	erm.	•			,
GROU	J P 7.	DAII	RY HUSBANDRY '		
		JUNIOR	YEAR		
Agronomy 301	3	2	Dairy Husbandry 306	3	2
Soils Chemistry 309	3	3	Butter Making and Factory Economics 403	мап. 3	0
Agricultural Chemistry Dairy Husbandry 301	2		Principles English 303	2	0
Market Milk Genetics 301	4		Argumentation *Elective	4	U
Genetics 301	3	2	*Elective	12	
*Elective	5			20	2
* _Z	16	9			
		SENIOR	VEAR		
Animal Husbandry 303				2	a
Animal Nutrition		^	Public Speaking		•
Animal Husbandry 303 Animal Nutrition Marketing and Finance 3 *Elective	502 3	U	Farm and Ranch Man- agement 401	3 .	2
*Elective	12		Farm Management		-
	18		*Elective	14	_
	10			19	2

Note.—In group 7, senior year, one course in Dairy Husbandry must be elected each term.

GROUP 8. ENTOMOLOGY

JUNIOR YEAR

First Term	Hours We	ek	Second Term	Hours	ek
Agronomy 301	Th.	Pr. 2	Economics 403		Pr. .0
Soila		_	Principles English 303	2	
Chemistry 309)	3	Argumentation		0
Entomology 301	2	4	Entomology 302	2	4
Entomology 301 Systematic *Elective	8		Entomology 302 Systematic *Elective	10	
	16	9		17	4
			YEAR		
Entomology 401	2	4	English 401	2	0
Genetics 301	3	2	Public Speaking Entomology 402	2	4
Genetics *Elective	П		Economic *Elective	13	
Licetive			Bicctive		
	16	6		17	. 4
GRO	UP 9.	HC	RTICULTURE		
			R YEAR		
Agronomy 301		2	Economics 403	3	0
Chemistry 309Agricultural Chemistry	3	3	Principles English 303	2	0
Genetics 301	3	2	Argumentation Genetics 304 Plant Breeding Horticulture 310 Commercial Veg. Production	3	2
Genetics Horticulture 317		4	Plant Breeding	2	2
Principles of Fruit Product:	ion	4	Commercial Veg. Production	2	_
*Elective	5,		Horticulture 318Principles of Fruit Producti	/.	4
	16	11	*Elective	5	
	×			17	8
	S	ENIOR	YEAR		U
Horticulture 401	3	2	Biology 416	2	4
Pomology Horticulture 421	2	2	Plant Diseases English 401	2	0
Commercial Horticulture Marketing and Finance 302			Biology 416 Plant Diseases English 401 Public Speaking Horticulture 420 Experimental Horticulture		4
		U	Experimental Horticulture	I	4
*Elective	9		*Elective	11	
₂₀ - 4	17	4		16	8
GROU	P 10.	LA	NDSCAPE ART		
			YEAR		
Agricultural Engineering 305.	2	4	Economics 403	3	. 0
Terracing and Drainage Agronomy 301	3	2	Principles English 303	2	0
Soils Landscape Art 301		4	Argumentation Landscape Art 302	2	0
Introduction to Landscape A	rt	•	History of Landscape Art		~
*Elective	y	_	*Elective	13	_
	16	10		20	0

SENIOR YEAR

Hou First Term W Th	rs per ⁷ eek . Pr.	Second Term	Hours We	ek
Architecture 407		English 401	Th. 2	Pr. 0
History of Art Landscape Art 4013		Public Speaking Landscape Art 402		Ü
Landscape Art		Landscape Art 402 Landscape Art	3	8
Marketing and Finance 302 3		Landscape Art *Elective	11	
*Elective7			16	8
15	8		10	U
		TRY HUSBANDRY		
okeel III		R YEAR		
Agronomy 301 3	2	Economics 403	3	0
Soils Chemistry 309	3	Principles English 303	2	0
Chemistry 309 3 Agricultural Chemistry Genetics 301 3	2	Argumentation Genetics 308	2	0
Genetics		Poulrty Breeding		•
Poultry Husbandry 301 2	2	Poultry Husbandry 302	3	2
Market Poultry *Elective5		Feeding and Brooding *Elective	9	
16	9		19	2
	SENIOR	YEAR .		
Marketing and Finance 302 3	0	English 401	2 '	0
Marketing Poultry Husbandry 401 2 Management	2	Public Speaking Poultry Husbandry 402	2	2
Management Poultry Husbandry 403 2	2	Poultry Farming *Elective	15	
Judging *Elective10	2	-Elective	17	_
*Elective10			19	2
$\overline{17}$	4			
GROUP 12.	RUI	RAL SOCIOLOGY		
	JUNIOR	YEAR		
Accounting and Statistics 303. 2	4	Agricultural Economics 31	2 2	2
Statistical Method Economics 4033	0	Agricultural Economics English 303	2	0
Principles Rural Sociology 311 3	0	Argumentation		0
Rural Sociology 311 3 Social Psychology *Elective 10	Ü	Rural Sociology 312 General Sociology *Elective		U
*Elective10		*Elective	12	_
18	4		19.	2
	SENIOR	YEAR		
Rural Sociology 4072	2	English 401	2	0
*Elective17		Public Speaking Rural Sociology 415		2
	_	Agricultural Journalism *Elective	4	4
19	2	*Elective	15	
		•	19	2

XIV.—COURSE IN AGRICULTURAL ADMINISTRATION

FRESH	MAN	YEAR

	FKE	SH MIN	IN IEAR		
First Term	Hours Weel Th.	k	Second Term	Hours We Th.	ek
Agricultural Economics Agricultural Resources		0	Agricultural Economics 102	3 .	0
Biology 101	2	4	Riology 102	2	4
Chemistry 101		3	General Botany Chemistry 102	3	3
English 103	3	0	Inorganic English 104 Rhetoric and Composition	3	0
Rhetoric and Composition Mathematics 101	3	0	Rhetoric and Composition Mathematics 102 Algebra		0
Algebra Military Science	1	2	Military Science	1	2
	15 SOPI	9	RE YEAR	. 15	9
			Laboration to the state of the		_
Accounting and Statistics Principles of Accounting	201_2	4	Accounting and Statistics 202 Principles of Accounting Agronomy 301	22	. 4
Principles of Accounting Agronomy 105	3	2	Soils		2
Economics 203		0	Animal Husbandry 107 General Animal Husbandry		4.
English 203 Composition and Literatu	ire	0	Principles English 204		0
*Horticulture 201 Plant Propagation and O	rcharding	2	Composition and Literature		2
Military Science	l	_2	Military Science	i	_
*Or Dairy Husbandry 202	13 2 (2-2),	10		13	121
		2)	N .		
or Poultry Husbandr or Entomology 201 (<i>L)</i> ,			
		JNTI	NG AND STATISTICS		
	J	UNIOR	YEAR		
Accounting and Statistics Theory and Practice of		4	Accounting and Statistics 30	4. ₋ 1	4
Accounting and Statistics	303 . 2	. 4	Agricultural Economics 312	2	2
*Elective	10		Agricultural Economics English 303 Argumentation		0
	14	8	*Elective	10	
				15	6
	cı	NIOP	YEAR		
Accounting and Statistics		4	*Elective	18	
Cost Accounting English 401 Public Speaking	2	0	•	18	0
*Elective	13				
	16	4	e)		
Note -In group I th	he electiv		r the second term of the se	nior v	vear

Note.—In group I the electives for the second term of the senior year must include at least one course in the Department of Accounting and Statistics.

GROUP 2. AGRICULTURAL ECONOMICS

JUNIOR YEAR

10	Hours per		Hours	
First Term	Week Th. Pr.	Second Term	We Th.	
Accounting and Statistics Statistical Method		Agricultural Economics 312		2
Form and Ranch	7-4	English 303	2	0
Management 401 Farm Management History 307	3 0	Argumentation History 308	3	0
History 307 Industrial History of Eng *Elective	land ∇II	United States *Elective		
	N16 84		17	$\frac{}{2}$
	1416 04	•	1,	~
78m.401	SENIOR	YEAR		
FRM 401 Agricultural Economics 42	3 3 0	Agricultural Economics 402 Property and Contract	2 3	0
Outline of Land Economic Economics 413	3. 0	Economics 414	3	0
Advanced Theory English 401	2 0	Advanced Theory *Elective	12	
Public Speaking *Elective	10,6		18	0
	1817 182			
	•			
GROUP 3. F	ARM AND	RANCH MANAGEMENT		
	JUNIO	R YEAR		
Acounting and Statistics Statistical Method	303_2 . 4	Agricultural Economics 312	2 2	2
Agricultural Engineering	321 1 4	Agricultural Economics Agronomy 314 Field Crops	3	2
Animal Husbandry 409	3 2	Dairy Husbandry 202	2	2
Animal Nutrition Farm and Ranch Management 301		Dairying English 303	2	0
agement 301 Farm Records and Cost A	nalysis	Poultry Husbandry 302	3	2
*Elective	4	Feeding and Brooding *Elective	4	
	$\overline{11}$ $\overline{14}$		16	 8
	,•		10	0
	SENIOR	YEAR		
English 401Public Speaking	2 0	Agronomy 308 Forage Crops	2	2
Farm and Ranch Man- agement 401	3 2	Farm and Ranch Man- agement 404	1	6
Farm Management *Elective		Field Studies *Elective		-
LICCLIVE		- Diccilve	11	
	17 2		14	8

۷.

GROUP 4. MARKETING AND FINANCE

JUNIOR YEAR

First Term Accounting and Statistics: Statistical Method Economics 311 Money and Banking Farm and Ranch Management 401 Farm Management *Elective	3 	c	Argumentation	
TR71 401	01 3	NIOR NIOR 0 0 2	Marketing and Finance 4023 Agricultural Finance *Elective	0· 0

*Junior and Senior Electives

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

XV.—COURSE IN AGRICULTURAL ENGINEERING

FRESHMAN YEAR

	s per eek Pr.	Second Term We	
Agricultural Engineering 101 0	3	Agricultural Engineering 102. 0	3
Animal Husbandry 107 2	4	Agronomy 105 3	2
General Animal Husbandry Chemistry 101	3	Crop Production Chemistry 102	3
Inorganic English 103 3 Rhetoric and Composition	0	English 104 3 Rhetoric and Composition	0
Mathematics 101 3	0	Mathematics 1023	0
Algebra Mathematics 103	0	Algebra Mathematics 1043	0
Trigonometry Military Science1	2	Analytics Military Science1	2
. 15	12	16	10
so	PHOMOR	E YEAR	
Agricultural Engineering 203_2	2	Agricultural Engineering 214 _ 2	4
Gas Engines Drawing 1010	2	Civil Engineering 204 3 Analytic Mechanics	0
Mechanical English 2032	0	Drawing 108 0	2
Composition and Literature Horticulture 201 2 Plant Propagation and	2	Drawing 108 0 Mechanical English 204 2 Composition and Literature	0
Orcharding Mathematics 203 5	0	Mathematics 204 5	0
Calculus	2	Military Science1	2
Military Science 1 Physics 203 3	3	Physics 204 3	3
General	1 1	16	$\overline{11}$
. 15		WEAD	
. 201	JUNIOR 2		2
Agronomy 3013		Agricultural Engineering 201. 2 Farm Machinery	2
Civil Engineering 201 3	4	Agronomy 3082 Forage Crops	2
Electrical Engineering 305 3 Electrical Machinery	3	Civil Engineering 305 3 Mechanics of Materials	0
Geology 201	2	Civil Engineering 315 0 Materials Laboratory	2
*Elective3	_	Dairy Husbandry 202 2	2
15	11	Economics 403	0
		English 303 2 Argumentation	0
		*Elective3	
· ·		17	-8

SUMMER WORK

Civil Engineering 300, Field Practice, three weeks

SENIOR YEAR

First Term	Hours We Th.	ek	Hours Second Term We Th.	ek
Agricultural Engineering 413	2	3	Agricultural Engineering 402. 2	4
Farm Buildings Civil Engineering 311	3	0	Automobiles and Trucks Agricultural Engineering 410. 2 Irrigation	4
Civil Engineering 336	0	2	Agricultural Engineering 416_2	4
Hydraulics Laboratory English 401 Public Speaking	2	0	Drainage Agricutural Engineering 418 2 Designing of Farm Structures	.4
Marketing and Finance 302	}	0	Civil Engineering 334 2	0
*Elective	Ø 1:	2	*Elective3	
	- 19	<u> </u>	13	16

*Junior and Senior Electives

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

XX.—COURSE IN LANDSCAPE ART

FRESHMAN YEAR

		1.1	CESHMA	N YEAR		
		Hour	s per		Hours	per
	First Term		eek	Second Term	We	
		Th.	Pr.		Th.	
	Agronomy 105	3	2	Architecture 102	0	-3
	Crop Production	0	2	Architectural Drawing	2	4
	Architecture 101		3	Biology 102	Z	4
	Biology 101	2	4	General Botany Chemistry 102	3	3
	General Rotany	4	4	Increania		,
	General Botany Chemistry 101	3	3	English 104	3	0
	Inorganic			Rhetoric and Composition Mathematics 103		•
	Inorganic English 103	3	0	Mathematics 103	3	0
	Rhotoric and Composition			Trigonometry		_
	Military Science	1	. 2	Military Science	1	2
		12	14		12	12
		so	PHOMOR	RE YEAR		
	Architecture 109	0	2	Agricultural Education 20	7 3-	. 0
•	Freehand Drawing			Psychology		-
	Freehand Drawing Drawing 103	3	0	Architecture 104	2-	$\overline{}$
	Descriptive Geometry			Shades and Shadows		_
	English 203	2	0	Architecture 110	0	2
	Composition and Literature Entomology 201	2	2	Freehand Drawing English 204	2	0
	General Comology 201	2	2	Composition and Literature	Z	U
	Geology 201	3	2	Horticulture 208	2	2
	General		2	Ornamentals	<i>L</i>	2
	Horticulture 201	2	2	Landscape Art 302	2	0
	Plant Propagation		_	History of Landscape Art		Ū
	Military Science	1	2	Military Science	1	2
	Elective	3		Elective	♦ (,
					_	
		16	10		16	6
			JUNIOR	YEAR		
	Agricultural Engineering 30	15 2		Architecture 206	Ω	4
	Terracing and Drainage)) <u>L</u>	7	Freehand Drawing	0	7
	Agronomy 301	3	2	Economics 403	3	0
	Soils		-			Ū
	Architecture 205	0	4	English 303	2	0
	Freehand Drawing Landscape Art 301	_		Argumentation	_	_
	Landscape Art 301	2	4	Argumentation Horticulture 314	2	2
	Introduction to Land- scape Art			Floriculture Landscape Art 304	0	8
	*Elective	5		Landscape Art 504Landscape Design	U	o
	Licetive			*Elective	6	
		12	14	Diective		
		12	17		13	14
			SENIOR	VEAD	. 12	1.7
	E 11 1 401					
	English 401 Public Speaking	Z	0	Economics 316	3	0
	Horticulture 317	2	2	Horticulture 420	1	4
	Fruit Growing	3	2	T3		4
	Landscape Art 401	3	8	Landscape Art 402	3	8
	Landscape Art 401	>	•	Landscape Art		J
	*Elective	8		*Elective"	7	
		_	_			_
		16	10		14	12
			2000 0000			

*Junior and Senior Electives

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

C.—TWO-YEAR COURSE IN AGRICULTURE

FIRST YEAR

	I IIIOI	Line	
First Term V	rs per Veek n. Pr.	Hours Second Term We Th,	
Agricultural Engineering 201 2		Agronomy 30 3 Elementary Crop Production	2
Farm Machinery Agronomy 25	3 2 .	Animal Husbandry 24 0	4
Soils Animal Husbandry 230	4 .	Market Types English 1043	0
Market Types Dairy Husbandry 23	3 2	Rhetoric and Composition Entomology 222	2.
English 103	3 . 0	Elementary Econ. Ent. Military Science1	2
Rhetoric and Composition Horticulture 212	2 2	Textile Engineering 102 ()	2
Plant Culture and Propagation	• `	*Elective6	
Military Science1 Textile Engineering 1010 Cotton Classing	l 2) 2·	15	12
14	16		
*To be cho	osen fro	m the following:	
Agricultural Engineering 203 2		Poultry Husbandry 201 2	2
Gas Engines Horticulture 202 Vegetable Gardening	2 2	Poultry Production	
	SECONI	O YEAR	
Eighteen term-hours each te Science.	erm fron	n the following in addition to Mili	tary
Agricultural Engineering 203. 2	2 2	Agricultural Engineering 214_ 2 Tractors	4
Agricultural Engineering 305_ 2 Terracing and Drainage	2 4	Agricultural Engineering 322 1	4
Agricultural Engineering 321 1		Farm Shop Agricultural Engineering 402 2 Automobiles and Motor	4
Agricultural Engineering 409. I	1 2	Trucks Agricultural Engineering 410 2	4
Animal Husbandry 55 2 Live Stock Feeding		Irrigation Animal Husbandry 52 2	2
Horticulture 53 3	3 2	Breeding Animal Husbandry 582	2
Military Science1	1 2	Live Stock Management Animal Husbandry 2022	. 2
		Brood Types	
		Entomology 56 2	
		Horticulture 304 1 Nut Culture	4
•		Military Science 1 Veterinary Anatomy 306 3 Animal Diseases	2 2
•			

THE SCHOOL OF ARTS AND SCIENCES

XIX.—COURSES 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.

	FR	ESHM	AN YEAR		
First Term	Hours We	ek	Second Term	Hours We	ek
101	Th.		162	Th.	
*Chemistry 103		4	3 *Chemistry 104	3	£#3.
Inorganic English 103Rhetoric and Composition	3	0	Inorganic English 104 Rhetoric and Composition	3	0
History 101	3	0	History 102	3	0
Western Europe Mathematics 101 Algebra	3	0	Western Europe **Mathematics 103 Trigonometry	3	0
Military Science	1	2	Military Science	1	2
Modern Language French, German or Spanish	3	0	Modern Language French, German or Spanish	3	$\overline{0}$
				_	
*Or Physics 201, 202 (3-2), College Physics.	16	5 5	**Or Mathematics 104 (3-0)	16).	€ S
	SOP	номо	ORE YEAR		
**Biology 211	2	4	**Biology 212	2	4
General Biology Economics 203 Principles			General Biology, Economics 204	3	0
E 1: 1 001	3	0	Principles English 232	3	0
Military Science	1 3	2 (English 232 > English Literature Military Science Modern Language French, German or Spanish *Flective	1	2 .
French, German or Spanish *Elective	3/	·	French, German or Spanish *Elective	3	
1,1001110	_		233001110		_
	15.	6	o.	15	6
,	.1	UNIO	R YEAR		
English 321				3	0
Nineteenth Century Literatu	ıre	U	English 322Nineteenth Century Literatu	ire	U
*Elective	15		*Elective	15	
		-			
	18	0		-18	0
•	S	ENIOR	YEAR		
English 401	2	0	English 414	2	0
Public Speaking	_		Contemporary Literature		•
Public Speaking English 413 Contemporary Literature	2	0	*Elective	16	
Contemporary Literature	1.4			10	
*Elective	14			18	0
	18	0			
**Or Biology 103, 104, or	r Biol	ogy 2	203, 204.		

MAJOR AND MINOR STUDIES, AND ELECTIVES

In the Course in Liberal Arts the student will chose his major study from the following departments:

Economics, English, History (including Government), Mathematics, Modern Languages.

The minor study may be chosen from one of the above departments, other' than that of the major study, or from the following:

Biology, Chemistry, Geology, Physics.

Electives may be chosen from the above departments, or from other departments of the College, subject to the approval of the Dean of the School of Arts and Sciences.

Fre-Lew

Engl 103-104 \ Engl 231-232

Moth 101-103 | Ecor 203-20+

Nist 213-214 | Rist 211-212

Nist 213-214 | Nist 215-216

Science | Cagli 201-202

Ener Requirements

E3 18 2 7/13 Lang 2 Elect 5

That more than 3 units in

That where there is in 74 st. +

There than it ind 74 st. +

Civisis

X.—COURSE IN SCIENCE

FRESHMAN YEAR

First Term Biology 103 Botany Chemistry 103 Inorganic English 103 Rhetoric and Composition Mathematics 101 Algebra Military Science Modern Language French, German or Spanis	3 3 3	7r. 4 4 0 0 2	Second Term Biology 104 Botany Chemistry 104 Inorganic English 104 Rhetoric and Composition *Mathematics 103 Trigonometry Military Science Modern Language French, German or Spanish	3 3 1	
	15 1	10	*Or Mathematics 104	15 3	10 0
	COBLIC	MOD	Analytics E YEAR		
Piotomy 202				2	
Biology 203 Zoology English 231	2	4 0	Biology 204 Zoology English 232	2 3	4
English Literature	1	2	English Literature	1	2
English Literature Military Science	3	$\tilde{0} \sim$	Military Science	3	ő
French, German or Spanis Physics 201	h 3	2	French, German or Spanish Physics 202	1	2
*College Physics	4		College Physics *Elective	4	
	16	8		16	8
		NIOR	YEAR		
Economics 203 Principles English 321 Nineteenth Century Litera	3	0	Economics 204	3	0
English 321	3	0	Principles English 322 Nineteenth Century Literal	3	0
*Elective	14		*Elective	14	
r	20	0	•	$\overline{20}$	$\overline{0}$
	SEN	IOR	YEAR		
English 401	2	0	English 414	2	0
Public Speaking English 413 Contemporary Literature	2	0	*Elective	18	
Contemporary Literature *Elective	16 _			20	0
	20	0	•		

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, bactericology), Chemistry, Entomology, Geology, Physics.

- 2. Before graduation the student must complete in his major department at least twenty-four term hours, not including prescribed subjects.
- 3. The student who chooses Physics or Geology 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 eighteen 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 Quantitative Analysis.

Chemistry 207, 208, Quantitative Analysis, Technical Analysis.

Chemitsry 301, 302, Organic Chemistry.

Entomology 201, 202, Systematic, Economic.

Geology 201, 202, Physical and Historical Geology.

Agricultural Education 207, Psychology.

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

\$ 5.00

For the junior and senior years the electives are to be chosen in the Departments listed on page 114, subject to the special requirements noted above.

E. 127.4

WORK PREPARATORY TO MEDICINE

The freshman and sophomore years of the Course in Science include the minimum requirements of those Medical Schools that require two years of college work for admission

Pre- med Biel 203-204 Chem 103-104 Engl 103-104 Moth 101-103 173 Jany

THE SCHOOL OF ENGINEERING

IX.—COURSES IN ARCHITECTURE

GROUP 1. GENERAL COURSE

FRESHMAN YEAR

Architecture 101	First Term	Hours Wee		Second Term	Hours Wee Th.	ek
Architecture 109		0	3	Architecture 102		
Chemistry 101	Architecture 109	0	2	Architecture 110	0	2
Inorganic	Freehand Drawing Chemistry 101	3	3	Freehand Drawing Chemistry 102	3	3
Engineering Problems 0 3 English 104 3 0 Rhetoric and Composition Mathematics 101 3 0 Rhetoric and Composition Mathematics 101 3 0 Mathematics 102 3 0 Algebra Mathematics 103 3 0 Mathematics 104 3 0 Trigonometry Military Science 1 2 Military Science 1 Military Science 1 Military Science 1 Military Science 1 Military Scienc			0			2
Referric and Composition Algebra	Descriptive Geometry Engineering Problems	0	3	Descriptive Geometry Engineering Problems	0	3 - `
Mathematics 101 3 0 Mathematics 102 3 0 Algebra 3 0 Mathematics 104 3 0 Trigonometry 1 2 Military Science 1 2 Military Science 1 2 Military Science 1 2 Architecture 201 0 10 Architecture 202 0 14 V Design Architecture 203 1 0 Architecture 206 0 4 Shades, Shadows and Perspective Architecture 205 0 4 Architecture 208 2 0 Architecture 205 0 4 History 4 Architecture 208 2 0 Architecture 207 2 0 Mechanics of Materials 2 0 Architecture 218 3 0 0 Architecture 217 3 0 Composition and Literature Military Science 1 2 0 Architecture 208 2 0 0 Architecture 218 3 3 3	English 103	3	0	English 104	3	0 .
Mathematics 103 3 0 Mathematics 104 3 0 Trigonometry Analytics 1 2 Military Science 1 2 Military Science 1 2 Military Science 1 2 Interval Science 1 2 Military Science 1 2 Architecture 201 0 10 Architecture 202 0 14 V Design Architecture 203 1 0 Architecture 206 0 4 Architecture 205 0 4 Freeshand Drawing Architecture 208 2 0 Architecture 205 0 4 History Architecture 218 3 0 Architecture 207 2 0 Mechanics of Materials 2 0 English 204 2 0 Military Science 1 2 English 203 2 0 Physics 204 3 3 Composition and Literature Military Science 1 2 2 <td>Mathematics 101</td> <td>3</td> <td>0</td> <td>Mathematics 102</td> <td> 3</td> <td>0</td>	Mathematics 101	3	0	Mathematics 102	3	0
Military Science	Mathematics 103	3	0	Mathematics 104	3	. 0
Architecture 201	Military Science	1	2	Military Science	1	2
Architecture 201		16	13		15	15
Design	·	SOP	номо	RE YEAR		
Architecture 203		0 .	10.		0	14, *
Perspective Architecture 205	Architecture 203	1	0	Architecture 206	0	4 -
Architecture 207 2 0 Mechanics of Materials History 3 0 Mechanics of Materials Elements of Mechanics 2 0 Composition and Literature Military Science 1 2 Physics 203 3 3 General	Donanactiva	0	4	Architecture 208	2	0
History Architecture 217 3 0 Composition and Literature Elements of Mechanics English 203 2 0 Military Science 1 2 Physics 203 3 3 General 2 0 Physics 203 3 3 3 11 23	Freehand Drawing		į.	Architecture 218	3	0 ×
Elements of Mechanics English 203	History		0	Mechanics of Materials English 204	2	ÓV
Composition and Literature Military Science 1 2 Physics 203 3 3 11 23 General -	Architecture 217	3 .	0	Composition and Literatur	e 1	2 6
Military Science 1 2 Physics 203 3 3 General 1 23	English 203 Literatu	2	0	Physics 204	3	3
General	Military Science	1		General'		
- -	General Control	3	3	Ŷ,	11	23
12 19 52		12	19	ን' ህ		

SUMMER WORK

Architecture 300, Working Drawings, three weeks

JUNIOR YEAR

Hours per Week Th. Pr. Second Term Week Th. Pr.	
Design	
Architecture 305 0 4 Architecture 306 0 Freehand Drawing Architecture 309 2 0 Architecture 316 3 Architecture 317 2 3 Architecture 318 3 Framed Construction Reinforced Concrete **English 303 2 0 Modern Language 102 3 Argumentation French 3 Modern Language 101 3 *Elective 3	15
Architecture 309 2 0 Architecture 316 3 History Mechanical Equipment Architecture 317 2 3 Architecture 318 3 Framed Construction Reinforced Concrete **English 303 2 0 Modern Language 102 3 Argumentation French *Elective 3 French 3	4
Architecture 317 2 3 Architecture 318 3 Framed Construction **English 303 2 0 Modern Language 102 3 Argumentation French Modern Language 101 3 0 *Elective 3	0
**English 303 2 0 Modern Language 102 3 Argumentation Modern Language 101 3 0 *Elective 3 French	3
Modern Language 101 3 0 *Elective 3	Ó
	$\overline{22}$
$\overline{12}$ $\overline{22}$	

*To be chosen from List A, page 130.

Or History 305, Citizenship. (Second Term).

**English 305 (2-0) may be substituted for English 303 by students having an acceptable record in English.

SUMMER WORK

Architecture 400, Working Drawings, three weeks

SENIOR YEAR

Architecture 4010	18	Architecture 402 0	20
Design Architecture 4072	0	Design Architecture 4062	0
History of Art		Professional Practice	
Architecture 409 0	4	Architecture 4100 Freehand Drawing	4
Economics 403 3	0	Architecture 4141	0
Modern Language 201 3	ó	Modern Architecture - English 401 2	. 0
French		Public Speaking	٥
*Elective3		Modern Language 202 3	U
11	22	*Elective 3	
		11	$\frac{-}{24}$

^{*}To be chosen from List A, page 130.

GROUP 2. STRUCTURAL COURSE

FRESHMAN YEAR

Same as in Group 1. SOPHOMORE YEAR

First Term	Hours Wee		Second Term	Hours We	
	Th.			Th.	
Architecture 201a	0	8	Architecture 202a	0	4 -
Design Architecture 203 Principles of Perspective	1	0	Design Archtecture 206 Freehand Drawing	0	4
Architecture 205	0	4	Architecture 208	2	0
Architecture 207	2	0	Civil Engineering 204	3	0
English 203	2	0	Analytic Mechanics English 204	2	0
Composition and Literature			Composition and Literature		
Mathematics 203	5	0	Mathematics 204	5	0
Calculus Military Science	1	2	Calculus Military Science	1	2
Military Science Physics 203	3	3	Military SciencePhysics 204	i	3
General		,	General		,
4	_	_		_	
	14	17		16	13
	SU	MMER	WORK		
Architecture	300, W	/orkin	g Drawings, three weeks		
		IUNIOR	YEAR		
Architecture 305	_	4	Architecture 306	٥	A
Freehand Drawing	0	4	Freehand Drawing		т.
Architecture 309	2	0	Freehand Drawing Architecture 312	0	12
History of Architecture			Design		
Architecture 311	0	12	Architecture 316	3	0
Design Civil Engineering 206	1	3	Mechanical Equipment Civil Engineering 340	3	0
Surveying		,	El. Structural Analysis		·
Civil Engineering 305	3	0	Civil Engineering 342	0	6
Mechanics of Materials		•	Structural Drafting		^
Civil Engineering 315	0	2	**English 303	2	0
Mechanical Engineering 20 Elementary Steam Engineer	05_2	0	*Elective	3	
*Elective				$\overline{11}$	22
21001110				11	24
	11	21			
*To be chosen			page 130, or History 305.		•

SUMMER WORK

Architecture 400, Working Drawings, three weeks

^{**}English 305 (2-0) may be substituted for English 303- by students having an acceptable record in English.

SENIOR YEAR

First Term	We	per ek Pr.	Second Term Wo Th.	eek
Architecture 407	2	0	Architecture 406 2	0
History of Art Architecture 411 Structural Design	0	14	Professional Practice Architecture 4122 Structural Design	16
Civil Engineering 413	2	0	Architecture 414 1	0
Elements of Reinf. Concrete Economics 403 Principles	3	0	Modern Architecture Electrical Engineering 436 3 Wiring and Lighting	0
Geology 201	3	2	English 4012	0
General *Elective	3		Public Speaking *Elective3	`
	13	16	13	<u>, 15</u>

^{*}To be chosen from List A, page 130.

COURSES IN ENGINEERING

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

FRESHMAN YEAR

			1.0
Chemistry 101 3	3	Chemistry 102 3	3
Drawing 101 0	2_	Drawing 104 2	2
Drawing 103 3	0	Descriptive Geometry Drawing 1080	2
Descriptive Geometry English 1033	0	Mechanical English 1043	0
Rhetoric and Composition Engineering Problems 0	3	Rhetoric and Composition Engineering Problems0	3
Mathematics 101	0	Mathematics 102 3	0.
Mathematics 103 3	0	Mathematics 104 3	0
Military Science1	2	Analytics Military Science1	2
16	 10 .	19	12
	(17	

VIII.—COURSE IN CHEMICAL ENGINEERING

(Gas, Petroleum and Cotton Seed Oil Engineering)

FRESHMAN YEAR See Page 120.

SOPHOMORE YEAR

		7		
Hours First Term We			Hours	
Th		Second Term	Wee Th.	Pr.
Chemistry 205 2	8	Chemical Engineering 202		8
Qualitative Analysis Drawing 2010	2	Quantitative Analysis Drawing 202	_ 0	2
Mechanical English 203 2 Composition and Literature	0	Mechanical English 204 Composition and Literature	_ 2	0
Mathematics 203 5	0	Mathematics 204	5	0
Military Science1 Physics 2033	2	Military Science	_ 1	2
Physics 203	3 .	Physics 204	3	3
13 .	15	•	 13 '	15
	JUNIOR	YEAR		
Chemical Engineering 301 2	8	Chemistry 302	3	4
Quantitative Analysis Chemistry 301	4	Organic Economics 403		0
Organic	7	Principles		Ü
Organic History 305 3 Citizenship	0	Electrical Engineering 305	_ 3 .	3 ·
Mechanical Engineering 319 4 Engines and Boilers	0	**Electrical Machinery **English 303	_ 2	0
*Elective3		Argumentation Mechanical Engineering 320 Thermodynamics	4	0
	12	*Elective	3	
			10	-
*To be chose	n from	List A, page 130.	18	1.
		ted for English 303 by student	s hav	rin or
an aceptable record in English.	abstitu	ted for English 505 by student	.5 Hav	1115
•	SENIOR			
Chemical Engineering 409 3 Gas and Oil Production	6	Chemical Engineering 416	_ 3	4
Chemical Engineering 411 3 Physical Chemistry	4	Chemical Engineering 418 Physical Chemistry	_ 3	4
English 4012	0 (;	Chemistry 438	1	0
Public Speaking Geology 4012	3 ⁶	***Geology 404 Geology of Petroleum 3** Mechanical Engineering 404 Laboratory	3	3
Geology for Engineers Mechanical Engineering 403 0	*3	Mechanical Engineering 404	0	43
*Elective3		*Elective		
	3571/			35 vil
13 B	17 1/s	120	13	1>1

^{*}To be chosen from List A, page 130.

***Students Specializing in Cotton Seed Oil Engineering will substitute Chemical Engineering 422 for Geology 404.

IV.—COURSE IN CIVIL ENGINEERING

FRESHMAN YEAR See Page 120.

SOPHOMORE YEAR

First Term	Hours We		Second Term	Hours We	
• "	Th.	Pr.		Th.	Pr.
Civil Engineering 201	3	4	Civil Engineering 202	4	3
Drawing 201	0	2	Civil Engineering 204		0
Mechanical		_	Analytic Mechanics		·
English 203		.0	Drawing 202	0	2
Composition and Literature	-		Mechanical .		
Mathematics 203	5	0	English 204	2	0
Calculus			Composition and Literature		
Mechanical Engineering 2		0	Mathematics 204	5	0
Elementary Steam Engineer		-	Calculus		
Military Science		2	Military Science	l	2
Physics 203	3	3	Physics 204	3	3
General			General		
					-
	16	11		17	10

SUMMER WORK

Civil Engineering 300, Field Practice, three weeks.

*	JUNIOR	YEAR .	
Civil Engineering 305 3 Mechanics of Materials	0	Civil Engineering 311 3	0
Civil Engineering 306 2	0	Civil Engineering 334 2	0
Civil Engineering 315 0	2	Civil Engineering 3360 Hydraulics Laboratory	2
Civil Engineering 320 0	2	Civil Engineering 340 3 Elem. Structural Analysis	0
Topographic Drawing Civil Engineering 3312	0	Civil Engineering 342 0	6
Analytic Mechanics Civil Engineering 3330	3	Structural Drafting Geology 2013	2
Railroad Surveying Electrical Engineering 305 3	3	General History 3053	. 0
Electrical Machinery **English 303 2	0	Citizenship *Elective	
*Elective3			10
.15	-	,	

^{*}To be chosen from List A, page 130.

SUMMER WORK

Civil Engineering 400, Field Practice, three weeks.

^{**}English 305 (2-0) may be substituted for English 303 by students having an acceptable record in English.

GROUP I. STRUCTURAL ENGINEERING

SENIOR YEAR

	_				
First Term	Hours Wee Th.	ek	Second Term	Hours Wee Th.	per ek Pr.
Civil Engineering 401	0	3	Civil Engineering 414	\$ ²	43
Civil Engineering 407	3	0.	Civil Engineering 448	33	Ø,c
Civil Engineering 413 El. of Reinforced Concrete	2	0	Civil Engineering 454	0	4
Givil Engineering 443	+	3	English 401 Public Speaking	2	0
Civil Engineering 451		0	Municipal and Sanitary Engineering 410	4	-2
Civil Engineering 453	0	6	Sanitary Engineering	2	
Structural Design Economics 403 Principles		0	*Technical Elective Elective from List A	3	
Elective from List A	3 3 3 4517 e chose	ے	nse402 3-0	15	12
	\$517	程内			
*To-b	e chose	n fro	m the following:		
			Givil Engineering 434	3	0
ř			Irrigation and Prainage Civil Engineering 446	3	0
2 -1			Highway Administration Civil Engineering 452 Structural Engineering	_3	0
			Municipal and Sanitary Engineering 406 Sanitary and Public Health	_3_	0

GROUP 2. HIGHWAY ENGINEERING

٠,	SENIOR	YEAR	3
Civil Engineering 4010	3	Civil Engineering 414 1 Reinforced Concrete Design	A
Railroad Drafting Civil Engineering 4073 Roads and Pavements	0 2:	Civil Engineering 41812	3
Civil Engineering 413 2 Fl. of Reinforced Concrete	0 ^	Civil Engineering 448	80
Civil Engineering 417 \$	3	English 401 2 Public Speaking	0
Highway Materials Civil Engineering 423 2 Bridge Design 5	4	Municipal-and Sanitary	•
Economics 403 3	0	Engineering 410 4. Sanitary Engineering	2-
Principles Elective from List A		*Technical Elective3 Elective from List A3	
m2E 401 - 3-0 15	10	mit. 1 = -0 16	-
(4)		W ₁	8

GROUP 3. MUNICIPAL AND SANITARY ENGINEERING

SENIOR YEAR

First Term	Hours y Weel Th.	¢	Second Term	Hours p Week Th. I	
Chemistry 441	#2	48	Biology 418	i	4
Chemical Testing Water &		•	Water Bacteriology	• /	
Civil Engineering 407	3	0	Civil Engineering 414	X2	#3
Roads and Pavements	_	•	Reinforced Concrete Design	_	•
Civil Engineering 413	2 .	0	English 401	2	0
El. of Reinforced Concrete		_	Public Speaking		
Givil-Engineering 443	†	3	Municipal and Sanitary		
Materials of Construction			Engineering 402	3 .	0
Economics 403	3	.0	Water Supply and Purification	on	
Principles			Municipal and Sanitary		
Municipal and Sanitary			Engineering 404	-0-	4-
Engineering 401	3	0	Sanitary Design		•
Sewerage and Sewage Dispo		-	Municipal and Sanitary		
Municipal and Sanitary			Engineering 406	3	Λ
Enginerieng -403	-0-	-4-	Sanitation and Public Healt) h	U
Sanitary Design			Municipal and Sanitary		
*Elective	3			2	Ο
			Engineering 408	Z	•
CE 423 2-4	16	14.	Municipal Administration	2	
	159	r.	*Elective from dist "W	3	
•	18	7	CE443-1 - 0-3	7	-
	_	(Dechnical Else. 3%	113	12
		c		1/2	
*ic be	cnosen	trom	List A, page 130.	10	

Jechnical Elections -

CE 452 3-0
7125 404 0-6
7125 406 3-0
7125 408 3-0

V.—COURSE IN ELECTRICAL ENGINEERING

FRESHMAN YEAR See Page 120.

SOPHOMORE YEAR

First Term	Hours We		Second Term	ours Wee	
	Th.	Pr.	·	Th.	Pr.
Drawing 201	0	2	Civil Engineering 206	1	3
Electrical Engineering 201 Electricity and Magnetism	4	4	Drawing 202	0	2
English 203Composition and Literature	2	0	Electrical Engineering 202.	2	4
Mathematics 203		0	English 204Composition and Literature	2	0
Mechanical Engineering 20	1 0	3	Mathematics 204	5	0
Pattern Making and Founda Military Science	1	2 2	Mechanical Engineering 214.	0	3
Physics 207	3	Z	Machine Shop Military Science	1	2
×	15	13	Physics 208	3	2
		N.	-		
		21/2	1	14	16
	.J	UNIOR		• •	27
Electrical Engineering 301		6	Civil Engineering 305	3	0
**English 303 Argumentation	2	0	Mechanics of Materials Civil Engineering 315	0	2
History 305	3	0	Materials Laboratory Electrical Engineering 302	5	6
Citizenship Mechanical Engineering 20. Kinematics	7 _ 2 ·	. 2	Alternating Currents Mechanical Engineering 319 Engines and Boilers	4	0
Mechanical Engineering 3: Engineering Mechanics	17 3	0	Mechanical Engineering 318.	2	0
*Elective	3		*Elective	3	
V	17	8		17	8
*To be	chosen	from	List A, page 130.		v.

Note.—If Military Science 305, 306 be chosen, it must be accompanied by Electrical Engineering 309, 310.

**English 305 (2-0) may be substituted for English 303 by students having an acceptable record in English.

	SE	NIOR	YEAR	
Economics 403	3	0	Electrical Engineering 402 4	6
Principles		_	A. C. Machinery	
Electrical Engineering 401	4	6 -	Electrical Engineering 432 3	0
A. C. Machinery	_	0	Public Utility Problems •	
Electrical Engineering 431	2	0 -	Mechanical Engineering 416 0	3
Engineering Administration		_	Laboratory	
English 401	2	0	*Technical electives	
Public Speaking			Elective from List A	
Mechanical Engineering 415_	0	3		
Laboratory			17	
*Technical elective	3		. 17	9
Elective from List A			3	
Elective from Elect it	-	- 2		
	- ·	_		
	1	9		
·			•	

*To be chosen from the following:

		`	
Electrical Engineering 405 3	0	Civil Engineering 311 3	0
Elec. Distribution and Transmission		Hydraulics	•
Electrical Engineering 425 2	2	Electrical Engineering 406 3	0
Illumination Engineering		 Elec. Distribution and Transmission 	
Electrical Engineering 427 2	2	Electrical Engineering 414 3	0
Telephone Engineering		Radio Communication	
Mechanical Engineering 407_2	0	Electrical Engineering 416 3	0
Mechanical Refrigeration		Motor Applications	
		Electrical Engineering 426	2
		Illumination Engineering	
		Electrical Engineering 4282	2
		Telephone Engineering	
		Electrical Engineering 438 3	0
		Theory of Alternating Currents	

III.—COURSE IN MECHANICAL ENGINEERING

See Page 120. FRESHMAN YEAR

SOPHOMORE YEAR						
	ours We		н	ours	per	
	Th.			Wed		
Chemistry 207			Chemistry 208		3	
Quanitative Analysis			Technical Analysis	•	,	
English 203	2	0	English 204	2	0	
Composition and Literature Mathematics 203	-		Composition and Literature Mathematics 204	_	•	
Calculus	. 🤈	0	Calculus	,	0	
Mechanical Engineering 201	O	3	Mechanical Engineering 202	٥	3	
Pattern Making and Foundry	. 0	.,	Pattern Making and Foundry	U	,	
Pattern Making and Foundry Mechanical Engineering 207	2	2 .	Mechanical Engineering 212_	3	0	
Kinematics			Engineering Mechanics		_	
Militry Science	. <u>I</u>	2	Military Science	. <u>l</u>	2	
Physics 203	. 3	3	Physics 204	3	3	
General			General			
	15	13	•	15	11	
				1)	1 .	
E		JUNIOR	YEAR			
Civil Engineering 305	. 3	0	Civil Engineering 315	0	2 .	
Mechanics of Materials			Materials Laboratory		_	
Electrical Engineering 307	. 3	0	Elecetrical Engineering 308	2	3	
Electrical Machinery **English 303	2.	0	Electrical Machinery History 305	2	0	
Argumentation	- 4	U	Citizenship	٠,	U	
Mechanical Engineering 303_	. 0	3	Mechanical Engineering 304	2	6 🗻	
Machine Design			Machine Design			
Mechanical Engineering 309	. 0	. 3	Mechanical Engineering 310	0	3	
Machine Shop	2	0	Machine Shop	Ä	0	
Mechanical Engineering 313 Engineering Mechanics	.)	0	Mechanical Engineering 320	4	0	
Mechanical Engineering 319	4	0	Thermodynamics *Elective	3		
Fraince and Roilers		U	Licetive	_	_	
*Elective	. 3			14	14	
	_			•		
	18	.6.		`.		
			uted for English 303 by studen	its h	1av-	
ing an acceptable record in E	ngli	sh.				
*T. L. al			List A mage 120			

*To be chosen from List A, page 130.

S. Requir	ENIOR	YEAR all groups.	1-	L
Requii	cu iii	an groups.		
Chemical Engineering 407 3	0	Chemical Engineering 408	2.	0
'Industrial Chemistry Civil Engineering 411 211 3	0	English 401	2.	0
Hydraulics		Public Speaking		
Economics 403 3	0 ·	Mechanical Engineering 404	0	34
Principles	4 .	Laboratory		
Mechanical Engineering 403 0	34	Mechanical Engineering 410	3	0
Engineering Laboratory		Gas Engines		
_	_	Mechanical Engineering-412-	3-	0-
9	\$	History and Biography		
	13	0	-	_
\ '.		. 34	10-	14
1	,	•		

GROUP I. POWER

First Term Wee Th. Mechanical Engineering 407 2 Refrigeration Mechanical Engineering 417 2 Power Plants and Equipment *Elective			rs per eek . Pr U
GROUP 2. IND	USTE	RIAL ENGINEERING	
Mechanical Engineering 419 3 Industrial Engineering Mechanical Engineering 421 2 Methods and Management *Elective	2 0	Mechanical Engineering 420 3 Industrial Engineering 422 2 Methods and Management *Elective	2 0 - <u>2</u>
GROUP 3.	TRA	ANSPORTATION	
Mechanical Engineering 423 2 Transportation Mechanical Engineering 425 2 Railway Mech. Engineering *Elective	-4	Mecehanical Engineering 424 2 Transportation Mechanical Engineering 426 2 Railway Mech. Engineering *Elective	0 4

SCHOOL OF ENGINEERING

VI.—COURSE IN TEXTILE ENGINEERING

FRESHMAN YEAR See Page 120.

SOPHOMORE YEAR

First Term	Hours We	ek	Second Term W	s per eek
Chamistan 207	Th.	Pr.	The Chamistrus 200	
Chemistry 207Quantitative Analysis	Z	3	Chemistry 208 1	3
Drawing 201	0	2	Civil Engineering 2061	3
Mechanical			Surveying	_
English 203 Composition and Literature	2	0	Drawing 2020	2
*Mathematics 203	5	0	English 204 2 Composition and Literature	0
Mechanical Engineering 205 Elem. Steam Engineering	2	0	Mechanical Engineering 207_2 Kinematics	2
Military Science	_ 1	. 2	Military Science1	2
Physics 203	3	. 3	Physics 2043	3
General		2	General	_
Textile Engineering 207	0	3	Textile Engineering 206 0 Yarn Manufacture	3
_	.15	13	10	18
*Or Accounting and Stat			Accounting; and Accounting and	
	.151103	201,	Accounting, and Accounting and	Sta-
tistics 202, Accounting.			•	
•		UNIOF	YEAR	
Chemistry 206	3	2	Chemistry 308 2	4
Organic	2	0	Dyeing Electrical Engineering 209	3
Electrical Engineering 307	J	U	Electrical Engineering 308 2	>
Mechanical Engineering 309	0	3	Electrical Machinery **English 3032	0
Machine Shop		3	Argumentation History 305 3 Citizenship	•
Textile Engineering 301	Z)	Citizenship	0
Textile Engineering 303	0	3	Textile Engineering 3020	2
Fabric Design		_	Yarn Manufacture	_
Textile Engineering 307		3	Textile Engineering 304 0	3
*Elective	3		Textile Engineering 306 3	3
	14	14	Weaving *Elective3	
	17.	17		
			15	15

^{*}To be chosen from List A, page 130.

^{**}English 305 (2-0) may be substituted for English 303 by students having an acceptable record in English.

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SENIOR YEAR

First Term	Hours per Week Th. Pr.	Second Term We Th.	eek
Agricultural Education 207	3 0	Economics 3163	0
Economics 403	3 0	Business Law English 401 2 Public Speaking	0
Textile Engineering 401	3 2	Textile Engineering 402 2	3
Textile Engineering 413 Cotton Classing	1 2	Yarn Manufacture Textile Engineering 414 0 Cotton Classing	2
Textile Engineering 415 Fabric Design	0 3	Textile Engineering 416 1	3
Textile Engineering 419 Weaving	1 2	Textile Engineering 4200	3
*Elective **Elective	3 3	Weaving Textile Engineering 422 3 History of Textile Industry	0
	17 • 9	*Elective 3 **Elective 3	
		17	11

^{*}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 co	ommo	on to all engineering courses.	
English 321 3 Nineteenth Century Literature	0	Economics 408 3	0
English 405 3	0	English 322 3	0
Public Speaking and Debate Genetics 405	0	Nineteenth Century Literature English 406 3	0
Survey of Eugenics History 311	Δ	Advanced Debating History 312	Λ
Modern and Contemporary Europe	U	Modern and Contemporary Europe	U
*Military Science3	2	*Military Science3	2
Modern Languages3	0	Modern Languages 3	0
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.

XVIII.—TWO-YEAR COURSE IN COTTON MARKETING AND CLASSING

	FIRST	YEAR	
Hours First Term We Th.	eek	Hours Second Term We Th.	eek
Agricultural Economics 101 3 Agricultural Economics	0	Agricultural Economics 102 3 Agricultural' Resources	. 0
Chemistry 101 3	3	Chemistry 102 3	3
English 103 3 Rhetoric and Composition	0	English 104 3 Rhetoric and Composition	0
Mathematics 101 3	0	Mathematics 102 3	0
Military Science 1 Textile Engineering 107 2 Cotton Classing	2 5	Military Science 1 Textile Engineering 108 2 Cotton Classing	2 5
15	10	. 15	10
	SECOND	YEAR	
Accounting and Statistics 201 2	4	Accounting and Statistics 202 2	4
Economics 203 3	0	Economics 2043	0
Economics 311 3	. 0	Economics 316 3	0
Money and Banking English 203 2 Composition and Literature	0	English 204 2 Composition and Literature	0
Military Science 1 Textile Engineering 205 3 Cotton Exchanges	· 2.	Military Science 1 Textile Engineering 212 1 Cotton Classing	2 5
Textile Engineering 2111	5 [.]	Textile Engineering 218 3 Foreign Cotton Markets	0
	_	<u> </u>	

Note.—Completion of this course will be accepted for full Junior standing in group 4 of the course in Agricultural Administration.

15 11

THE SCHOOL OF VETERINARY MEDICINE

XI.—COURSE IN VETERINARY MEDICINE

	FRE	ESHMA	N YEAR			
		per	C 1 M	Hours		-
First Term	We Th.		Second Term	Wee Th.		
Animal Husbandry 107	2	4	Biology 102	2	4	
General Animal Husbandry Biology 101	2	4	General Botany Chemistry 102	3	3	
General Botany Chemistry 101	. 3	3	Inorganic English 104	3	0	
Inorganic English 103		0	Rhetoric and Composition		2	
Rhetoric and Composition		2	Military Science Poultry Husbandry 201	2	-0	1
Miltary Science Veterinary Anatomy 111	3	6	Poultry Production Veterinary Anatomy 112	3	6	
Anatomy of the Domestic Anim	als		Anatomy of the Domestic An	nimals		
Veterinary Physiology and Pharmacology 121 Physiology	2	0	Veterinary Physiology and Pharmacology 122 Physiology	2	0	
	_	_	1 hysiology	_	_	
	16	19		16	15	
	SOP	HOMOR	E YEAR			
Biology 207		4	Biology 206	1	4	
English 203	2	0	Bacteriology Chemistry 206	3	2	
Composition and Literature Entomology 201	2	2	Organic English 204 Composition and Literature	2	0	
General Military Science	1	2	Entomology 208	2	2	
Veterinary Anatomy 211	3	6	Animal Parasites Military Science		2	
Veterinary Anatomy 211 Anatomy of Domestic Animals Veterinary Anatomy 213	2	4	Veterinary Pathology 242	3	2 2	
Vet. Phys. and Pharm. 221	2	0	General Veterinary Physiology and			
Physiology			Veterinary Physiology and Pharmacology 222 Physiology	3	4	
. 1	14	18	1 hysiology	_	_	
				15	16	
•		UNIOR	YEAR		•	
Dairy Husbandry 301	2	2	English 303	2	0	
Market Milk Veterinary Medicine 351	3	0 -	Genetics 301	3	2	
Non-infectious Diseases Veterinary Medicine and			Genetics Veterinary Medicine 352	3	0.	
Surgery 3/1	0	7	Non-infectious Diseases			
Veterinary Pathology 341	2	0	Surgery 372	0	12	
Veterinary Pathology 343	2	4	Veterinary Pathology 342	2	4	
Special Bacteriology Vet. Pharmacology 333		4	Special Vet. Pharmacology 334	3	0	
Pharmacology Veterinary Surgery 361		0	Pharmacology Veterenary Surgery 362		0	
General Elective			General		•	
-	_	_	Elective	j		
1	8	17	•	19	18	

SENIOR YEAR

	First Term	Hours We Th.	ek		s per eek Pr.
			_		
	l Husbandry 409	3	2	English 401 2	0
	mal Nutrition			Public Speaking	
Veterii	nary Medicine 451	3	0	Veterinary Medicine 452 3	0
Dise	ases of Small Anima	ls		Practice of Medicine and	
	Fowls			Jurisprudence	
Veterii	nary Medicine 453	3	0	Veterinary Medicine and	
	ctious Diseases			Surgery 4720	7
Veterii	nary Medicine and			Clinic	•
	ery 471	0	7	Veterinary Pathology 442 2	2
Clin			,	Meat Hygiene	
		2	2	Veterinary Pathology 444 2	2
vetern	nary Pathology 441	Z	2		2
	unology and Serum			Laboratory Diagnosis	2
	nerapy		2	Vet. Pharmacology 432 I	2
	ary Pathology 443	Z	2	Toxicology	
	asitology		_	Veterinary Surgery 462 3	4
	nary Surgery 461	2	0	Operative	
	etrics			Elective 3	
Electiv	e	3			
			_	16	17
		18	12	10	.,
		10	1)		

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

First Term	Hours We Th.	ek	Second Term We	eek
Agricultural Economics 101		0	Agricultural Economics 102 3	0
Agricultural Resources Agronomy 105	3	2	Agricultural Resources Animal Husbandry 107 2 General Animal Husbandry	4
Crop Production		4	General Animal Husbandry Biology 1022	4
Biology 101 General Biology Chemistry 101	3	3	Biology 102 2 General Biology Chemistry 102 3	3
Inorganic English 103		0	Chemistry 102 3 Inorganie English 104 3	0
Rhetoric and Composition		2	Rhetoric and Composition	2
Military Science	_	_	Military Science1	_
	15	11	14	13
	:	SECOND	YEAR	
Biology 207	2	4	Agricultural Engineering 201 2	2
Zoology English 203	2	0	Farm Machinery Biology 2061	4.
Composition and Literature Entomology 201	2	2	Chemistry 206	2
General Geology 201	3	2	Dairy Husbandry 2022	2
General Horticulture 201	2	2	Dailying English 204 Composition and Literature	0
Plant Prop. and Orchardin Military Science	g	2	Composition and Literature Military Science1	2
Elective	3	2	Elective3	2
	15	12	14	12
		THIRD	VEAR	
Animal Husbandry 202		2		2
Animal Husbandry 303 Principles of Nutrition		_	Agronomy 308 2 Forage Crops Economics 403 3	2
Genetics 301	3	2	Principles 3	0
Veterinary Anatomy 111 Anatomy of Domestic Anim	3	6	Principles English 303 2 Argumentation	0
Veterinary Physiology and			Entomology 208 2	2
Pharmacology 121		0	Animal Parasites Veterinary Anatomy 112 3	6
*Elective	6		Anatomy of Domestic Animels Veterinary Physiology and	
	17	10	Pharmacology 122 2	0
			Physiology *Elective4	
			10	10
			. 18	10

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

FOURTH YEAR

		FUUKIN	IEAR		
First Term	Hours We Th.	s per eek Pr.	Second Term	Hours Wee	
Veterinary Anatomy 211		6	English 401		0
Anatomy of Domestic Animal	s	U	Public Speaking		U
Veterinary Anatomy 213	2	4	Veterinary Pathology 242	3	2
Histology and Embryology Veterinary Physiology and			General Veterinary Physiology and		
Pharmocology 221	_ 2	0	Pharmacology 222	3	. 4
Physiology			Physiology Elective	10	
Elective			Elective	10	
¥	16	10		18	6
		FIFTH	YEAR		
Veterinary Medicine 351	. 3	0	Veterinary Medicine 352	3	. 0
Non-infectious Diseases			Non-infectious Diseases		
Veterinary Medicine and Surgery 371	Λ	7	Veterinary Medicine and Surgery 372	0	12
Clinic	0	,	Clinic		14
Veterinary Pathology 341	_ 2	0	Veterinary Pathology 342	2	4
Special Veterinary Pathology 343	2 .	. 4	Special Vet. Pharmacology 334	3	0
Special Bacteriology			Pharmacology		-
Vet. Pharmacology 333Pharmacology	. 3	4	Veterinary Surgery 362	3	0
Veterinary Surgery 361	. 3	0	Elective	5	
General Elective					16
•		_		16	16
	17	15			
		SIXTH	YEAR		
Veterinary Medicine 451	3	•0	Veterinary Medicine 452	3	0
Diseases of Small Animals	. ,	U	Prac. of Med. and Jurisprude		•
and Fowls	2	Λ	Veterinary Medicine and	^	
Veterinary Medicine 453	.)	. 0	Surgery 472	0	
Veterinary Medicine and			Veterinary Pathology 442	2	2
Surgery 471	. 0	7	Meat Hygiene		2
Veterinary Pathology 441	2	2	Veterinary Pathology 444 Laboratory Diagnosis		1
Immunology and Serum Thera	ру		Veterinary Physiology and	ş.	1
Veterinary Pathology 443	2	2 ·	Veterinary Physiology and Pharmacology 432	1 -	2.
Veterinary Surgery 461	2	0	Toxicology Veterinary Surgery 462		4
Obstetrics					•
Elective	. 7		Elective	4	
	- 19	11		15	17

THE SCHOOL OF VOCATIONAL TEACHING

XII.—COURSE IN AGRICULTURAL EDUCATION

FRESHMAN YEAR

First Term	urs per Week 'h. Pr.	Second Term	Hours Wee	ek `
Animal Husbandry 107		Agronomy 105		2
General Animal Husbandry Biology 101		Crop Production Biology 102		4
General Botany English 103	2 T	General Botany English 104	2	- 1
Rhetoric and Composition		Rhetoric and Composition		0
Military Science	1 2	Military Science	1	2
Poultry Hnsbandry 201	2 2	Elective		_
Elective	₹.	•	16	8
(a.fc 1-1-102 for 28 =	3 12			
•		ORE YEAR		
		Chemistry 102	3	3
Biology 206 Zoology Batters 101 Chemistry 101	3 3	Inorganic —Dairy Husbandry 202		2
Ingrania	, ,	Dairying -English 232	<i>L</i>	_
-English 231		English Literature		0
English Literature -Horticulture 201	2 2	Economic Entomology	2	2
Plant Prop. and Orcharding Military Science	1 2	Military Science	1	2
Elective	3	Elective	3	
$\overline{\mathbf{i}}$	3 11		14	9
	JUNIO	OR ÝEAR		
Agricultural Education 305	3 0	Agricultural Education 308	3	0
Agricultural Engineering 321.	1 4	Agricultural Engineering 322 Farm Shop	1	.4
-Agronomy 301	3 . 2	Chemistry 206	3	2
Genetics 301	3 2	Veterinary Anatomy 306	3	2
Genetics Elective	6	Veterinary Anatomy 306 Animal Diseases Elective	6	
- Licetive		Liective		`
, 10	6 8		16	8
	SENIO	R YEAR		
Agricultural Education 401		Agricultural Education 402	3	2
Animal Husbandry 409	3 2	Teaching Vocational Agricult Animal Husbandry 416	ure 3	2
Animal Nutrition and Feeding English 401		Live Stock Management		-
Public Speaking		Elective		
Marketing and Finance 302		·	17	t
Elective	б			•
$\overline{1}$	7 4			

XIII.—COURSE IN INDUSTRIAL EDUCATION

FRESHMAN YEAR

First Term	Hours We		Hours Second Term We Th.	ek
Chemistry 101	3	3	Chemistry 102 3	3
Inorganic Drawing 101	0	2	Inorganic Drawing 108	2
Inorganic Drawing 101 Mechanical English 103			Mechanical English 104 3	0
Rhetoric and Composition Mathematics 101		0 .	Rhetoric and Composition	
Mathematics 101Algebra	3	. 0	Industrial Education 102 2 Theory and Principles of Voca-	0
Military Science	<u>I</u>	2	tional Education Mathematics 103	0
*Elective	6	_	Trigonometry	
	16	7	Military Science 1 *Elective 3	2
				_
	24.		15	7
-			RE YEAR	_
Drawing 201Mechanical	0	2	Drawing 202 0	2
Economics 203	3	0	Economics 204 3	0
Principles Industrial Education 203.	2	0	Principles Industrial Education 202 2	0
		2	Job Analysis Military Science 1 Physics 204 3	2
Military Science Physics 203	3	3	Physics 204 3	3
*Elective	6		General Rural Sociology 204 3 Introductory Rural Sociology	0
	15	7	*Elective 3	
	19	,	· —	_
	1	LINIOR	YEAR	7
History 305		0	History 308 3	
Citizenship		•	Industrial History of the	U
Industrial Education 301 - Methods and Management		0	United States Industrial Education 310 2	0
*Elective	12		Course Making Industrial Education 312 3	0
	17	0	Psychology Applied to Industry	•
•			Industrial Education 314 1 Observation and Criticism	2
•			*Elective9	
			18	
	S	ENIOR	YEAR	
Industrial Education 409 Organization and Manage	2	0	English 401 2	0
in Industrial Schools			Public Speaking Industrial Education 406 2	0
Industrial Education 411 Lesson Planning		0	Vocational Guidance **Industrial Education 416 0	6
**Industrial Education 415	50	6	Practice Teaching	U
Practice Teaching *Elective	11		*Elective12	
·	 15	<u></u>	16	6
	1)	U		

*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 experiences 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

FRESHMAN YEAR

Rural Education	First Term Animal Husbandry 107 General Animal Husbandry Biology 101 General Botany English 103 Rhetoric and Composition Military Science Rural Education 121 Elementary School Methods	2 2 3 1 3	Pr. 4 4 0 2 0	Second Term Agronomy 105 Crop Production Biology 102 General Botany English 104 Rhetoric and Composition Mathematics 101 Algebra Military Science Poultry Husbandry 201	2 3 3-	ek
Chemistry 101	algebra -	#	10	Poultry Production Rural Education 122 Elementary School Method		<u>.</u>
Chemistry 101		en.	DHO MOB	DE VILAD	'4	
Inorganic English 231 3	Chamistau 101				2	2
English Electrice	Inorganic)	. 3	Inorganic)
Entomology 201	English Literature	3	. 0	Dairy Husbandry 202	2	2
Rural School Methods 3 Elective 3	Entomology 201	 2.	2	English 232	3	0
Rural School Methods 3 Elective 3	Military Science	1	. 2	Military Science	1	2
Secondary School Methods Rural Sociology Rural Education 322 3 0 Secondary School Administration Rural Sociology Rural Education 322 3 0 Secondary School Administration Elective 6 Rural Education 422 3 0 Rural Education 425 Ru	Rural Education 221	3	0	Rural Education 222	3	0
Secondary School Methods Rural Sociology 407 2 4 Economics 403 3 0	Elective	3				
Biology 207,	•	15	7		15	7
Biology 207		• ,	. •	<u></u>		•
Rural Education 321 3 0 English 303 2 0	D: 1 00F				_	0
Secondary School Administration	Zoology			Principles	3	U
Secondary School Administration	Rural Education 321	3	0	English 303	2	0
Secondary School Administration	Rural Sociology 407	2	2	History 305	3	0
15 6 Elective	Rural Sociology Flective	. 8		Citizenship Rural Education 322	3	0
SENIOR YEAR SENIOR YEAR English 401				Secondary School Administration	ration	
English 401 2 0 Rural Education 422 3 0 Public Speaking History of Education Rural Education 425 1 4 Elective 15 Practice Teaching 13 0		15	6	Elective	o	
English 401 2 0 Rural Education 422 3 0 Public Speaking Rural Education 425 1 4 Elective 15 Practice Teaching Elective 13 0				e	17	0
Elective1318 0	e .		SENIOR	YEAR		
Elective1318 0	English 401	2	. 0	Rural Education 422	3	0
Elective1318 0	Public Speaking Rural Education 425	1	4	History of Education	15	
	Practice Teaching				_	_
$\frac{16}{4}$	Elective	13		,	18	0
		16	4		-	

XXII.—COURSE IN INDUSTRIAL ARTS

FRESHMAN YEAR

LV	ESHM	AN FEAR	
First Term We	eek	Hours Second Term Wee Th.	
Architecture 1010	3	Architecture 1020	3
Architectural Drawing Drawing 103	0	Architectural Drawing Drawing 104 2	2.
Descriptive Geometry Drawing 1010	2	Descriptive Geometry Drawing 1080	2
Drawing 101 0 Mechanical English 103 3	0	Drawing 108 0 Mechanical English 104 3	0
Rhetoric and Composition Mathematics 1013	0	Rhetoric and Composition Mathematics 1043	0
Algebra Mathematics 1033	0	Analytics Mechanical Engineering 104 0	
Trigonometry	_	Foreing	,
Mechanical Engineering 105 0 Bench Woodwork	6	Mechanical Engineering 106 0 Cabinet Making & Mill Work	6
Military Sciencee1	2	Military Science	<u>3</u> .
13	13	9	18
· so	РНОМ	ORE YEAR	
Agricultural Engineering 203_2	. 2	Agricultural Engineering 402 2	4
Gas Engines Architecture 201a 0	8	Automobiles and Trucks Architecture 202a0	4
Design Electrical Engineering 201 4	4	Design Electrical Engineering 204 0 Electric Wiring & Repair	6
Electricity & Magnetism English 2032	0	Electric Wiring & Repair English 2042	0
Composition and Literature Industrial Education 102 2	0	Composition and Literature Industrial Education 202 2	0
Theory and Principles Mechanical Engineering 201 0	3	Job Analysis Industrial Education 312 3	0
Pattern Making & Foundry Work	-	Psychology Applied to Industry	2
Military Science1		Military Science1	_
11	19	10	16
•		ER WORK	
Architecture 300, V	/orki	ng Drawings, three weeks	
	JUNIO	R YEAR	
Agricultural Engineering 321 1	4	Agricultural Engineering 322 1	4
Farm Shop Industrial Education 301 2	0	Farm Shop Industrial Education 308 22	0
Methods of Teaching and Management		A Study of Modern Industries Industrial Education 310 2	0
Mechanical Engineering 207 2	2	Course Making Mechanical Engineering 310 0	3
Mechanical Engineering 309 0	3	Machine Shop Rural Education 322	0
Rural Education 321 3.	0	Secondary School Administration	U
Secondary School Methods Elective6		Elective6	_
· 1 4	-	141	5 7
14	9		

DEPARTMENT OF ACCOUNTING AND STATISTICS

Professor Leland, Assistant Professors Weinke, Hosking, Mr. Bentley.

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. Principles 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, instalment 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, acturial 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.

303. Statistical Method. (2-4).

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

Text: Principles and Methods of Statistics, Chaddock.

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.

(Required in XIV group 1).

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. Advanced treatment of measures of relationship; linear, non-linear, multiple linear, and multiple non-linear; application of correlation, simple and multiple, to time series, and the problem of estimation.

Text: Statistical Method, Mills.

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, con-

sumption 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: Business Cycles, Mitchell.

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

Assistant Professor Paine, Mr. Watson

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 to 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.

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).

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 valuaton; 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, 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 I group 2; XII).

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.

FOR GRADUATES

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

This course involves more extensive study of the problems considered in courses 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, F. R. Jones, Assistant 'Professor 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).

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. Terracing and Drainage. (2-4).

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. (1-4).

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, XXII; 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.

SENIOR YEAR

First Term	Hours We-	ek	Second Term	Hours Wee Th.	
Economics 403	3	0	English 401	2	0
Principles			Public Speaking		
Industrial Education 411	2	0	Industrial Education 406	2	0
Lesson Planning			Vocational Guidance		
Industrial Education 415	5 0	6	Industrial Education 416	0	6
Practice Teaching		•	Practice Teaching		-
*Elective	9		*Elective	12	
	-				_
	14	6		16	6
	17	U		10	U

^{*}At least 6 term hours of these electives must be taken in advanced shop work or drawing.

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	143	Horticulture	195
Agricultural Economics		Industrial Education	198
Agricultural Education		Landscape Art	202
Agricultural Engineering		Marketing and Finance	
Agronomy	149	Mathematics	
Animal Husbandry	152	Mechanical Engineering	206
Architecture		Military Science and Tactics	210
Biology	159	Modern Languages	216
Chemistry and Chemical		Municipal and Sanitary	
Engineering	164	Engineering	218
Civil Engineering	169	Physical Education	219
Dairy Husbandry	175	Physics	220
Drawing	177	Poultry Husbandry	223
Economics	178	Rural Education	225
Electrical Engineering	180	Rural Sociology	226
English		Textile Engineering	228
Entomology	186	Veterinary Anatomy	230
Farm and Ranch Management	189	Veterinary Medicine and Surger	y_ 231
Forestry		Veterinary Pathology	233
Genetics	190	Veterinary Physiology and	
Geology	191	Pharmacology	235
History	194	=-	

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. Sturgis.

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; com-

mercial 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 relation to plants; control of soil water; soil heat; soil air; absorptive properties of soil; 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, XIV, 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 1 group 4a).

413. 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.

(Required in I groups 4, 4a).

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).

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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. Commercal 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).

10. 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 Professor Mackey, Assistant Professors Gibbens, Knox.

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

Farm animals as a source of food, clothing, and labor; the place of live-stock 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 live stock; classifications 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, XXI).

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; adaptability; 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 valuing 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 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 precentage of animals.

Text: Farm Meats, Helser. (Not offered in 1928-29).

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 Husbandry 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; unsoundness; 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 course 406, 410, 412, 413.

Prerequisite: Animal Husbandry 409.

(Required in XII).

418. Wool and Mohair. (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, Percheon 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 investigation; sources of error. 505, 506. Advanced Live Stock Production. (3-2).

A continuation of courses 406, 410, 412, and 413. The course is caried 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 Mobair 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.

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 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 and Morrison. (Elective in C).

58. Live Stock Management. (2-2).

A modification of course 416.

Prerequisite: Animal Husbandry 55.

(Elective in C).

DEPARTMENT OF ARCHITECTURE

Professor Giesecke, Professors Geist, Langford, McLaughlin, Mr. Johnson, Mr. Krauel, Mr. Dexter.

101. 102. Architectural Drawing. (0-3).

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: American Vignola, Parts I and II.

(Required in IX, XX, XXII).

109, 110. Freehand Drawing. (0-2).

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; for course 202, Architecture 201 and 203.

(Required in IX group I).

201a, 202a. Design. (Elementary). (0-8, 0-4).

Similar to course 201, 202.

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

(Required in IX group 2; XXII).

203. Shades, Shadows and Perspective. (1-0).

A study of the principles of shades, shadows, and perspective and of their application to various architectural subjects.

Lectures; 'recitations; problems.

Prerequisite: Drawing 103.

(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: History of Architecture, Hamlin.

(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: Practical Mechanics, Leigh.

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: History of Architecture, Hamlin.

(Required in IX groups 1, 2).

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; acoustics.

Prerequisite: Mathematics 101, 102, 103, 104; Physics 203, 204. (Required in 1X groups 1, 2).

317. Building Construction. (2-3).

Design of wood and steel framing as used in building construction; beams; columns; struts; roof trusses; analytic and graphic method.

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: Design of Reinforced Concrete Structures, Urquhart and O'Rourke. 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 1X group 1).

406. Professional Practice. (2-0)

. A series of lectures on the law of contracts; professional practice; ethics; professional and inter-professional relationships.

(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, 2-16).

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: For course 411, Civil Engineering 330; for course 412, Civil Engineering 413.

(Required in IX group 2).

414. Modern Architecture. (1-0).

An analysis of modern buildings; historic influences; modern development; tendencies. Lectures; asignments, and reports.

(Required in IX groups 1, 2).

BIOLOGY

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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; rendering; color harmony and effects.

DEPARTMENT OF BIOLOGY

Professor Ball, Professor Pratt; Associate Professor English, Assistant Professors Gibbons, Freeman; Mr. Doak, Mr. Gore.

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 1).

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).

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 occurring in Texas are selected for study and the student is trained to investigate and indentify the cause of 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.

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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 Zoology, Reese.

Laboratory fee, \$1.00.

(Required in I, XI, 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.

BACTEROLOGY

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, XII, XXI).

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:

320. 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 group making the selection.

Prerequisite: Biology 103, 104, 309, 310.

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.

BIOLOGY 163

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.

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 air and soil, its normal requirements 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 Jensen, Waite, Assistant Professors Koenig, B. C. Jones, Harter, Bauer, Mr. Harrington, Mr. Snuggs, Mr. Middleton, Mr. Potts, Mr. Caldwell, Mr. Eads.

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 breifly 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, Newell.

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 properities 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 illustration 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 compounds discussed in the theory.

Prerequisite: Chemistry 101, 102.

Laboratory fee, \$2.50.

(Required in I, VI, XI, XII, XXI).

207. Quantitative Analysis. (2-3).

A considerable portion of the class-room time is devoted to chemical calculation involved in the practice.

The laboratory work consists of a number of carefully selected experiments in quantitative 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 of the course. The student here familiarize 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).

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, fertilizers, insecticides, and fungicides.

The laboratory work consists of the chemical analysis of feeds, fertilizers, 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, 8, 9, 11).

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.

(Not offered in 1928-29).

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 analysis 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 from 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 principle 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.

Prerequisite: Chemistry 101, 102.

(Required in III).

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. Gas and Oil Production. (3-6).

Application of chemistry and engineering to the production of gas, natural gasoline, petroleum, and cotton seed oil.

The laboratory work comprises the refining of petroleum and the production and refining of cotton seed oil.

Prerequisite: Chemistry 302.

Laboratory fee, \$4.00.

(Required in VIII).

411. Physical Chemistry. (3-4).

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.

Laboratory fee, \$2.00.

(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 the engineer.

Prerequisite: Chemistry 206 or 301, 302.

Laboratory fee, \$4.00.

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.

Text: Principles of Chemical Engineering, Walker, Lewis and McAdams.

Prerequisite: Chemical Engineering 409.

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, \$2.00.

(Required in VIII).

422. Animal and Vegetable Oils. (3-4).

Chemical examination of animal and vegetable oils with special reference to the detection of adulterants.

Text: Food Analysis, Woodman.

Prerequisite: Chemistry 302.

Laboratory fee, \$4.00.

(Elective in VIII).

DEPARTMENT OF CIVIL ENGINEERING

Professor Richey, Professors McNew, Munson, MacLean, Associate Professor Sandstedt, Mr. Wright, Mr. E. H. Morgan, Mr. McCosh.

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 Practie 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; frition; 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 measurements; 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: Prinicples 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, riveted 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. (3-0).

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 nozzles, orifices, weirs and meters; estimates for water supply and water power, theory and efficiency of water wheels, motors, turbines, rams and pumps.

Text: Hydraulics, King and Wisler. Prerequisite: Civil Engineering 204.

(Required in III, IV, XV; elective in V).

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

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).

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).

336. Hydraulics Laboratory. (0-2).

Calibration of nozlzes, orifices, water meters, weirs, pressure gauges; efficiency tests on impulse motors, hydraulic ram, and on one, two, and three-stage centrifugal pumps.

Prerequisite: Civil Engineering 311 or registration in that course.

(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 riveted plate girder.

Text: Theory of Structures, Spofford.

Prerequisite: Civil Engineering 305.

(Required in IV, IX group 2).

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, IX group 2).

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 rotaton 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 locations, 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 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).

413. Flements of Reinforced Concrete. (2-0).

Theory of stress distribution in plain and reinforced concrete beams; derivation of working formulas for rectangular reinforced beams and T-beams; stress determination and elementary design of beams; theory, investigation, and design of reinforced columns; beams with double reinforcement.

Text: Reinforced Concrete Design, Sutherland and Clifford.

Prerequisite: Civil Engineering 305.

(Required in IV, IX group 2).

414. Reinforced Concrete Design. (1-4).

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).

417, 418. Highway Materials. (2-3, 1-3).

Origin, production, specification, and tests of bituminous and non-bituminous materials and mixtures used in the constrution and maintenance of roads and pavements. Bituminous material 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 riveted truss bridge in accordance with a given set of specifications.

Text: Structural Engineer's Handbook, Ketchum.

Prerequisite: Civil Engineering 340, 342.

(Required in IV group 2).

434. Irrigation and Drainage. (3-0).

Determination of the quanity of water available; collection and storage works; design, location 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 Enginerieng 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 streets 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).

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, riveted 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 rail-way plate girder, a mill building bent, and a riveted 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.

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; operation costs; locomotive performance; speed-distance and time-distance curves; virtual profile; betterment surveys including grade revision, change of alignment, etc.

541, 542. Research. (2 to 6 credit hours).

Technical research; project subject to approval of head of department upon submission of outline of proposed investigation.

DEPARTMENT OF DAIRY HUSBANDRY

Professors Clutter, Darnell, Mr. Sinclair Baker

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).

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.

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).

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; type 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.

411. History of Dairying. (3-0).

The development of the industry, stressing influence of inventions; natural resources of leading dairy countries; types of organization; present status of industry.

Text: History of Dairying, Pirtle.

Prerequisite: Dairy Husbandry 202.

(Not offered in 1928-29).

FOR GRADUATES

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 nandling milk and dairy products on the farm.

Text: Farm Dairying, C. Larsen.

Laboratory fee, \$1.00.

(Required in C).

DRAWING 177

DEPARTMENT OF DRAWING

l'rofessor A. Mitchell, Mr. Davis, Mr. Baccus, Mr. Galbraith, Mr. Tomlinson.

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, IX, XX, XXII).

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, IX, 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).

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).

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DEPARTMENT OF ECONOMICS

Professor Clark, Professor Seaman, Mr. Vaughn, Mr. Adams.

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).

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: Banking Principles and Practice, Westerfield.

Prerequisite: Economics 204 or 403.

(Required in XIV group 4; XVIII).

315. Economics of Insurance. (3-0).

An introductory course dealing with the historical development and general eonomic aspects of the insurance business. Special attention is given to property and life insurance.

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 inheritance, surety, bankruptcy. Supplementary studies of Texas laws, and of court decisions.

Text: Business Law, Conynton and Bergh; Clark's Outlines.

(Required in VI, XIV, XVIII, XX).

318. 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.

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, 8, 9, 10, 11, 12; III, IV groups 1, 2, 3; V, VI, VIII, IX, groups 1, 2; XV, XVI, XX, XXI, XXII).

ECONOMICS 179

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, 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.

(Not offered in 1928-29).

412. Public Finance and Taxation. (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 agriculturist 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.

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. (4-0).

The purpose of this course is to study in detail, beginning with the Physicocrats, 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. Comparative 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, Professors M. C. Hughes, Yates, Associate Professors Markle, Fouraker, Rode, Assistant Professor 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 circuits, 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 varoius 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 electrical 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 familiarity 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.

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 Curent 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. (2-2, 1-2).

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 preliminary 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. Enginereing 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).

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 special 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 Alternating Current Machinery. (2-4).

A study of the complicated alternating current machines.

DEPARTMENT OF ENGLISH

Professor Summey, Professors W. H. Thomas, Cofer, Spriggs, Associate Professor Gunter, Assistant Professors S. S. Morgan, Spahr, Key, Mr. Stephenson, Mr. Abbott, Mr. Chapman, Mr. Plunkett,

Mr. Stone

103, 104. Rhetoric and Composition. (3-0).

Composition both oral and written, and readings from standards and current literature.

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.

(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 contury, with parallel readings and written reports; special attention given to the main currents of English thought as reflected in the literature.

Prerequisite: English 103, 104. (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).

(Elective in III, IV, V, VI, VIII, IX).

305. Contemporary Civilization. (2-0).

A composition and discussion course dealing with current thought and with various phases of contemporary civilization. Restricted to students whose record in English shows that they can take the course with profit.

Prerequisite: English 203, 204, or 231, 232.

(Elective as a substitute for English 303 in III, IV, V, VI, VIII, IX).

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.

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312. Shakespeare. (3-0).

A course in the life, environment, and major dramatic works of Shakespeare.

Prerequisite: English 231, 232, or 203, 204.

315. English Literature of the Seventcenth Century. (2-0).

A period course in English poetry and prose of the seventeenth century, with the omission of Shakespeare.

Prerequisite: English 231, 232, or 203, 204.

316. English Literature of the Eighteenth Century. (2-0).

A period course in Eighteenth Century English literature, with special attention to poetry, the essay, and the novel, and to the social and intellectual movements reflected in the literature.

Prerequisite: English 231, 232, or 203, 204

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, Thackery, 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, and 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).

405. Public Speaking and Debate. (3-0).

A restricted course in debate for students interested in forensic work and likely to be of use as members of debate teams.

Prerequisite: English 203, 204, or 231, 232.

(Elective in III, IV, V, VI, VIII, IX).

406. Advanced Debating. (3-0).

A restricted course in debate continuing course 405 described above. Prerequisite: English 405 or 401.

(Elective in III, IV, V, VI, VIII, IX).

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 Little, Asssitant Professor Johnston

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 in X, XIV).

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 insects 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 XII; 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).

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 apairy 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.

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.

401, 402. Advanced Economic Entomology. (2-4).

This course is arranged for students who desire a knowledge of insect life histories; the physical and chemical properties of insecticides and their effects on insects, and methods of entomological research.

Prerequisite: Entomology 201 or 301.

Laboratory fee, \$1.00.

(Required in I group 8).

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 sterilizing machinery and insecticides are 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 more common 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. 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; XIV groups 2, 3, 4).

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.

(Required in XIV group 3).

DEPARTMENT OF FORESTRY

Professor Siecke

No courses in forestry are available at present.

DEPARTMENT OF GENETICS

Professor Humbert, Associate Professor Horlacher, Assistant Professor Godbey

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 germ-plasm; 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, 8, 9, 11; XI, XII, XXI).

(To be repeated in the second term).

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 11).

(Not offered in 1928-29).

403. Eugenics. (2-0).

Variation and heredity applied to human beings.

Text: Being Well Born, Guyer.

Prerequisite: Genetics 301, Senior classification.

(To be repeated in the second term).

405. Survey of Eugenics. (3-0).

A general study of Engenics and eugenic reform, and certain genetic principles underlying human heredity. Lectures and outside reading.

GENETICS 191

Text: Heredity, Shull.

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 the 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 animals, guinea pigs, pigeons 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 familiar with the method 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. Killough.

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 paleon-

tology. 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.

(Not offered in 1928-29).

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.

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 selected.

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 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.

GEOLOGY 193

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).

An abbreviated study of crystallography, mineralogy, and general geology. Laboratory work on minerals and topographic and geologic maps.

Text: lectures, laboratory work and assigned readings.

Laboratory fee, \$1.50.

Open only to Seniors in Engineering.

(Required in VIII).

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: To be selected.

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.

408. Petroleum Geology. (3-3).

A course designed to acquaint the engineering student with certain funda-

mental features of petroleum accumulation and development.

Text: Lectures, laboratory work, and assigned readings.

Prerequisite: Geology 401.

Laboratory fee, \$2.00.

Open only to Seniors in Engineering.

410. Field Methods. (1-4).

A theoretical and practical study of the field methods employed in geological surveying.

Geologic profiles, stratigraphy, tracing of key horizons, mapping, use of compass and clinometer, plane table and alidade, barometer.

Field trips.

Text: Field Methods in Petroleum Geology, Cox, Dake and Muilenburg.

415 Lie & GuldERARTMENT OF HISTORY

Professor Gammon, Professor Sugareff, Mr. Tabor

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 the 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).

The nature, organization and functions of the Federal system; the rights, privileges and obligations of citizenship; immigration; naturalization; law enforcement; party poltics 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; III, IV, V, VI, VIII, XIII, XVI; 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.

HISTORY 195

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 XIII, 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).

421, 422. Contemporary United States. (3-0).

A course in American History since the Civil War. 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 seniors who have had one college course in history).

DEPARTMENT OF HORTICULTURE

Professor Kyle, Professor Adriance, Associate Professor Brison, Assistant Professor 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; elective in XIV).

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: Vegetable Gardening, Watts.

Practice in planning, planting and cultivating a small garden, equipping, fertilizing, spraying, harvesting, erection of hot-beds and cold frames.

Laboratory ree, 75 cents.

(Elective in I, C).

208. Ornamentals. (2-2).

A study of those indigenous and exotic trees, shrubs and vines of land-

scape 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 to climate, soil, equipment and storage, as affecting production and marketing in Texas and other states.

Text: Vegetable Crops, Thompson.

Practice: The production, harvesting and marketing 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 climatic conditions.

Text: To be assigned. Lectures.

Practice: The growing, transplanting and care of the more common annuals and perennials.

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 317, 318.

(Required in I group 9).

420. Experimental Horticulture. (1-4).

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 assignments.

Laboratory fee, \$2.00, second term.

(Required in I group 9; XX).

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.

Prerequisite: Horticulture 202, 303.

Laboratory fee, 75 cents.

(Required in 1 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 various 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 improvement of fruit by means of bud selection and breeding.

Prerequisite: Horticulture 317, 318, or equivalent work.

503, 504. Advanced Vegetable Gardening. (2-4).

A systematic study of the recent developments 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, 310, 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 is 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.

Prerequisite: Horticulture 21.

Laboratory fee, \$1.00.

(Elective in C).

DEPARTMENT OF INDUSTRIAL EDUCATION

Professor E. L. Williams, Assistant Professor Fern

Note.—The following courses in this department are offered in residence during the Summer Session only: 203, 320, 322, 414, 420, and 422.

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 traning 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 information 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 in XIII).

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).

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 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 workers' 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 initiative, reasoning and judgment in workers, psychology as an aid in reducing turnover.

(Required in XIII, XXII).

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 assignments and written reports are turned in and followed by discussion and conferences.

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).

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).

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).

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 in some of the departments of the College.

(Required in XIII, XXII).

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 Worker. (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. Basic 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 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 taking 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 College 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

- 102. Theory and Principles of Vocational Education.
- 202. Job Analysis.
- 203. Trade Analysis.
- 301. Methods of Teaching and Class Managemeni.
- 310. Course Making.
- 314. Observation and Criticism.
- 406. Vocational Guidance.
- 411. Lesson Planning and Practice Teaching

FOR PART-TIME GENERAL EDUCATION TEACHERS

- 301. Methods of Teaching and Class Management.
- 314. Observation and Criticism.
- 320. Aims and Objectives of Part-Time Schools.
- 322 Occupational Analysis and Organization of Instructional Material.
- 411. 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 knowledge 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 properties.

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: Horticulture 208, 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.

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, Assistant Professor Hunt

302. 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 1 groups 2, 3, 4, 4a, 5, 7, 9, 10, 11; XII, XIV group 4, XV).

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 land banks, intermediate credit banks, livestock loan companies, 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.

(Required in XIV group 4).

403. Cotton Marketing. (3-0).

Historical survey of the development of cotton marketing problems; the functions performed in marketing cotton; description of the local, central, and spinners' markets; the economic functions of cotton exchanges; future trading and speculation and their relation to the price of cotton; the evolution of cotton standardization; the origin and operation of cotton cooperative marketing associations.

Text: To be selected.

Prerequisite: Marketing and Finance 302.

(Required in I group 4a).

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.

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. Cotton Marketing Problems. (2-4).

The potential supply of cotton; potential demand for cotton; price making in local, central, and spinners' markets; relation of spot and futures prices; problems of estimating current demand and supply; the economics of cotton standardization; analysis of the Cotton Futures Act; cooperative versus individual sale of cotton.

Text: To be selected.

Prerequisite: Marketing and Finance 302.

DEPARTMENT OF MATHEMATICS

Professor Puryear, Professors R. F. Smith, J. W. Mitchell, Halperin, D. C. Jones, Associate Professor Martin, Assistant Professors Binney,

T. R. Nelson, Mr. Ayres, Mr. Blumberg, Mr. McKee, Mr. Ross, Mr. E. H. Thomas, Mr. McGee, Mr. Rees.

1. Algebra. (3-0).

A review of certain topics in elementary Algebra, carrying no College credit. Students whose work in Mathematics 101 up to November 1 is very unsatisfactory are required to take this course.

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, undertermined coefficients.

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, XVI, 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, parabola, 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, X1X).

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 of freshmen in the School of Engineering who do not present solid geometry for admission).

203, 204. Calculus. (5-0).

Differentiation, limits, infintesimals, 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 differential 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.

Text: The Mathematics of Investment, Hart.

Prerequisite: Mathematics 102.

FOR GRADUATES.

- 501. Advanced Calculus. (3-0).
- 502. Differential Equations. (3-0).
- 503. Theory of Equations. (3-0).
- 505. Vector Analysis. (3-0).

DEPARTMENT OF MECHANICAL ENGINEERNIG

Professor Flagg, Associate Professors Brewer, Crawford, Assistant Professors Fern, Faires, Mr. Downard, Mr. McCarter, Mr. Noster, Mr. Gill, Mr. Oncken, Mr. Fleming, Mr. Spencer, Mr. Fromherz, Mr. Mathews.

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 Enginerieng 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. (Required in III, V, XXII).

See note after course 214.

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.

Text: Elementary Steam Power Engineering, McNaughton.

Prerequisite: Mathematics 103. (Required in IV, VI, IX group 2).

207. Kinematics. (2-2)..

Without taking account of the strength of the structure, this course takes v 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, VI, XXII).

Repeated in the second term.

212. Engineering Mechanics. (3-0).

A study of pure mechanics as a foundation principle 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).

NOTE.—For Sophomore electrical engineering students, courses 201 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 201, the other with course 214. At the beginning of the second term the groups will each change to the other work.

303, 304. Machine Design. (0-3, 2-6).

A study of the theory and practice of machine design applied to machine elements and complete machines.

Text: Each student is required to have a Mark's Handbook, or an approved substitute, also a text to be selected.

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.

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. Engineering Mechanics. (3-0).

A continuation of course 212, including also dynamics of rotation, work, energy, friction, impact, etc.

(Required in III):

317, 318. Engineering Mechanics. (3-0, 2-0).

A modification of courses 212, 313, with the same prerequisites.

(Required in V).
319. 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 III, V, VIII).

Repeated in the second term.

320. Thermodynamics. (4-0).

A study of the efects 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, Emswiler.

Prerequisite: Mechanical Engineering 319.

(Required in III, VIII).

403, 404. Engineering Laboratory, (0-4).

Instruction and practice in testing gauges, indicators, fans, pumps, boilers, 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 and

operation 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 Orrak.

Prerequisite: Mechanical Engineering 320. '

(Required in III group 1).

419, 420. Industrial Engineering_(3-2).

A study of the industrial plant, and its management, including building and equipment; from the standpoint of health of workers as well as from the standpoint of suitability for the industrial processes involved.

The text is supplemented by lectures and collateral reading in this course. The practice includes reports, also detailed sketches and drawings covering problems with definitely chosen conditions.

Text: Industrial Management, Lansburgh.

Prerequisite: Senior classification. This course must be taken concurrently with 421, 422.

(Required in III group 2).

421, 422. Methods of Industrial Management. (2-0).

A study of the management and shop methods used in plants and factories whose output is largely the product of machine tools and similar equipment.

Text: Machine Shop Management. Van de Vinter.

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).

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 economic operation.

505, 506. Analytic Mechanics. (3-0).

An advanced course in statics and dynamics, with special emphasis on the latter.

507, 508. Experimental Engineering Research. (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 C. J. Nelson. Professors: Major Stevenson, Major Sloan, Major Bertram, Captain Guidera, First Lieutenant Mickelsen, Assistant Professors: Major Buchly, Captain Limbocker, Captain Aldridge, Captain Besse, Captain Montgomery, Captain Ware, First Lieutenant Powell.

INFANTRY UNIT

Professor: Edward H. Beitram, 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: Musketry; automatic rifle.

Practical: Command and leadership as corporals; musketry; automatic rifle.

Text: War Department Training Regulations.

Prerequisite: M. S. 101, 102.

202. (1-2).

- . (a) Theoretical: Scouting and patrolling; interior guard duty.
- (b) Practical: Command and leadership as corporals, scouting and patrolling.

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.

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; alministration; 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; description, care and use. The elements of Field Artillery gunnery; definitions; 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 reconnaisance.
- (b) Practical: Conduct and observation of fire, terrain board. Reconnaisance. Non-commissioned officer, with battery mounted, communications. 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 in 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, infantry 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

Profesosr: Charles L. Stevenson, Major, Cavalry.

Assistant Professor: Walter E. Buchly, Major, Cavalry.

Assistant Professor: Thomas F. Limbocker, Captain, Cavalry.

107. (1-2).

- (a) Theoretical: Military courtesy and discipline; cavalry drill regulations to include rifle platoon; elementary equitation; care of the horse.
- (b) Practical: Cavalry drill, dismounted and mounted 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.

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 corporals; 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: Communications; minor tactics; military history; military hygiene, sanitation and first aid.
- (b) Practical: Command and leadership as corporals; cavalry drill, mounted and dismounted to include the rifle troop; minor tactical problems.

Text: War Department Training Regulations.

Prerequisite: M. S. 207.

307. (3-2).

- (a) Theoretical: Command and leadership; cavalry drill; ceremonies and inspections; tactics; pistol.
 - (b) Practical: Command and leadership as sergeants; pistol practice. Text: War Department Training Regulations.

Prerequisite: M. S. 208.

308. (3-2).

- (a) Theoretical: Machine, gun; field engineering; selection and care of animals; equitation.
- (b) Practical: Command and leadership as sergeants; machine gun practice; saber practice.

Text: War Department Training Regulations.

Prerequisite: M. S. 307

407. (3-2).

- (a) Theoretical: Command and leadership; cavalry drill; ceremonies and inspections; equitation; military law; packing and transportation.
 - (b) Practical: Command and leadership as sergeants and officers. Text: War Department Training Regulations.

Prerequisite: M. S. 308.

408. (3-2).

- (a) Theoretical: Administration; tactics, military history; Officers' Reserve Corps Regulations.
- (b) Practical: Command and leadership as sergeants and officers; tactical exercises.

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; ceremonies, display of equipment and shelter tent pitching, buzzer practice.

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; 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 divison.
- (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

Profesor Campbell, Assistant Professor Woolket, Mr. Strehli.

In beginning courses a thorough drill in pronunciation, the essentials of grammar, and colloquial exercises is given through daily oral and written exercises. 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 in courses X and XIX; French is required throughout the junior and senior 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 of 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, Moratin, Martinez Sierri, Tamayo y Baus, Hartzenbusch, Benavente, Echegaray, and the brothers Quintero.

Second term, the novel: texts selected from the works of Alarcon, Romanos Ibanez, Valera, Galdos, Pereda, Caballero, Pardo Bazan, and Pio Baroja. 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 work of Cervantes, Quevedo, Guevera, and others. Special study of the picaresque 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, Metcalf 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 Enginereing 401 and 402.

(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; mosquito, fly and rodent control; sanitation of swimming pools and tourist camps; organization of health departments.

Text: Municipal and Rural Sanitation, Ehlers and Steel.

Prerequisite: Junior or senior classification.

(Required in IV group 3; elective in IV groups 1, 2).

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. Sanitary 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).

Principles and methods of sewage treatment; principles and methods of water purification; recent developments in the treatment of water and sewage; garbage and refuse collection and disposal; mosquito control; sanitation and public health.

DEPARTMENT OF PHYSICAL EDUCATION

Professor Bible, Professor Anderson, Associate Professors Penberthy, Bassett, Assistant Professor Higginbotham, Mr. Sprague, Mr. Countryman.

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) Freshman 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.
 - (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 "Freshman Teams" are organized from students who are in their first year in attendance at the college. These teams are suppervised by members of the Department. Freshman 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.

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.

305, 306. Public School Physical Training. (3-2).

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 special aptitude for work in Physical Education.

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 considerd.

Prerequisite: Junior standing, and special aptitude for athletic sports.

DEPARTMENT OF PHYSICS

Professor Silvey, Associate Professors Vezey, Sanders, Mr. McCorkle, Mr. E. G. Smith, Mr. Tarney.

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 gasses; and the phenomena of heat, light, sound, electricity and magnetism. Instruction is given by recitations, quizzes, problems and demonstrated lectures. Emphasis is laid on the fundamental principles rather than the mathematical processes involved.

The practice includes about thirty experiments in the subjects named above.

PHYSICS 221

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 determination. 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; X111, 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 applications 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, refractions, interference, diffraction, polarization, double refraction and theories of refraction and reflection.

The treatment is non-mathematical.

Text: Edser's Light for Students, or its equivalent.

Prerequisite: Physics 201, 202, 204 or 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, polarization, magnetism, magnetic induction and potental, current electricity, electrostatic induction and potential, electromotive forces, thermal effects; photoelectricity, electro-magnetic induction and electro-magnetic theory.

Texts: A Treatise on Light, Parts II and III, Houston, Electricity and Magnetism, Starling.

Prerequisite: Physics 201, 202, or 203, 204 and Mathematics 203, 204.

Laboratory fee, \$1.00 each term.

Not offered in 1928-29.

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, attracton 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. (3-0).

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 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 Thermodynamics and Thermal Radiation. (3-0).

An advanced course in thermodynamics and thermal radiation including Planck's thermodynamical basis of the quantum theory, the quantum theory of specific heats, Gibb's phase rule, Nernst's heat theorem, radiation and spectra. Also the subjects of chemical equilibrium and affinty, modern theories of osmotic pressure, properties of solutions and of voltaic cells.

Texts: Thermodynamics, Planck. Heat Radiation, Planck. Thermodynamics, Partington.

507, 508. Kinetic Theory; Electron Theory. (3-0).

A study of gas pressure, speed of gaseous molecules, Boyle's law, the law of Gay-Lussac, Graham's law, mean free path, coefficients of diffusion and viscosity, Maxwell's distribution law, Vander Waal's equation and Brownian movements.

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 and photo-electric action.

Texts: Kinetic Theory of Gases, Loeb. Ions, Electrons and Ionizing Radiations, Crowther.

Open to undegraduate students who have a grade of A or B in Physics 301, 302.

DEPARTMENT OF POULTRY HUSBANDRY

Professor Reid, Associate Profesor Irving.

201. Poultry Production. (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: Practical Poultry Management, Rice and Botsford.

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 XI, XII, XVI; elective in I, XIV, C).

Repeated in the second term.

301. Market Poultry. (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.

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 II).

302. Feeding and Brooding. (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 201.

The practice includes methods in balancing poultry rations, different methods of determining the value of feeds, identification 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).

304. Poultry Essentials. (2-2).

Starting with poultry; renewing the poultry flock; producing good market eggs; cost of producing hatching eggs; value of different feeds for the laying hen; principles of judging Rhode Island Reds, White Leghorns, and Barred Plymouth Rocks. Arrangement of a poultry farmstead; seasonal products of the poultry farm and their preparation for sale.

The practice consists of judging, feeding and culling poultry, also the working out of cost problems.

Text: Poultry Production, Lippincott.

401. Culling and Management. (2-2).

The underlying principles of poultry cuiling, 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, R.ce and Botsford.

Prerequisite: Poultry Husbandry 201.

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 II).

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 demonstrating plans.

Text: Productive Poultry Husbandry, Lewis.

Prerequisite: Poultry Husbandry 201.

The practice consists of problems in organizing, fiancing and establishing a commercial poultry business.

(Required in I group 11).

403. Judging. (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 201.

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 201.

422. Artificial Brooding. (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 201.

FOR GRADUATES.

501, 502. Research Problems. (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 disinfectants on the hatching of hens' eggs. Peculiar requirements of hatching eggs from different species of domestic fowl. Chickens, ducks, geese, turkeys 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, Professor Wilcox.

121, 122. Elementary School Methods. (3-0).

Methods of teaching the elementary school 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).

Not offered in 1928-29.

221. Rural School Methods. (3-0).

This course covers such problems as organization of the school, the daily program, general management, classifying and promoting pupils, keeping school records, and methods of teaching under rural school conditions.

(Required in XVI).

222. Rural School Administration. (3-0).

This course covers the administrative problems of rural and village schools, such as community leadership, evaluating the efficiency of teachers, financing the rural schools, cooperating with agencies for rural school improvement, consolidation, teachers institutes, etc.

(Required in XVI).

321. Secondary School Methods. (3-0).

This course is to meet the needs of students who expect to teach in city high schools. It covers methods of teaching high school subjects.

(Required in XVI, XXII).

322. Secondary School Administration. (3-0).

The aim of this course is to meet the needs of those teachers who expect

to administer school systems. It covers the administrative problems of the city superintendents.

(Required in XVI, XXII).

422. History of Education. (3-0).

The first term is 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).

423. The Junior High School. (3-0).

The organization and problems of the Junior High School.

425. Practice Teaching. (1-4).

(Required in XVI).

FOR GRADUATES.

501, 502. Problems in Rural Education. (4-0).

The work of 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 work of 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 tendencies, forms of organization, the curricula, management, selection of subject matter, and teaching children how to study.

504. Development 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.

204. Introductory Rural Sociology. (3-0).

An attempt is made to ecquaint the student with some of the underlying social problems of the country district. The human element in rural life and production; 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 influence 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 defined. 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 quantitative measurement of the data of sociology.

Text: Introduction to the Science of Sociology, Park and Burgess. (Required in I group 12).

404. Rural Organization. (3-0).

A study of community 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 tnd country relationships; rural health problems, recreation, rural leadership; community organizations and community planning. Attention is also given to the social problems connected with the home, the school, the church, the press and other social institutions.

Text: Rural Sociology, Gillette.

(Required in I group 12; XVI). 415. Agricultural Journalism. (2-2).

The principles of newspaper writing, especially the preparation of ma-

terial 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 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 preparation of articles for agricultural and country newspapers; news campaigns for special objectivies; 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.

511. History of Modern Social Thought. (4-0).

A study of the history, basis, and foundation of modern systems of thinking, as to authors who advance the theories, and as to the different theories themselves. Special emphasis is placed on the study of the mental attitudes of the farmers on social, political, and economic questions.

512. The Rural Community. (4-0).

A study of the rural community as to its geographic background, population, social institutions, and occupational attitudes. Different efforts at organizing the rural community as the county public welfare project, school and church community center projects, recreational and health projects, local, state and national agencies for rural community co-operation are studied.

DEPARTMENT OF TEXTILE ENGINEERING

Professor Bagley, Associate Professor Lichte, Assistant Professor Powers, Mr. C. L. 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, 50 cents each term.

(Required in C).

107, 108. Cotton Classing. (2-5).

Classes of buyers found in interior towns; problems and methods of interior buying; detail office methods, keeping account of purchases and sales of cotton. Practice, same as in 101, 102.

Text: Cotton Trade Procedure, Handrick & Dawd.

Laboratory fee, \$1.25 each term.

(Required in XVIII).

205. 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).

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).

218. Foreign Cotton Markets. (3-0).

An intensive study of the production and marketing of cotton in foreign countries.

(Required in XVIII).

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 necessary gearing to produce given numbers, speeds and production

Text: Cotton Mill Processes and Calculations, Tompkins. (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).

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).

401, 402. Yarn Manufacture. (3-2, 2-3).

A continuation and more exhaustive treatment of course 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).

413, 414. Cotton Classing. (1-2, 0-2).

Recitations and lectures 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).

415. 416. Fabric Design. (0-3, 1-3).

Dissecting samples of cloth for reproduction. The practice is a continuation of course 304.

Prerequisite: Textile Engineering 304.

(Required in VI).

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 of the Textile Industry. (3-0).

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; Textile Magazine Articles.

(Required in VI).

1

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 in I).

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 in I).

211. 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 in I).

213. Histology 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 in I).

302 Anatomy and Physiology of Domestic Animals (2-2)

This course is intended as an introduction to the study of veterinary mediicine. It treats the fundamental process 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).

FOR GRADUATES

511, 512. Veterinary Anatomy. (2-4).

DEPARTMENT OF VETERINARY MEDICINE AND SURGERY

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.

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 thirty-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 infections 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.

7461. 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, spaying, denistry, lameness, shoeing. Surgical exercises are required.

Laboratory fee, \$4.00.

(Required in XI, XXI).

FOR GRADUATES

501, 502. Special Surgery. (2-4).

This course deals with problems of surgical conditions, surgical pathology, surgical technique and sterility of animals.

Laboratory fee, \$2.00 each term.

DEPARTMENT OF VETERINARY PATHOLOGY

Associate Professor Wharton

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 inflammation, necrosis, gangrene, atrophy, hypertrophy, ulceration; the various degenerations, infiltrations, pigmentations and tumor formations are considered.

The practice consists of the microscopical study of these processes and 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.

Laboratory 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. 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, and current copy of B. A. I. Regulations Governing Meat Inspection.

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.

Text: Underhill's Parasites and Parasitosis of Domestic Animals.

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; animal inoculations; isolation of the organisms of disease from lesions.

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, including 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, in 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 medical 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 non-official preparations. Prescription filling, preparing, compounding, and dispensing pharma-

ceutic 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 standardization 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.

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 poisonius 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 physiology who wish to make a thorough study of modern experimental methods. The work is arranged to suit the needs of the student and in harmony with his 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. In comprises original research in studying the actions and uses of drugs.

Part V

RESEARCH, EXTENSION, SUMMER SESSION, AND OTHER ACTIVITIES



THE TEXAS 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 beeyards in 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 informatoin 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 practi-

For the fiscal year, the Station System receives \$70,000.00 Federal funds and \$351,364.70 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 loin diseases of cattle.

Chemistry:

The Division of Chemistry conducts researches relating to feeding stuffs, soils, fertilizers, irrigation waters, minerals, paints, and miscellaneous 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. The 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 the reconnoissance soil surveys of the entire State of Texas, by counties and areas. Soil surveying is merely the recording of the soil resources by type, on 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, 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 day's 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 combinations 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. Special cotton insect investigations are being conducted with peculiar emphasis on the cotton flea hopper and the boll weevil. The Chief of the Division is also State Entomologist, and as such has charge of the details of the enforcement of the law regulating foul-brood 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 sorghums 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 boll 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. Intensive cotton root rot investigations are being conducted at the Main Station and at a Central Cotton Root Rot Station which is being developed in the Blacklands, as well as at other points in the State where this disease is prevalent.

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 Collin Counties, 25 farms are being studied by inducing farmers to keep detailed farm records and accounts.

A comprehensive study of cotton staple is being made, contrasting the local cotton markets with the central cotton markets as to grade, staple, and price.

Botany:

The Division of Botany has as its purpose the 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 imortance 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. The Division of Rural Home Research with a thoroughly competent research woman as Chief, has been developed to look after all projects which have a bearing upon rural home problems.

Apicultural Research:

The Division of Apiculture has an especially equipped laboratory for the conduct of beekeeping investigations, located near San Antonio, in Bexar County. This laboratory is in charge of a competent Apiculturist who is conducting researches bearing directly on the successful continuation of the beekeeping industry of the State. A competent queen breeder is also located at this laboratory.

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 pro-

pagation 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 increases 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 needs 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 Agricultural 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 farmers 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.

THE ENGINEERING EXPERIMENT STATION

F. E. GIESECKE, Director.

The Texas Engineering Experiment Station was organized in 1914 for the purpose of affording a service to the industries of Texas similar to that afforded by the Agricultural Experiment Station to the agricultural interests; 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 Engineering Experiment Station staff consists of the entire teaching force of the following departments of the College:

Architecture.

Chemical Engineering.

Civil Engineering.

Electrical Engineering.

Geology.

Mechanical Engineering.

Municipal and Sanitary Enginereing.

· Physics.

Textile Engineering.

Thirty-four bulletins have been issued relating to various engineering or industrial problems. So long as the supply lasts, these bulletins will be distributed free, except in a few cases, in which a small charge will be made.

For copies of bulletins or for other information, address

Texas Engineering Experiment Station College Station, Texas.

THE EXTENSION SERVICE

O. B. MARTIN, 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 station 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 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 salary and expenses being borne by the College and the Department.

FARM DEMONSTRATION WORK

The farm demonstration work is conducted by district and county agents, and consists of aplying 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 imrovement; thus enabling the farm women to keep fully informed with reference to modern methods in dealing with household problems.

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 speciality and assist the county and home demonstration 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 corerspondence, and emergency calls.

RURAL ORGANIZATION

The Extension Service, through its specialists, district and county agents, is encouraging rural organizations 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 happy life 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, newspaper articles, and the Semi-Monthly Extension Service Farm News, as well as correspondence and mimeographed letters and circulars.

THE FOREST SERVICE

E. O. SIECKE, Director

The State Forestry activities were initiated by an act of the thirty-fourth 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 cooperating 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 appropriations 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 \$31,000.00 of Federal funds are available for carrying on the designated activities of the office. The personnel comprises five technical foresters and forty-seven 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 mantains head-quarters 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 a stimulation of proper forest management on the part of the farmers in the timbered portion of the State and the encouragement of tree planting 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 of un-numbered forestry circulars have been prepared and published. Requests for forestry publications should be addressed to Director, Texas Forest Service, College Station, Texas.

SUMMER SESSION

The regular Summer Session consists of two terms of six weeks each. The 1928 Summer Session opens Monday, June 11, and closes Saturday, September 1. 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 attending College during the regular sesion 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 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 issued 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.

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. The State work occupies all the time and attention of the staff, so that it is not possible to accept private work.

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 Experiment Station.

OFFICE OF STATE ENTOMOLOGIST

F. L. THOMAS, State Entomologist

By act of the Legislature the entomologist of the Texas Agricultural Experiment Station is ex-officio State Entomologist and is charged with enforcing the law of the State relative to diseases of bees. This law provides for the protection of honey bees against foulbrood and other contagious diseases and empowers the State Entomologist to issue 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 across county lines without proper authority, provide for quarantining apiaries where disease may be found, and make it unlawful to keep bees in hives or boxes not possessing movable frames.

Inspectors from this office examine about thirty thousand colonies a year in protecting the beekeeping industry of Texas.

In the biennial reports which are published as bulletins of the Texas Agricultural Experiment Station, much information is presented for the benefit of beekeepers as well as reports on the progress of the work.



Part VI

REGISTER OF STUDENTS

REGISTER

GRADUATE STUDENTS

Adam Edwin Heine CF	Hillshoro
Adam, Edwin Heine CE B. S., University of Texas, 1927. Adriance, Guy Webb Sci B. S., A and M. College of Texas, 1915. Baccus, Ira Bishop EE	C. II C. C.
Adriance, Guy WebbSciSci	_College Station
Baccus, Ira Bishop EE	College Station
B. S., A. and M. College of Texas, 1924. Bauer, George CME	
M. S., Iowa State College, 1927. Brison, Fred RobertSci	
Brison, Fred Robert Sci	_College Station
B. S., A. and M. College of Texas, 1921. Caldwell, Blake MarableChE	Muskogee, Okla
B. S., A. and M. College of Texas, 1927. Carlyle, Elmer Cardinal Agr B. S., A. and M. College of Texas, 1906 Crawford, Charles William ME	College Station
B. S., A. and M. College of Texas, 1906	Conege Station
Cushing, Emory ClaytonAgr	_Bryan
Cushing, Emory Clayton Agr B. S., A. and M. College of Texas, 1923. DeForest, Frank Ray AgEng B. S., Iowa State College, 1919. Doak, Clinton Childress Sci	Callana Station
B. S., Iowa State College, 1919.	Conege Station
Doak, Clinton ChildressSci	College Station
Durst Louis Hopkins CE	Crockett
B. S., A. and M. College of Texas, 1927. Eads, Richard Arthur Sci	
B. S., East Texas State Teachers College, 1923. Flagg, Ray	College Station
B. S., Purdue University, 1905.	D
M. S. A. and M. College of Texas, 1927.	Bryan
Galbraith, John WarrenCE	Belton
B. S., A. and M. College of Texas, 1925. Gatlin, Carl Earl AA	Miami
B. S., A. and M. College of Texas, 1926.	IVIIallii
B. S., A. and M. College of Texas, 1926. Gibbons, ErnestAgr	College Station
B. S., A. and M. College of Texas, 1914. Goodsell, Samuel Foster	Cameron
B. S., Iowa State College, 1927. Gross, Homer Roy RE B. A., Trinity University, 1925. Hembree, Joel Franklin AA M. S., A. and M. College of Texas, 1927. Hunt, Robert Lee AA	Cameron
Gross, Homer Roy RE	_Midlothian
Hembree Joel Franklin AA	Honey Grove
M. S., A. and M. College of Texas, 1927.	
Hunt, Robert Lee AA	Omaha
M. S., North Carolina State College, 1927. Irving, Donald Freeman AA	College Station
B. S., Rutgers University, 1922. Jamison, Frank S. AA AA	C-11- C:
M. S., Iowa State College, 1925.	College Station
Johnson, Paul RufusAgr	College Station
M. S., Iowa State College, 1925. Johnson, Paul Rufus B. S., A. and M. College of Texas, 1927. Karper, Robert Earl B. S., Kansas State Agricultural College, 1914.	College Station
B. S., Kansas State Agricultural College, 1914.	Conege Station
Kerns, Albert HEEEE	Bryan
B. S., Kansas State Agricultural College, 1926. Koenig, Louis AdolphRE	Brvan
B. S., University of Texas, 1917. Krausnick, WalterSci	C. II
B. S., University of Missouri, 1909.	College Station

Lacey, Bert ThomasonRE	Centerville
Lacey, Bert Thomason RE B. S., A. and M. College of Texas, 1928. Lichte, F. E. ME	Bryan
Lichte, F. E. ME. B. S., A. and M. College of Texas, 1906 McCorkle, Willard Homer Sci B. A., University of Iowa, 1924. McCosh, Stanley Armstrong CE B. S., Iowa State College, 1923. MacLean, Edwin Archibald Sci M. S., University of Illinois, 1925. Markle, Elias Ward EE S. Pensylvania State College, 1913.	Bryan
B. A., University of Iowa, 1924.	Bryan
B. S., Iowa State College, 1923.	College Station
M. S., University of Illinois, 1925.	Conege Station
Markle, Elias WardEE	Bryan
Mathews, Clarke Aubrey IE	Fort Worth
Mathews, Clarke Aubrey B. S., A. and M. College of Texas, 1928. Meador, Jack Ralph B. S., A. and M. College of Texas, 1927. Middleton, Errol Bathurst Sci	Dallas
Middleton, Errol Bathurst Sci	Bryan
Minma Maryin Hatchleice Agr	Marlin
B. S., A. and M. College of Texas, 1926. Mogford, Joseph Sayers Sci. M. S., A. and M. College of Texas, 1920. Morgan, Ellis Hamilton CE.	College Station
M. S., A. and M. College of Texas, 1920.	Li anatan
B. S., A. and M. College of Texas, 1923.	Houston
Morris, LaurenceAgrAgrAgr	Mesa, Arizona)
Obenshain, Samuel Shackley Agr	Buchanan, Va.
B. S., A. and M. College of Texas, 1923. Morris, Laurence Agr Agr B. S., University of Arizona, 1925. Obenshain, Samuel Shackley Agr B. S., Virginia Polytechnic Institute, 1927. Page, William AA. B. S., Clemson College, 1927. Palmer, Carl C. B. S., Purdue University, 1926. Rees Warren Alonzo Sci	Galivants Ferry, S. C.
Palmer, Carl C. EEE	Chambers, Ind.
B. S., Purdue University, 1926. Rees, Warren AlonzoSci	Center Point
M. A., University of Texas, 1926. Rode Norman Frederick FF	Bryan
B. S., Clemson College, 1919. Ross, James Wendell Sci B. A., University of Texas, 1923. Sandstedt, Carl Edward CE	Parin
B. A., University of Texas, 1923.	Bryan
B. A., Stamford University, 1910.	Bryan
Smith, Elmer Gillian Sci	College Station
Spencer, Ervin Russell ME	Bryan
B. A., Stamford University. 1910. Smith, Elmer Gillian Sci M. S., A. and M. College of Texas, 1925. Spencer, Ervin Russell ME B. S., State College of Washington, 1926. Stark, James Albert Agr.	Sealy
Tabor Sam Henry	Lockhart
B. S., A. and M. College of Texas, 1927. Tarney, Clyde HaroldSci	Pevan
Ph. M., University of Wisconsin, 1927.	Bryan
Ph. M., University of Wisconsin, 1927. Thomson, Jesse Clayton	College Station
I nurmond, Milam FrankAgrAgr	College Station
Todd, Charles JudsonAgr	Pecos
Tomlinson, George Edmund Sci	Gulfport, Miss.
M. A., University of Missisippi, 1927 Vezey, Edward EarlSci	College Station
B. S., A. and M. College of Texas, 1922. Todd, Charles Judson Agr B. S., A. and M. College of Texas, 1927. Tomlinson, George Edmund Sci M. A., University of Missisippi, 1927 Vezey, Edward Earl Sci M. S., A. and M. College of Texas, 1927. Walls. Ernest McCullough RF	Clyde
B. A., Abilene Christian College, 1926.	MaNaill M'
Walls, Ernest McCullough RE B. A., Abilene Christian College, 1926. Ward, Clarence Havens Agr B. S., Mississippi A. and M. College, 1925.	Wichelli, Wilss.

GRADUATE STUDENTS

Ward, Robert Page	EE	College Station
B. S., A. and M. Colle	ge of Texas, 1924.	_
Weinke, Oscar A		Bryan
Williams, Edward L.		College Station
B. S., University of Pit	tsburg, 1925.	
Woodrum, Mack		College Station
B. S., A. and M. College		D
Wright, Samuel Robert B. S., A. and M. College		Bryan
B. S., A. and M. College	e of Texas, 1922.	

UNDERGRADUATE STUDENTS

ABBREVIATIONS

AA-Agricultural Administration
Ag-Agriculture
AgEd—Agricultural Education
AgEng-Agricultural Engineering
Ar—Architecture
CE—Civil Engineering
ChE—Chemical Engineering
EEElectrical Engineering
IA—Industrial Arts

C—Two-year Course in Agriculture CM—Two-year Course in Cotton Marketing and Classing

Abbott, Thomas Flournoy, Jr., 1 CM..... Abernethy, Robert Grandison, Jr., 3 LA..... Palestine Abrams, Loyd Hamblen, 1 ME.....Ennis Abu Karam, Salim, 1 Ag..... Alexander, Hubert Allen, Sp ME
Breckenridge
Alexander, Thomas Mayben, 4 EE
Fort Worth
Alford, Richard Overton, 1 Ag. Henderson
Allen, Frank Collins, 1 Ar
DeRidder, Louisiana
Allen, John Leary, 1 Ag. El Campo
Allen, Robert Lee, 1 EE
Fort Worth
Allison, Atlas Marvin, 1 AA
Denton
Allison, Jack Edward, 2 AA
San Angelo
Almond, Joe, 2 LA
Del Rio Anderson, Clifford Ernest, 2 ME..... Anderson, Crittenden H. C., 1 Land... Dallas
Anderson, Donald Bertrand, 2 VM...

Sparta, Tennessee
Anderson, Ernest Monroe, Jr., 1 CM.... Anderson, Gran Victor, 4 ME Donna
Anderson, James Floyd, 2 AA Hillsboro
Anderson, Louis Wilmer, 2 AA Taylot

IE-Industrial Education LA-Liberal Arts Land—Landscape Art ME—Mechanical Engineering RE—Rural Education Sci—Science TE—Textile Engineering VM-Veterinary Medicine

-Senior

3—Junior 2—Sophomore

1-Freshman Sp-Special Student Anderson, Malcolm Marshall, 1 CE...Lawn Andrews, Hilma Felix, 2 Ag...... Bryan Andrews, Thomas Joseph, 1 LA...Houston Andrews, William McIntosh, Jr., 1 ME..... Abilene

Antunes, Amadeu Rodrigues, Sp Ag
Alegrete, Brazil
Armstrong, Robert Markle, 2 EE. Dallas
Armstrong, William Davis, 3 Ag. Wharton
Arnold, Gus W., 1 Ag. Troup
Arthur, Curtis Link, 2 Ar. Groveton
Ashley, Howard, 2 ME. San Antonio
Ashly, Joe Henry, 2 AA. Jasper
Askew, Wilburn Thomas, 1 ChE.
Fort Worth

Badgett, Walter Howard, 3 Ar..... Denison Baggett, Andy Lee, 1 AA.....Santa Anna Baggett, Henry Irvin, 3 Ag....Santa Anna Baggett, James Jackson, Jr., 1 AA...

..... Holland Bailey, Edward Jack, 2 AgEd. Shelbyville Bailey, Roy Alexander, 4 ME... Sherman Bain, Joe Bailey, 1 CE... Waco Baker, Ivey Maurice, 1 LA... Houston Baker, Landis Clyde, 1 ChE... Dale Baker, Paul Werner, 1 AA. Silsbee Baker, Roy William, 1 Ag... San Antonio Balderach, Clarence Thomas, 2 EE.

..... Galveston Ballanfant, John D'Orsey, 1 AA Mercedes

Ballard, James Anthony, Jr., 1 ME
Rallenger Joe Oscar 1 AA San Benito
Ballou, George Horatio, 1 CEDallas
Baltzell, Lawrence Alphaeus, 3 EE
La Belle, Missouri
Banks, Clayton Charles, 1 EEEustace
Banks, James Uliver, 2 EEAustin
Oklahoma City, Okla.
Barbeck, Chester Arthur, 1 ME
San Antonio
Ballou, George Horatio, 1 CE
Barbee, James Edward, 1 EE Bunkie, La.
Barber, Clifford Fountain, 2 CE
San Antonio
Barker, Elmer David, 1 AAHouston
Barker, Jesse Edward, 1 AgTekarkana
Barker, Robert Edward, 1 AgManchaca
Barnard William Clifford 2 EE Deport
Barnes, Clarence Whaley, J. LAMarshall
Barnes, Jack Arron, 2 ChEWaco
Barnett, Othal Vernon, 1 CEBeaumont
Barnett, Patrick Edward, Jr., 4 Ar
Rarnhill Noel William 1 EE Silshee
Barrett, William Burton, 1 ChE Dallas
Barricklow, William Robert, 1 Sci
San Antonio
Barry, James Alvin, 2 LAMercedes
Bartlett Fred William Ir 2 I.A Dellac
Bartlett, Zenas Wilson, Jr., 2 LADallas
Basinger, Charles Spurgeon, 2 EEDallas
Barbee, James Edward, 1 EE. Bunkie, La. Barber, Clifford Fountain, 2 CE
Bassett, Edwin Lee, 1 ChEWaco
Bateson Joseph Weldon 1 CE Cleburne
Batier, Jack, 4 AgCape Girardeau. Mo.
Bauer, George, 1 Ag El Campo
Bauer, Ralph Elliott, 3 MEHouston
Baughn, Milton Hubert, 2 SciDallas
Mayico D F Mayico
Bayless, Robert Earle, 3 AA Hillsboro
Beach, William Davis, 1 Ag
Beall, William Sheffield, 1 EETrinity
Beams George William 2 FF Honoford
Beard, Albert Paul. 2 ME. Port Arthur
Beard, Calvin Wayne, 3 EEKurten
Beard, Louis Archie, 1 MEBryan
Beaty, Denzil Herbert, 3 AAAustin
Bell Clifford Ellis 1 CF Corrigon
Bell, Clarence Ward, 2 LA Houston
Bell, John Sparks, 2 IASulphur Springs
Bell, Joe Warren, 2 MESulphur Springs
Bates, Roy Phillip, 4 EE. Dallas Bateson, Joseph Weldon, 1 CE. Cleburne Batjer, Jack, 4 Ag. Cape Girardeau, Mo. Bauer, George, 1 Ag. El Campo Bauer, Ralph Elliott, 3 ME. Houston Baughn, Milton Hubert, 2 Sci. Dallas Baumann, Ted Phillip, 2 ME. Baumann, Ted Phillip, 2 ME. Houston Bayless, Robert Earle, 3 AA. Hillsboro Beach, William Davis, 1 Ag. College Station Beand, William Sheffield, 1 EE. Trinity Beam, George Steever, 1 CE. Sherman Beams, George Steever, 1 CE. Sherman Beams, George William, 3 EE. Hereford Beard, Albert Paul, 2 ME. Port Arthur Beard, Calvin Wayne, 3 EE. Kurten Beard, Louis Archie, 1 ME. Bryan Beaty, Denzil Herbert, 3 AA. Austin Behse, Charles Henry, 1 ChE. Harlingen Bell, Clarence Ward, 2 LA. Houston Bell, John Sparks, 2 1A. Sulphur Springs Bell, Joe Warren, 2 ME. Sulphur Springs Bell, Roy Chester, 1 ME. Bellville Bell, Stanton Forrest, 3 LA. Asherton Bell, Therman Milton, 1 AA. San Juan Bellah, William Newton, 3 ME. Bowie Benham, Howard Raymond, 1 EE. Crowell
Bell Therman Milton 1 AA Com
Bellah, William Newton 3 ME Bowie
Benham, Howard Raymond, 1 EE Crowell
Bennett, Glenn Gordon, 3 MESour Lake
Bell, Therman Milton, 1 AASan Juan Bellah, William Newton, 3 MEBowie Benham, Howard Raymond, 1 EECrowell Bennett, Glenn Gordon, 3 MESour Lake Bennett, George Palmer, 1 EEDallas Bentley, Wesley Dent, 1 CEBryan Benton, Marion Bythel, 4 AgSlaton Berger, Alton, 1 CETemple Bergman, Ewald John, 1 AA
Bentley, Wesley Dent, 1 CEBryan
Berger Alton 1 CE
Bergman, Ewald John, 1 AA

Bergstrom, Charles Richard, Jr., 4 ChE Bergstrom, Howard Raymond, 1 ME..... Bergstrom, John August Earl, 3 AA...... Blount, Robert Henry, 1 AA. Mart Blount, Robert John, 1 CM. Gainesville Blum, Howard Fred, 2 EE. San Antonio Blum, Howard Fred, 2 EE. San Antonio Bock, Abe, 4 Ar. Dallas Bock, George, 4 Ar. Dallas Bock, George, 4 Ar. Dallas Boehm, Eston Lewis, 2 ME. Genoa Boethel, Roy Henry, 2 Ag. Hallettsville Bogle, Robert Gerald, 2 ME. El Paso Bohuslav, Edward Joe, 1 EE. Moulton Bolton, Hugo Frank, 1 Ar. Eagle Lake Bomar, Edward Bruce, 1 CM. Jefferson Boog-Scott, John Elliot, Jr., 1 Ag. Fort Worth Booth. James Edwin, 2 EE. Dallas Boog-Scott, John Elliot, Jr., 1 Ag

Booth, James Edwin, 2 EE Dallas
Boothe, Ray Henry, 1 Ar Sweetwater
Booty, Emory Few, 1 EE Dallas
Bordages, Elliott Isadore, 1 AA Beaumont
Bortle, Frank Edward, 1 EE Longview
Bortle, Frank Edward, 1 EE Longview
Bostick, Walter Leon, 3 ME Beaumont
Boswell, Arthur Dale, 2 ChE Fort Worth
Boswell, Howard Bartlette, 4 AgEd
De Leon

De Leon Bowers, Albert Verne, 4 EEVernon

Bowman, Clyde Roland, 1 REBenchley	Brown, Jesse Thomas, 1 ArLockhart
Box, George Pierce, 4 LACuero	Brown, Joe Taylor, 4 CEEl Paso
Box, George Pierce, 4 LACuero Box, Joseph Elton, 1 CEBrashear	Brown, Kenneth Lyons, 1 CMRunge
Boyce, James Cecil, 4 CEDallas	Brown, Lightfoot Houston, 1 Sci
Boyce, James Cecil, 4 CEDallas Boyd, James S., Jr., 1 Ar	San Antonio
Boyd, Robert Earl, 2 EENeedville	Brown, Marshall S. Dorsey, 2 AA
Boyd, Robert Earl, 2 EENeedville	Kaufman
Boyd, Richard Sterling, 1 EE	Brown, Orval Allen, 1 ChELockhart Brown, Paul Armstrong, 4 CESomerville
San Antonio	Brown, Paul Armstrong, 4 CESomerville
Boyett, William C., 1 LACollege Station	Brown, Raymond Kenneth, 2 Ar
Boykin, Robert Stafford, Jr., 3 EE	San Antonio
Boykin, Starley Napoleon, 3 ME.	Brown, Sidney Overton, 1 SciColeman
Boykin, Starley Napoleon, a ME	Browning, Jack Thomas, 1 EEStamford Browning, Thomas Carl, 1 CMMineola
	Bruce, Graham, 1 LAOrange
Poyt Cool Konnoth 2 Ag Cheek	Brumleu, Edward Carl, 1 AAHouston
Bradford Raymond Moore 4 Ar	Reumleu Ernost Joseph 1 EE Houston
Boynton, Sidney Moses, 3 IE Lufkin Boyt, Cecil Kenneth, 2 Ag Cheek Bradford, Raymond Moore, 4 Ar Fort Worth	Brummett, James Robert, 2 LADallas Bryan, Herbert Harris, 4 AgRobstown Bryant, Allen Cullen, 1 ArMexia Bryant, Alton Watson, 2 ArSweetwater
Bradley, Elbert J., Jr., 3 ME, Fort Worth	Bryan Herbert Harris, 4 Ag. Robstown
Bradley, Elbert J., Jr., 3 MEFort Worth Bradley, Raymond Jackson, 1 AgElectra	Bryant, Allen Cullen, 1 ArMexia
Bradshaw, Price, 2 ChEMcGregor	Bryant, Alton Watson, 2 Ar Sweetwater
Brady, Edward Harrison, 2 EE Oklahoma City, Oklahoma	Bryant, Garlen Randolph, 1 CMTemple
Oklahoma City, Oklahoma	Buchanan, John Terrell, 2 LASaratoga
Bragdon, Kerlin Joseph, 1 LADallas	Buchanan, Robert James, 2 AgKurten
Bragdon, Kerlin Joseph, 1 LADallas Brammer, Jesse Lee, Jr., 1 LAHouston Branum, Kermit Estous, 3 Ag Ed	Bryant, Garlen Randolph, 1 CMTemple Buchanan, John Terrell, 2 LASaratoga Buchanan, Robert James, 2 AgKurten Buchanan, Samuel Bernard, 1 LADel Rio
Branum, Kermit Estous, 3 Ag Ed	Buchanan, Samuel Rice, Jr., 2 Sci
Hornersville, Missouri	Saratoga
Brasner, Ray Vernon, 1 SciMission	Buchel, Carl Anthony, 2 CECuero Buck, Cleo Eugene, 1 SciBeaumont Buck, Richard Allan, 1 LABeaumont
Bratton, David Jonathon, I Arriouston	Buck, Cleo Eugene, 1 Sci
Prauric Fluor Paul 2 AA Hallettaville	Dueller Propeis Augustine 4 Ag Pefugie
Rray Austin Coleman 2 AA Dellas	Buckley, Francis Augustine, 4 AgRefugio Buckman, Thomas Robert, 1 CE
Brasher, Ray Vernon, 1 Sci	Fort Worth
Breazeale, Lawrence Callier, 2 Ag	Buescher, Vastine August, 3 AA.
Crockett	Smithville
Breedlove, Iverson Delansen, Jr., 1 EE Houston	Buford, Fred Seymour, 1 Ar
Houston	Bugh, Ernest Bennie, 1 AgAldine
Bret, Peter Emile, 4 EEHitchcock	Buie, Joseph Edgar, C 1Wills Point
Brewer, Garland Oakley, 1 AgMason	Bullington, Paul Trapier, 1 CMHouston
Bret, Peter Emile, 4 EE. Hitchcock Brewer, Garland Oakley, 1 Ag. Mason Brewer, Lawrence Joseph, 2 ChE. Houston Brian William Thomas 12 2 Ab.	Bullock, Robert L., Jr., 1 EETaylor
Ditan, William Indinas, Jr., o MA	Buines, Carlos C., 1 CE
Bridges, Orville Dial, 2 MESan Antonio	Runn Henry Dog 1 Av I aredo
Briggs, Orvine Dial, 2 MESan Antonio	Bunn, Henry Dee, 1 ArLaredo Bunton, Sam Emmit, Jr., 3 AgValentine
Briggs, Preston Pengra, 3 ChEEastland Briggs, Wallace Eugene, 2 TELampasas Brigman, Myron Weldon, 1 EEMaypearl	Burchers, Louis, 1 ME Yoakum
Brigman, Myron Weldon, 1 EE. Maypearl	Burchers, Louis, 1 ME
Brinkoeter, Hilbert Clayton, 3 AA	Hale Center
Brite, Weldon Lee, 1 Ag. Oklaunion Broad, Bertram Carl, 2 ME. Brady	Burgess, John William, 3 ArFort Worth Burgin, Claud Joseph, 1 AgEdHondo Burkey, Fred Morrisson, 1 VMHouston
Brite, Weldon Lee, 1 AgOklaunion	Burgin, Claud Joseph, 1 AgEdHondo
Broad, Bertram Carl, 2 MEBrady	Burkey, Fred Morrisson, 1 VMHouston
Brock, Gayle Lee, & Chr	Burks, Darnall, 4 CESan Antonio Burks, Jack, 2 MESan Antonio
Sandsprings, Oklahoma	Burks, Jack, 2 MESan Antonio
Brock, Kirk Patrick, 4 MELivingston Brock, Norman Howard, 2 EE	Burney, J. W., Jr., 2 CE Evant
San Antonio	Burnitt, Richard White, 2 AACalvert Burns, Louis Thomas, Jr., 1 AgYoakum Burns, Weldon Bailey, 1 LACatorina Burrage, James Wilson, 2 MEDallas
Broesche Edwin 2 CM Rurton	Burns Weldon Railey 1 LA Catorina
Broesche, Edwin, 2 CM, Burton Broesche, Joseph Hoffman, 4 EE Burton	Burrage, James Wilson, 2 ME Dallas
Broiles, Francis Alford, 1 AAFort Worth	Burroughs, Charm Maurice, 1 Sci
Broiles, Hiram, Sp AgFort Worth	Fort Worth
	Burroughs, Samuel, 1 SciBuffalo
Brooks, Jack Manual, 2 AASan Antonio	Busby, Ernest Monroe, 3 CEWaco
Brooks, William Smith, 1 LAWharton	Busby, Harold Everett, 1 ChEHouston
Brooks, Jack Manual, 2 AASan Antonio Brooks, William Smith, 1 LAWharton Brothers, Robert W., 1 AAShamrock Brown, Bernard Pierce, 4 ChEBurleson Brown, Cleveland Hardy, 1 EE,Seymour Brown, Clifford L., Jr., 2 SciCorsicana Brown, Fred Ross, 1 EE	Burroughs, Samuel, 1 Sci Buffalo Busby, Ernest Monroe, 3 CE. Waco Busby, Harold Everett, 1 ChE. Houston Busby, Richard Oliver, 2 EE. Houston
Brown, Dernard Pierce, 4 ChEBurleson	Bushong, George Edward, 1 IA Granevine
Brown, Clifford I. In 9 Cai Can	Butler Kenneth House 1 ME
Brown Fred Rose 1 EE	Butler, George Edward, 1 SciDallas Butler, Kenneth Hervy, 1 MEDallas Butler, William Jonathan III, 1 CE
Brown, Griggs Weldon 1 AA Posses	Transam vonathan III, I UE
Brown, Griggs Weldon, 1 AAPearsall Brown, Horace Kirtland, 2 EEHouston	Sharman
	Byars, Russel Henry, 3 LA
Brown, Jack Eddie, Jr., 2 EE Bryan	Byars, Russel Henry, 3 LA
Brown, Jack Eddie, Jr., 2 EE Bryan	Byars, Russel Henry, 3 LA
Brown, Jack Eddie, Jr., 2 EEBryan Brown, Joe Elmer, 1 CE	Byars, Russel Henry, 3 LA College Station

Care Thomas Charles 1 AA . Pearsall	
Cage, Inomas Charles, I AA Carsan	Cl 11 T. b
Cage, Thomas Charles, 1 AA	Chandler, John Chandler, Olen E
Caldwell, Richard Hanner, 2 ChE	Chandler, Olen H
Muslance Oklahama	Chanowsky, Sam, Chapin, Alfred V
Calk, William Carlyle, 1 SciKyle	Chanowsky, Sam,
Calk, William Carlyle, 1 SciKyle	Chapin, Alfred V
Callaghan George Franklin 2 AA	
Callaghan, John Bell, 3 AA Houston Callicoatte, Conrad Stanley, 1 CE Jayton Calrow, Richard Noel, 1 CE Boerne Cammack, David Richard, 1 EE	Chapin, Edwin I
Houston	Chapin, Edwin L
Callaghan John Rell 3 AA Houston	
Calling and the second	Chapman, Cliffor
Callicoatte, Conrad Stanley, I ChJayton	Chapman, Chiller
Calrow, Richard Noel, 1 CEBoerne	Chase, Arthur Me
Commonly David Dishard 1 FF	Cheaney, Dennis
Cammack, David Kichard, I EE	Cheaney, Dennis
Beaumont	***************************************
Cammack Thomas Infferent 1 FE	Childers Acia Ri
Cammack, Thomas Jefferson, 1 EE	Clinders, Hote D
Beaumont	Childers, Homer
Camp. Willie Hoyt. 1 Ag Lamesa	Childers, Acie Bi Childers, Homer V Chimene, Irvin E
Comphell Charles Venes 4 AA Temposes	Chromools Johnn
Campbell, Charles vance, 4 AALampasas	Chromeak, John
Camp, Willie Hoyt, 1 AgLamesa Campbell, Charles Vance, 4 AALampasas Campbell, Henry Villard, Jr., 4 AA	Chromcak, Johnn Clampitte, Joseph
Campbell, Itenry Villard, Jr., 4 AA. Lampasas Campbell, Lucien Ben, 1 EE. Houston Campbell, Robert Hill, 1 Ag. Hillsboro Campbell, Sam McInnis, 2 Ag. Owens Campbell, Tom Melvin, 1 ME. Owens Cannon, James Barnett, 1 Sci. Thornton Cannon, Timothy. 1 ME. Dallas	Clanton, Ralph F. Clardy, Carl Den Clark, Joseph Ba
C. I II T. D. 1 DE II	Clanton, temph 1
Campbell, Lucien Ben, I EEHouston	Clardy, Carl Den
Campbell, Robert Hill, 1 Ag., Hillsboro	Clark, Joseph Ba
Comphell Com Malnnia 2 Ag Owens	Clark John Hon
Campbell, Sam McInnis, 2 AgOwens	Clark, John Hand
Campbell, Tom Melvin, 1 MEOwens	Clark, Jack Plac
Cannon James Rarnett 1 Sci Thornton	Clark, Jack Plac Clark, Leonard Clark, Marcus H Clark, Robert Fr
Cannon, sames Darnett, 1 Del1hornton	Clark, Leonard
Cannon, Timothy, I MEDallas	Clark, Marcus H
Cannon, William Alston, 1 Ag Texarkana	Clark, Robert Fro
Controll To Vanl 1 TE Delical	Clark, Itoocro I I
Cantrell, Leo Karl, I EEPaducan	Clarke, Arthur C Clasby, Matthew Clausell, Carlos
Cape, Enos, Sp CESan Marcos	Clasby, Matthew
Card Loland Pouthware 9 LA Houston	Clausell Carles
Card, Leiand Poythress, 2 LA110080011	Clausell, Carlos A
Carder, Charles Loomis, 1 CE	
Cordell Oklahoma	Clay James Jack
C	Clay, builds buck
Cardwell, George Lalayette, 1 ME	Clay, James Jack Clay, Marion Ale
Lockhart	
Corbort Igono Whitfield 2 FF Croonville	Cleaver, Maurice,
Carnard, Isaac Whitneid, S EEGreenvine	Cleaver, Maurice,
Carl, Edward Miller, Jr., 2 EE	Clement, Fred M
San Antonio	***************************************
C1:1 (11- II CLE II	C1 : TT 1.7
Carlisle, Charles Harry, I CheHouston	Clewis, Howard I
Carlisle, Marvin Leroy, 2 AA San Antonio	,
Carlisle, Marvin Leroy, 2 AA. San Antonio	Clib D-bt 1
Carlisle, Marvin Leroy, 2 AASan Antonio Carlson, Ivan Morse, 1 EEDallas	Cliburn, Robert
Carlisle, Marvin Leroy, 2 AASan Antonio Carlson, Ivan Morse, 1 EE	Cliburn, Robert I
Carlisle, Marvin Leroy, 2 AASan Antonio Carlson, Ivan Morse, 1 EE	Cliburn, Robert I Cloud, Raymond
Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE. Dallas Carmichael, William Reginald, 4 LA Denton	Cliburn, Robert I Cloud, Raymond Clute, William B
Cannon, James Barnett, 1 Sci Thornton Cannon, Timothy, 1 ME Dallas Cannon, William Alston, 1 Ag Texarkana Cantrell, Leo Karl, 1 EE San Marcos Card, Leland Poythress, 2 LA Houston Carder, Charles Loomis, 1 CE Cordell, Oklahoma Cardwell, George Lafayette, 1 ME Lockhart Carhart, Isaac Whitfield, 3 EE Greenville Carl, Edward Miller, Jr., 2 EE San Antonio Carlisle, Charles Harry, 1 ChE Houston Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE Dallas Carmichael, William Reginald, 4 LA Denton Carnahan, William Gordon, 1 LA Center	Cliburn, Robert I Cloud, Raymond Clute, William B
Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE. Dallas Carmichael, William Reginald, 4 LA Denton Carnahan, William Gordon, 1 LA. Center Carothers, Henry Porter, 1 CE. Pyote Carpenter, Fred Ray, 4 Ar. Marshall Carpenter, Rodolph David, 8 LA Texarkana	Cliburn, Robert I Cloud, Raymond Clute, William B
Carlisle, Marvin Leroy, 2 AA.San Antonio Carlson, Ivan Morse, 1 EE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K Cochran, Roy, 3 Cochran, Virgil E Cocke, Richard P Cocks, Tilford W
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil E Cocke, Richard P Cocks, Tilford W Codrington, Char
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil E Cocke, Richard P Cocks, Tilford W Codrington, Char
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil E Cocke, Richard P Cocks, Tilford W Codrington, Char
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil E Cocke, Richard P Cocks, Tilford W Codrington, Char
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil E Cocke, Richard P Cocks, Tilford W Codrington, Char
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Virgil E Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Virgil E Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char
Carothers, Henry Porter, 1 CE	Cliburn, Robert 1 Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K Cochran, Roy, 3 Cochran, Roy, 3 Cochran, Virgil E Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W
Carothers, Henry Porter, 1 CE	Cliburn, Robert 1 Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K Cochran, Virgil E Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Cofker, Garland
Carothers, Henry Porter, 1 CE	Cliburn, Robert 1 Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K Cochran, Virgil E Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Cofker, Garland
Carothers, Henry Porter, 1 CE	Cliburn, Robert 1 Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K Cochran, Virgil E Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Cofker, Garland
Carter, Henry Porter, 1 CE Pyote Carpenter, Fred Ray, 4 Ar Marshall Carpenter, Rodolph David, 3 LA Texarkana Carr, Joe Matt, 2 CE Stephenville Carr, William Walton, 1 AA Terrell Carruth, Crawford Roscoe, 1 CE Port Arthur Carson, Kermit Langford, 2 ME Waco Carter, Arthur Edwin, 2 AA Luling Carter, Arthur Paul, 4 EE Bryan Carter, James Michelle, 1 ChE Waco Carter, Kenneth Forest, 1 AgEng Round Top Carter, William Henry, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee
Carter, Henry Porter, 1 CE Pyote Carpenter, Fred Ray, 4 Ar Marshall Carpenter, Rodolph David, 3 LA Texarkana Carr, Joe Matt, 2 CE Stephenville Carr, William Walton, 1 AA Terrell Carruth, Crawford Roscoe, 1 CE Port Arthur Carson, Kermit Langford, 2 ME Waco Carter, Arthur Edwin, 2 AA Luling Carter, Arthur Paul, 4 EE Bryan Carter, James Michelle, 1 ChE Waco Carter, Kenneth Forest, 1 AgEng Round Top Carter, William Henry, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee
Carothers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arnet Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William
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Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Colley, Richard S Collie, Morris W Collier, Worris W Collier, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Colley, Richard S Collie, Morris W Collier, Worris W Collier, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Colley, Richard S Collie, Morris W Collier, Worris W Collier, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Colley, Richard S Collie, Morris W Collier, Worris W Collier, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Colley, Richard S Collie, Morris W Collier, Worris W Collier, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Colley, Richard S Collie, Morris W Collier, Worris W Collier, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Colley, Richard S Collie, Morris W Collier, Worris W Collier, William
Carthers, Henry Porter, 1 CE	Cliburn, Robert I Cloud, Raymond Clute, William B Clutter, Bertley Cobb, Cecil Arner Cobb, Daniel Gor Cochran, Jim K. Cochran, Jim K. Cochran, Roy, 3 Cochran, Virgil F Cocke, Richard P Cocks, Tilford W Codrington, Char Cody, Raymond A Coe, Lyman Eug Coffin, James W Coker, Garland, Cole, Floyd Fran Cole, Robert Lee, Coleman, Earnest Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William Coleman, William

W 1 W. W.
Chandler John Wilson, 1 LA Dallas
Chandler, Olen Hubbard, 3MEDallas
Chanowsky, Sam, 1 CEBryan
College Station
Chandler, John Wilson, 1 LA. Dallas Chandler, Olen Hubbard, 3ME. Dallas Chanowsky, Sam, 1 CE. Bryan Chapin, Alfred Victor, 4 IE. College Station Chapin, Edwin Donald, 1 EE. College Station Chapman, Clifford Grady, 1 EE. Forney Chase, Arthur Merten, Jr., 2 ME. Houston Cheaney, Dennis Flynn, Jr., 1 ChE. Electra
Chapman, Clifford Grady, 1 EEForney
Cheaney, Dennis Flynn, Jr., 1 ChE
Electra
Childers, Homer William, 3 AA Houston
Chimene, Irvin Edward, 4 EEHouston
Clampitte Joseph Weldon 1 ChE Houston
Clanton, Ralph Francis, 2 EEDallas
Clark Joseph Baldwin 1 Ar Fort Worth
Clark, John Haney, 3 ChEFort Worth
Clark, Jack Placete, 3 LAYoakum
Clark, Marcus Hugh, 1 LASan Antonio
Clark, Robert Frederick, 2 MEBeaumont
Clasby, Matthew Edgar, 1 AgHouston
Clausell, Carlos Augustin, 2 EE
Clay James Jackson 2 EE San Angelo
Clay, Marion Alexander, 3 EE
Cleaver Maurice 3 LA Dallas
Clement, Fred McKemie, 1 EE
Clewis, Howard Raymond, 1 CE
San Antonio
Cloud Raymond Earl 1 AA Bryan
Clute, William Benjamin, 3 EE
Clutter, Bertley Allen, Jr., 1 ME
What Cheer, Iowa
Cobb. Daniel Gordon, 2 CE Fort Worth
Cochran, Jim Kennedy, 1 CEWaco
Cochran Virgil Eugene 4 RE Houston
Cocke, Richard Powell, 4 AASan Benito
Cocks, Tilford William, 2 AgSilsbee
Comfort
Cody, Raymond Albert, 2 AgCeleste
Healdton, Oklahoma
Coffin, James Watts, 1 AgItasca
Cole, Floyd Franklin, 1 CELubbock
Cole, Robert Lee, 1 LA Houston
Coleman, Earnest Abernathy, 4 LAMiles Coleman, Ray Rawls, 1 EEMidland
Coleman, William Farrell, 1 LA: Houston
Coleman, William Thomas, Jr., 3 ChE
Colley, Richard Stewart, 1 LandYoakum
Collier William Jennings 1 Sci
College Station Chapman, Clifford Grady, I EE. Forney Chase, Arthur Merten, Jr., 2 ME. Houston Cheaney, Dennis Flynn, Jr., 1 ChE. Childers, Acie Bill, 4 Ag. Jasper Childers, Homer William, 3 AA. Houston Chimene, Irvin Edward, 4 EE. Houston Chromcak, Johnnie Fred, 1 EE. Louise Clampitte, Joseph Weldon, 1 ChE. Houston Clarkor, Carl Dennis, 3 EE. Galveston Clark, Joseph Baldwin, 1 Ar. Fort Worth Clark, Leonard E., 1 AA. Marshall Clark, Marcus Hugh, 1 LA. San Antonio Clark, Robert Frederick, 2 ME. Beaumont Clarke, Arthur Cyrus, 1 AA. San Benito Clasby, Matthew Edgar, 1 Ag. Houston Clasby, Matthew Edgar, 1 Ag. Houston Clausell, Carlos Augustin, 2 EE. Mexico, D. F., Mexico Clay, James Jackson, 2 EE. San Angelo Clay, Marion Alexander, 3 EE. Ardmore, Oklahoma Clewis, Howard Raymond, 1 CE. Ardmore, Oklahoma Clewis, Howard Raymond, 1 CE. Schenectady, New York Clutter, Bertley Allen, Jr., 1 ME. What Cheer, Iowa Cobb, Cecil Arnett, 2 AA. Franklin Cobb, Daniel Gordon, 2 CE. Fort Worth Cochran, Virgil Eugene, 4 RE. Houston Cochran, Virgil Eugene, 4 RE. Houston Cochran, Virgil Eugene, 5 Land Cochran, Colarder, Franklin, 1 CE. Cody, Raymond Albert, 2 Ag. Celeste Coe, Lyman Eugene, Sp Land Coleman, Earnest Abernathy, 4 LA. Miles Coleman, Ray Rawls, 1 EE. Midland Coleman, William Farrell, 1 LA. Houston Coleman, Ray Rawls, 1 EE. Midland Coleman, William Farrell, 1 LA. Houston Coleman, William Jennings, 1 Sci. Denton Colley, Richard Stewart, 1 Land, Yoakum Collier, William Jennings, 1 Sci. Denton Coller, William Marion, Jr, 1 CE. Pecos Collier, William Jennings, 1 Sci. Breckenridge Collier, William Marion, Jr, 1 AR. Eleschon C
Colson, James Allison, 1 Ag. Bryan
Coltrin, Robert Barnett, 1 ArGalveston
Combest William Lewers 1 AA Olton
Compess, william Lewers, I AAUltun

Concannon, Winfield Bert, 1 CM	Crocker, Charles Graham, 3 ME
Coneway, Charles Richard, 1 Ar,Friona	Crook Richard Curtis 1 CE Granhury
Conley, Hardy William, 1 AASan Benito	Crook, Richard Curtis, 1 CEGranbury Cross, Paul Smith, 2 CMAustin
Connally, James Thomas, 1 CMWaco	Croxton, Carl Edwin, 1 EEMt. Pleasant
Connally, James Indinas, I CMwaco	Crosion Locard Bailou 9 FF Claburna
Connally, Wince Lanier, 4 AASulphur Springs	Crozier, Joseph Bailey, 3 EECleburne Cuellar, Pablo Mario, 1 CE
Connell Ice Edwin 1 AA Gilmor	Saltillo, Coah., Mexico
Connell, Joe Edwin, 1 AA Gilmer Conner, Robert Arthur, 1 LA	Culberson, William Albert, 2 Ag
College Station	Gatesville
Conner, Richard Roth, 2 LA	Cummings, Logan Oliver, 1 LA
College Station	Wellington
Conover, Brooks William Merele, 1 LA	Cummings, Wendell Percy, 1 Sci
Dallas	El Campo
Conway, Bill James, 1 AgSan Antonio	Cunningham, Thomas Cloyd, 4 AgEng
Conway Joseph Hendriy Jr 1 LA Bryan	
Cook Chauncey Levitt 2 Sci McAllen	Curry, George Washington, 4 EEEl Paso
Cook Eugene Glynn 3 EE Putnam	Curry, John Hall 1 Ag Gatesville
Cook, Chauncey Levitt, 2 SciMcAllen Cook, Eugene Glynn, 3 EEPutnam Cook, Lansford Silas, 1 ChEGoose Creek	Curry, John Hall, 1 AgGatesville Cushman, George Arthur, 1 EE
Cooke, Arthur Charles Henry, 4 AgEng	Cuthrell, Antum Eugene, 2 MENavasota Cuthrell, John Harris, 3 SciNavasota Dahlgren, Carl Arvid, 1 EE
Houston	Cuthrell, Antum Eugene, 2 MENavasota
Cooper, James Major, 1 AACenter	Cuthrell, John Harris, 3 SciNavasota
Cooper, Joseph Theoria, 2 CETemple	Dahlgren, Carl Arvid, 1 EEFort Worth
Cooper, Robert Everett, 1 SciTemple	Dalton, Jim Mitchell, 1 AAWeatherford
Cooper, Roy Kenneth, 1 LAHugo, Okla.	Dalton, Lloyd Amos, 3 IAMcGregor
Cope, Jessie Tiner, Jr., 1 AAKarnes City	Dalton, Murphy Leon, 4 AADallas
Cooper, Joseph Theoria, 2 CE Temple Cooper, Robert Everett, 1 Sci Temple Cooper, Roy Kenneth, 1 LA Hugo, Okla. Cope, Jessie Tiner, Jr., 1 AA Karnes City Corley, Quinn Marvin, 2 Ag Del Rio	Dalton, William Edmond, 1 AADallas
Corman, Abe Joe, 3 TEDallas	Dameron, Alton Bernard, 1 LAWest
Corman, Abe Joe, 3 TEDallas Cornelius, Reagan, 1 EEHope, Arkansas	Danforth, Joseph Jefferson, 1 SciBryan
Cornick Arthur Maurice, 1 EE	Danforth, Joseph Jefferson, 1 SciBryan Danhoff, Walter, 3 TECorpus Christi
Sumner, Mississippi Costello, James Matthews, 1 CE	Daniel, Joseph Shirley, 1 AgHolland Daniel, Robert Clinton, 1 EECleburne
Costello, James Matthews, 1 CE	Daniel, Robert Clinton, 1 EECleburne
Mt. Pleasant	Daniel, Robert Leonce, 3 CE Marietta Daniel, Robert Nelson, 2 Sci Dallas
Cothran, William Franklin, 1 CEMission	Daniel, Robert Nelson, 2 Sci
Cotton, James Arnold, 1 CEAbilene Cotton, Richard Howard, 1 AAAbilene	Dannelly, Cary Hamlin, 1 ChEJefferson
Cotton, Richard Howard, 1 AAAbilene	Dannelly, Perry, 3 CEDallas
Cotton, Wayland Garland, 1 AA	Dansby, Romney Evander, 2 LABryan
Counts, William Louis, 2 EE	Dansby, Romney Evander, 2 LA Bryan Darby, James Wilson, 2 EE Beeville Darby, Mitchell, 2 CE Weimar
Counts, William Louis, 2 EE	Darley, William George, 2 EE
Covacevich, Nicholos S., 1 MEBrownsville	Darley, William George, 2 EE
Cowan, James Vance, 3 ChEDallas	Darragh, George Gillum, Jr., 2 TE
Cowan, Woody Leon, 4 CEPecos Cowan, William Robert, 1 EEAbbott Coward, Chester Raymond, 2 AAAustwell	Marble Falls
Cowan William Robert 1 EE Abbott	Daugherty, Ralph Linn, 1 EEForney
Coward, Chester Raymond, 2 AA Austwell	Daughtrey, Elisha Robuck, 3 ME
Cowart, Fred Frazier, 1 Ag. Robstown	San Antonio
Cowart, Fred Frazier, 1 AgRobstown Cox, Dudley Sewell, 2 SciWichita Falls Cox, Fred Butler, 3 AgWhitney Cox, Hal Beverly, Jr., 1 MEHouston	Dauterive, Carroll Anthony, 2 ChE
Cox, Fred Butler, 3 AgWhitney	Houston
Cox, Hal Beverly, Jr., 1 MEHouston	David, William Lewis 1 Ac Corsigans
Cox. Herman Granm, 4 Ar. Fort Worth	Davidson, Alfred Harry, Jr., 4 CE
Cox, Preston Wright, 2 LAWichita Falls Cox, Robert Travis, 2 SciEastland	Kansas City, Missouri
Cox, Robert Travis, 2 SciEastland	Davidson, Raymond Wright, 3 Ar
Coyle, William Hunter, 1 EERowlett Crabtree, James Edley, 4 AAClarendon Craddock, Thomas Drayton, Sp CM	
Crabtree, James Edley, 4 AAClarendon	Davie, Roland Weldon, 1 E.E.
Craddock, Thomas Drayton, Sp CM	Grand Prairie
Craig, Charlie Christian, 1 EE Ingram	Davis, Ben Reps, Sp CMBurkburnett
Craig, Charile Christian, I EEIngram	Davis, Ben Reps, Sp CM
Craig, John Seller, 1 ME Hamilton Craig, Robert Matthews, 4 EE Hamilton Craigo, Edgar James, Sp CM. Fort Worth Crain, Oscar Lee, 1 CE. Lone Oak Crang, Cliston William 1 EF. Deletins	Davis, Ervie Dennis, I CESan Antonio
Craige Edger Inner Cr CM Fort Worth	Davis, Francis Clark, 1 AgDenton
Crain Ocean Lee 1 CF Lone Ook	Davis Henley Hardeman 2 FF Wass
Crass, Clinton William, 1 EEPalestine	Davis, Francis Clark, 1 Ag Denton Davis, Fred Terry, 2 Ar Silsbee Davis, Henley Hardeman, 2 EE Waco Davis, Joseph Eugene, 2 AA Dallas
Crawford, Robert Sherrill 1 LA Dallas	
Crawford, Robert Sherrill, 1 LADallas Crawford, Weldon Louis, 3 AgPalestine Crecelius, Emory Speer, 3 AA	Davis, James Madison, 1 LA Colvert
Crecelius, Emory Speer, 3 AA	Davis, James Russell, 2 EE Giddings
San Antonio	Davis, James Madison, 1 LA
Creed, Reginald Farquhar, 3 AgEng	Davis, James William, 4 LAStephenville
Bryan	Davis, Matt McKinney, Jr., 1 AA
Cretsinger, James Osborne, 1 ME Bryan	San Antonio
Crim, Benard LaVerne, 1 EEHenderson Criswell, Jack Fowler, 4 AAForney	Davis, Oral Egbert, 2 CERising Star
Criswell, Jack Fowler, 4 AAForney	Davis, Percy Cullen, 1 MEMineral Wells
Criswell, Leonard Lucius, 2 AAForney	
Crocker, Alfred, 3 AgCenter	Davis, Robert Foster, 1 LARule

Davis, Richard Thompson, 1 ME	Donalson, Thomas Kyle, 1 AgKyle Donoho, John Bransford, Jr., 1 ME Fort Worth
Waxahachie	Donoho, John Bransford, Jr., 1 ME
	Fort Worth
Davis Samuel Taylor 2 Ag Donton	Dorsey, Ralph Robert, 1 SciFort Worth
Davis, Sam Brice, 3 EE. Lometa Davis, Samuel Taylor, 3 Ag. Denton Davis, Tom Eli, 1 LA. Fort Worth Davis, Thomas Worth, 1 EE Berclair Davis, Virgel Allen, 1 Ar. Wichita Falls Davis, William Edwin, 3 AA Huckabay Davis, William Truett, 1 EE. Marfa Day, John Frank, Jr., 2 TE. Eden Day, James Reneau, 3 Sci. Caddo Mills Day, Russell Edward 1 AA Center	Dorsey, Raiph Robert, I SciFort Worth
Davis, 10m Ell, 1 LAFort Worth	Dosterschill, Walter Lloyd, 1 ArDallas Dougherty, Thomas Brook, 2 Ar
Davis, Thomas Worth, 1 EEBerclair	Dougherty, Thomas Brook, 2 Ar
Davis, Virgel Allen, 1 ArWichita Falls	Doughrameji, Ahmad Rafat, 2 Ag
Davis, William Edwin, 3 AAHuckabay	Doughrameji, Ahmad Rafat, 2 Ag
Davis, Wallace Turnin, 1 LA Mertens	Arhil Mesonotamia
Davis William Truett 1 FE Marfa	Dougles James Brock 9 EE Commerce
Day Isha Engale In 0 DE Elem	Downard, Richard Walter, Sp LABryan Doyle, John Edward, 1 CESan Antonio Dozier, Fred Sowell, 1 MEForney Drake, Cecil LeRoy, 3 AgSan Antonio Drascher Edward Lawrence, 1 EE.
Day, John Frank, Jr., 2 1EEden	Downard, Richard Walter, Sp LABryan
Day, James Reneau, 3 SciCaddo Mills	Doyle, John Edward, 1 CESan Antonio
	Dozier, Fred Sowell, 1 MEForney
Dean, Bob, 1 ChE Pecos Dean, John Randolph, 2 EE Athens	Drake, Cecil LeRoy, 3 AgSan Antonio
Dean John Randolph 2 EE Athens	Drescher, Edward Lawrence, 1 EE
Dean, William Harrell, 2 AAClaude	Caldwell
Doone William Francis O CE Vincenille	Drasser Daul Alter 9 Land Consisers
Deane, William Francis, 2 CEKingsville Dear, George Willard, 3 LATroup	Dresser, Paul Alton, 2 LandCorsicana
Dear, George Willard, 3 LATroup	Drinkard, Tom William, 1 ArEden
DeBardeleben, James Mitchell, 4 CE Brownsville	Dritt, John Roy, 1 CEMexico D. F., Mex.
Brownsville	Driver, Roy. 2 CE Bryan
Decker, Charles Thomas, 1 SciMission	Dubberly, Oscar Hugh, 1 ChEBig Spring
Dedmon, Jefferson Henry, 1 ME	Duckworth, Roy Earl, 3 AgWestover
Deumon, Jefferson Henry, 1 ME	Duckworth, Roy Earl, 5 Ag Westover
Goose Creek	Duderstadt, Ernest Frederick, 1 Ag
Deen, William Alonzo, 4 LABryan	Kerrville
Deffebach, John Alexander, 4 LA	Duffield, Robert Foster, 1 MEHouston
Fort Worth	Duncan, Verlyn Hudson, 3 AAHouston
DeForde, Orville Guy, 1 EEDallas	Dungan, Henry Lee, 4 LAEnnis
DeFriend, Leonard John, 1 AAHouston	Dungan, William Taylor, 1 AgMcKinney
Dolonou Doloh Torres 1 T A Constability	
Delaney, Ralph Jerry, 1 LASmithville	Dunham, Clayton Edwin, 1 IE
Delery, Hugh Bob, 1 CMHouston	San Antonio
DeMaret, Allan Navarre, 3 CEBryan	Dunlap, Lawrence Bettes, 2 MEDallas
Denison, Raleigh Edmond, 1 CETemple	Dunn, Charles Henry, 4 AA Sherman
Dennis, M. L., 1 ChE Moran	Dunn, Harvey Herbert, 1 SciIowa Park
DePasquale Francis Robert 2 ME	Dunnahoo, Walter Burks, 1 CEDallas
Diekingen	DuPree, James Allen, 1 AAHouston
DePasquale, Francis Robert, 2 ME Dickinsen DePasquale, Joseph Albert, 1 AA	Durken Edmin Countried 1 I A Diball
Der asquale, Joseph Albert, I AA	Durham, Edwin Crawford, 1 LADiboll
Dickinson	Durham, Grady Everett, 1 SciAustin Durham, Jake Webber, 2 LADiboll
deSteiguer, Edward Louis, 1 CEBryan	Durham, Jake Webber, 2 LADiboll
Deutsch, Julius Herman, 1 CE	Dusek, William Max, Sp Ag Flatonia
San Antonio	Dwyer, Roger Frank, 1 CEHouston Dyer, David Robert, 2 AgFort Worth Dyer, James Edward, 3 EEMarlin
Dew, Henry Elbert, 3 CETyler	Dver David Robert 2 Ag Fort Worth
Dewald, John George, 3 CECopperas Cove	Dyer James Edward & EE Morlin
Downer Honor Comes 0 CE Assertile	Earleton Fronts O EE
Dewey, Henry Cooper, 2 CEAmarillo	Eagleton, Foute, 2 E.ECommerce
Dexter, Frederick Fenwick, 4 Ar Houston	Eagleton, Foute, 2 EE
Dial, Joseph Smith, 1 LASulphur Springs	Easterling, Marcus Cleo, 1 MEMegargel
Dick, Leslie Gilliam, 2 LASan Antonio	Eatman, Joseph Walter, 2 SciAustin
Dickinson, William Calvin, 2 EEGonzales	Eaton, Charles Barthold, 1 EE
Dickinson William Cocil A EE Ballinger	Eberhardt, Frederick Wendell, 1 EE
Dickinson, William Cecil, 4 EEBallinger Dickinson, William Harold, 2 EEBryan	Phonhaudt Fundamial Wandell 1 FF
Diems Alfred Control of FE T C	Ebernardt, Frederick Wenden, I EE
Diers, Alfred Gerhard, 4 EELaGrange	Rising Star
Dietert, Milton Emil, 4 AAKerrville Dietz, Thomas Allan, 1 MEForney	Eby, George Andrew, Jr., 1 MEMcAllen
Dietz, Thomas Allan, 1 MEForney	Eckles, William Elam, 3 LADallas
Dietze, Herman Vernon, 1 EE Houston	Edding, Carlton Wilbur, 3 Ag Kerrville
Dietze, Norvan Gillett, 1 ME Cuero	Edding Henry Adair 1 ChE Marquez
Dillard R A Ir 1 TF Chilliantho	Edge John Hareld In 9 Sei Druen
Dillon Ford Applombite 4 CE	Eby, George Andrew, Jr., 1 ME. McAllen Eckles, William Elam, 3 LA. Dallas Eddins, Carlton Wilbur, 3 Ag. Kerrville Eddins, Henry Adair, 1 ChE. Marquez Edge, John Harold, Jr., 2 Sci. Bryan Edwards, James Owen, 1 Ar. San Antonio
Dietze, Herman Vernon, 1 EE	Edwards, James Owen, 1 ArSan Antonio
Dillon, Thomas R., 1 AgSan Antonio Ditta, Tony Anthony, 2 MEWaco	Egbert, Ford, 1 CE Waco Ehlers, Leslie, 2 Ag LaGrange Ehlert, Edward, Jr., 1 Sci Brenham Eisenwine, Norman, 1 CM Pecos Eiserloh, Jerold Frank, 1 ME Houston
Dillon, Thomas R., 1 AgSan Antonio	Ehlers, Leslie, 2 AgLaGrange
Ditta, Tony Anthony, 2 MEWaco	Ehlert, Edward, Jr., 1 Sci Brenham
	Eisenwine, Norman 1 CM Pecos
Dixon, Royce Lee 2 ChE Port Arthur	Eiserlah Jerold Frank 1 ME Houston
Dixon, Royce Lee, 2 ChEPort Arthur Dixon, Robert Melton, 4 ChEFrisco Dobson, James Starrett, 1 AgWhitesboro	Ekrem, Moustafa, 1 AgAngora, Turkey
Dobgon Tomos Comments 1 A. William	Exten, Moustala, 1 AgAngora, Turkey
Doubon, James Starrett, 1 Ag Whitesboro	Elder, Robert Marion, 1 REKarnes City
Dockum, Richard Swanson, 3 CE	Elder, Thomas Jefferson, Jr., 1 CE
Corsicana	Decatur
Dodds, Wilton Elliot, 1 EEHouston	Ellis, Castles Nerva, Sp CMGreenville
Dodge, John Hopkins, 2 MEJacksonville Dolan, Adreon Robert, 1 MEHouston	Filia Clude Vincil 9 MF Wickits Dalls
Dolan Adreon Robert 1 ME Houston	Ellig F P Jr 1 Ar Wavehashia
Dollinger John III 1 ME Donner-1	Filia Coorgo Louis 9 CE Co- A
Dollinger, John III, 1 MEBeaumont	Ellis, George Lewis, 2 CESan Antonio
Dominy, Frank Mortimer, 1 Ag	mis, marvie Russen, 4 vm
Palestine	Ellis, John Wilbur, 1 AgSan Antonio
Donehue, Joseph William, 2 ChEVernon	Ellis, John Wilbur, 1 AgSan Antonio
Donalson, Sidney Jackman, 1 AgKyle	Ellison, Claud Moore, 1 AgRosebud

Embree, Chester Arthur, 1 CEBelton	Fischer, Harry Otto, Jr., 3 CE
Emmons, James Rufus, 3 AgClarendon	Fischer, Richard Elwood, 2 ME Houston
Emmons, Walter Mark, 2 REClarendon Engel, Meredith Card, 3 ArSan Antonio English, Clifford Wade, 1 EEDallas	Fischer, Richard Elwood, 2 MEHouston
Engel, Meredith Card, 3 ArSan Antonio	rischer, willred Albert, 3 ArSan Antonio
English, Clifford Wade, 1 EEDallas	Fisher, Alexander Donald, Jr., 3 ME
Enquist, Burton Reinhold, 2 ME	Fitzhugh, Vermon Franklin, 4 AgTolar Fitzpatrick, James Brandon, 1 Land
Enquist, Melvin Anderson, 1 ChE	Fitzhugh, Vermon Franklin, 4 Ag10lar
Enquist, Melvin Anderson, 1 CnE	Fitzpatrick, James Brandon, I Land
Epp, Clarence Edwin, 3 ArSan Antonio	Flato, Henry William, 1 AALaredo
Epp, Clarence Edwin, a ArSan Antonio	Fleming, David Winston, Sp ME
Epperly, Don, 3 ArFort Worth Erhard, Fred William, Jr., 1 ME	College Station
Galveston	Floca, Charles Vinson, 2 AATemple
	Floeck Jesse Charles, Jr., 1 LA Houston
Ernst, Hugo. 1 EE Poteet	Floeck, Jesse Charles, Jr., 1 LAHouston Florian, John Frederick, 1 EEHouston
Ernst, Robert Lister, 1 CMGlen Flora	
Ernst, Hugo, 1 EE Poteet Ernst, Robert Lister, 1 CM Glen Flora Erwin, Ivan Basel, 1 Ar Honey Grove Erwin, William Joseph, 1 Sci	Flory, Clarence Mathew, 5 LA. Smithville Floyd, Clay McLane, 1 Ag. Midland Floyd, Gordon Russell, 1 AA. Rosewood Floyd, James Graceton, 1 AA. Rosewood Floyd, Jay Hawkins, 4 Ag. Midland Floyd, Robert Hyron, 1 ME. Longview
Erwin, William Joseph, 1 Sci	Floyd, Gordon Russell, 1 AARosewood
Unickasha, Ukianoma	Floyd, James Graceton, 1 AARosewood
Esparza, Jorge Gerardo, 2 ArLaredo	Floyd, Jay Hawkins, 4 AgMidland
Evans, Craig, 2 Ar	Floyd, Robert Hyron, 1 MELongview
Evans, Clarence William, 2 EECorsicana	rocke, dedige marckmann, 2 AA
Evans, Herbert Lyman, I Che	Galveston
Evens James Clara Ca Sei	Focke, John Clark, 4 AgGalveston
Roldwin Koness	Follett, Clarence Reneau, 2 Ag Eng
Evens John Willis 1 Sci Floresville	Follett George Henry 1 Ag Eng Houston
Evans, L. H., Jr., 3 EE Overton	Follett, George Henry, 1 Ag EngHouston Folsom, Ewell Vernon, 1 LABeaumont
Evans, James Glenn, Sp Sci	Fontaine, John Edward, 4 EE
Everts, Curtiss Mitchell, Jr., 2 CE	Stamps, Arkansas
Houston	Stamps, Arkansas Fooshee, Irb Haskell, 2 ChEFort Worth
Ewell, Walter Leighton, 1 LADallas	Forester, Russell Vann, 2 EEHouston
Ewing, Roy Francis, 3 AAJacksonville	Forgy, Moral Dee, 3 ArSan Antonio
Ewing, Richard Selman, 1 AASpeegleville	Forman, John Allan, 1 LADenison
Fagg, Lee, 4 MECorsicana	Forman, William Mahlon, 2 SciDeni son Forster, Arthur George, 2 EEDallas
Fair, Frank Rayston, Sp AgRaver, Ark.	Forster, Arthur George, 2 EEDallas
Fair, Frank Rayston, Sp AgRaver, Ark. Fair, Kirby Milbourne, 1 CEDallas Falley, Charles Frederick, 1 Sci	Foster, Lee Alston, 2 TEHope, Arkansas
San Antonio	Foster, Richard Eugene, 1 LAHouston Foster, William Paul 1 CESabinal
Farmer, Norman Kittrell, 1 AgJunction	Fox. Joseph Frank. 2 ME Dallas
Farmer, Robert Ruffin, 3 AA	Fox, Joseph Frank, 2 MEDallas Fox, James Lucius, 3 ArWichita Falls
Farmer, William Harold, 4 CEBryan	Foxhall, James Lesley, 2 ArMemphis
Farmer, William Harold, 4 CEBryan	Francis, Albert Edward, 1 EETyler
Farquhar, Bannister Wells, 2 CEWaco	Francis, Tom Anson, 1 ChE El Paso
Farquhar, Ernest Earl, 2 CEJonesboro	Frank, Bernie Lewis, 4 CE Jefferson Frank, George Perry, 1 Ag Falfurrias Franke, Herbert Adolph, 3 Sci Smithville
Farguhar Wilher Watson Sn I.A	Frank, George Perry, 1 AgFallurrias
Farquhar, Robert Edward, 3 CEEnnis Farquhar, Wilber Watson, Sp LA Jonesboro	Franke Louis John 4 Ag El Campo
Farrell, Joe Tapley, 4 EE	Franke, Louis John, 4 Ag. El Campo Franki, Guido Ernest, 2 Ag. Del Rio Franks, Roye Wendell, 2 ChE. Ennis Frazier, William Allen, 2 Ag.
Farris, Percy Carl, 4 AgUvalde	Franks, Roye Wendell, 2 ChEEnnis
Farrish, Harold Price, 3 SciDallas	Frazier, William Allen, 2 Ag
Fatheree, Ralph Edward, 1 LADallas	
Fawcett, Walter Robert, 2 AgDel Rio	Free, Walter Granville, 1 ME
Fatheree, Ralph Edward, 1 LA	Freeman, Josiah Bailey, 2 ChEAlvarado Frels, Herbert Henry, 3 AgEdGlen Flora French, John Abner, 2 MESan Antonio
Ferguson Fred Travia 1 ChE	Freis, nerbert henry, 5 AgrdGlen Flora
Sulphur Springs	Freytag. Walter Pius, 1 SciFlatonia
Ferguson, James Ed, 1 AgParis	Friday Louis Stephen 2 AA Laguna
Ferguson, Lloyd Benjamin, 2 Ag., Brandon	Frier, Walter Albert, 2 ChE Houston
Ferguson, Perry R., Sp LABryan	Fritch, Charlie Edward, 2 ChEDallas
Ferguson, Perry R., Sp LA Bryan Fermier, George Franklin, 1 EE	Fritch, John Joseph, 3 Ar
Fern, George Henry, Sp LA	Fritze, Hilmar Alfred Louis, 3 ChE
College Station	Fritze, Victor Otmar, 1 CESan Antonio
Fernald, Frank Stanford, 1 MEDallas	Frost, Spencer Cary, 4 EEDallas
Fields, William John, Jr., 3 Ag., Sonora	Fry, Lewis, 1 AgEngLeonard
Fields, William John, Jr., 3 AgSonora Fields, Walter Smallwood, Jr., 2 Ar	Fuente, Genaro de la, Jr., 2 AA
Irving	Saltillo, Coah., Mexico
Fife, Harry Millard, Jr., 1 CMTerrell	Fuente, Ildefonso de la, 2 Ag
rigari, Ernest Emil, 4 MEGaiveston	· Saltillo, Coah., Mexico
Finnegan, Robert Paul, Sp SciTemple Fischback, Alexander Antone, Jr., 3 CE	Fuente, Jose de la, 4 Ag
Dallas	Saltillo, Coah., Mexico Fulcher, Elmer Lee, 1 MEMineola
Danas	ruicher, Limer Lee, i MillimMilleola

Fulgham, Jack Edgar, 1 ChEWeatherford Fuller, Eugene Thomas, Jr., 3 AA	Gorzycki, Paul Mondrick, 1 Ag College Station
Galbraith, Kenneth Marshall, 1 ArBelton	Gossett, Harry Alonzo, 4 AAMidland Grable, Jessie Clinton, 1 LAFort Worth
Gallenkamp, Edgbert Harry, 1 CE	Gracey, Frank Matlock, 3 AgDallas Grady, William Leo, 1 SciDallas
Galloway, James Harrison, Jr., 2 ME	Graebner, Charles Alexander, 1 LA
Galloway, Robert Brice, 3 MECorsicana	Graham, Lawrence Elbridge, 2 LA
Galt, Sidney, 2 Sci	Graham, Robert Clarence, 3 CEJasper
Garcha, Kartar Singh, 1 AgEng College Station	Grammer, James Henry, 4 SciPittsburg Grantham, Alvin Howard, 1 EEMcGregor
Garcia, Arthur 3 Ag	Graves, John Lucius, 1 MEDallas Graves, Robert Clovis, Jr., 1 ME
	Graves, Robert Clovis, Jr., 1 ME
Garcia, Evaristo, 1 ChE	Gray Truman 1 I.A Houston
Gardner, Robert Houston, 3 EEAlice	Greenwade, James Walton, 2 AgWhitney Greenwade, Turner G., 4 AgWhitney
Gardner, Wilborn Gillis, 1 CMLott Gardner, William Howard, 1 CE	Greenwade, Turner G., 4 AgWhitney
Crystal City	Gregg, Bruce Pendleton, 1 AgKingsbury Gregory, Marolf Preston, 3 EEStowell
Garison, John Cullen, 3 AABuda Garland, Lee Heard, 1 AgHope, Ark.	Gregory, Thomas Mac, 2 CE Dallas
Garner, Andrew Beaumont, 2 Sci	Griffin, Boyd J., 1 CEForney Griffing, Norman Frisby, 1 CE
Galveston	McGehee, Arkansas
Garrett, John Rollin, 1 MEPittsburg Garrett, Morris Green, 1 MEHouston	Griffing, Ralph Clarence, 2 AABeaumont Griffis, Yale Berger, 2 LADallas
Garrison, Marcus Smith, 1 CMGarrison	Griffith, Lynn Edge, 1 LABryan
Gaston, Charlie Bell, 4 AgEdGranbury	Grimes, Benjamin Lyman, 4 CE
Gaston, Charlie Bell, 4 AgEdGranbury Gates, Alfred Louis, 3 MEGalveston Gatlin, Jabez Linten, 3 EEMexia	Groendes, Arthur Wilhelm, 2 ME Moody
Gay, Clarence McLean, 4 Ag. Moran	Gross, Jack, 1 ChE
Gay, Clarence McLean, 4 Ag Moran Gear, Harry Compton, 2 CEFort Worth Geer, Olin Monroe, 2 AgEng Anna	Grote, Fred Gerrit, 4 MESan Antonio
Geer, Olin Monroe, 2 AgEngAnna Gentry Porter Clay 4 RE Bryan	Groves, Joseph Taylor, 1 AgLeonard Gudger, Gordon Boone, 3 MEOrange
Gentry, Porter Clay, 4 REBryan Gerdes, Francis Leo, 4 AASinton	Guinn, Wendell Tarrant, 1 MELaredo
Gershovitz, Walter Lewis, 1 EEHillsboro	Guinn, Wendell Tarrant, 1 MELaredo Gulledge, Lee Jackson, 1 VMDallas Gunn, James Edward, 3 SciParis
Gibbons, Fate, 1 Ag	Gunn, James Edward, 3 SciParis Gunn, Willis Franklin, 4 SciLongview
Gibson, George Guilford, 3 AgTrinity	Gunter, William Montague, 2 LA.
Gibson, George Guilford, 3 AgTrinity Gideon, Howard Wayne, 1 ArDallas Gick Horold Bornard 1 MFDallas	San Angolo
Gieb, Harold Bernard, 1- MEDallas Giesey, Samuel Charles, 2 LASherman	Guyler, Robert Lerert, 2 CE. Eagle Pass Gwin, Clyde Wortham, Sp Ag. Oenaville Hable, Robert Ernest, 2 CE. Corsicana Haby, Walter Edward, 2 LA. Lampasas
Giffen, Emmett D., 1 ChESan Antonio	Hable, Robert Ernest, 2 CECorsicana
Giffin, Paul Kenneth, 3 MEDallas	Haby, Walter Edward, 2 LALampasas
Gilbreath, John Constantine, 1 AgEng Hereford	naddon, Joe Leon, I LASan Angeld
Gill, Harry C., Sp LABryan	Haegelin, Hilmer Bernard, 3 AAHondo Haggard, Kenneth Lloyd, 1 ArBonham
Gill, Jack Hale, 2 MESan Antonio	Hagius, Homer Hugh, 1 ChETerrell
Gill, Lester Oliver, 2 LAHugo, Oklahoma Gill, Maurice Etheredge, 1 EESan Marcos	Hagler, Don, Jr., 1 MEHouston Haile, Findley Lester, 1 LAWhitewright
Gill, William Doyle, 1 CEBellevue	Haile, Jack Blaisdell, 4 CE Goliad
Gilmore, John Richmond, 1 AAEnnis	Hairston, Francis Booth, 1 EE. Houston
Gilpin, Charles Edward, Jr., 1 CMDallas	Halbouty, Mike Thomas, 2 SciBeaumont Hale, Fred, Sp LACollege Station
Girand, Charles Francis, 1 Sci San Antonio	Hall, Festus Avery, Jr., 1 EE
Givens, Harrison Crandall, 3 CE	Hall, Frederic William, 2 AgEden Hall, John Bryan, Jr., 1 AgrMarshall
Glover, George Haskell, 3 ArAmarillo	Hallaman, Joe Charles, 2 EEDallas
Gnauck, Robert Ernest, 4 EEEl Paso	Hallaran, Kenneth Sherman, 1 EE
Godsey, Lee, 1 ChEJacksonville Godsey, Wilbur Rappleye, 1 ME	Haller, Elmer Charles, 2 EE San Antonio
Jacksonville	Hallum Frank Freking A Ar Son Antonio
Goldsmith, John Hammond, 1 LA	Hamby, Jack Clifton, 1 EE
Cincinnati, Ohio	Hamilton, Horace Cockerham 2 IA
Gorman, Edwin, 3 AA	Hamilton, Harmon Carlson, 1 ChE
Gorman, John Wardell, Jr., 1 EE	Hamilton, Harmon Carlson, 1 ChE
Alexandria, Louisiana	Marshall

Hamilton, Loyd Weldon, 4 CEStephenville	Hayes, Darrell Charles, 1 CE
Hammorly Lawis Raymond 1 EE McAllen	Mineral Wells
Hamner, Ed John, 2 LAWirt, Oklahoma	Haynes, Henry Autry, 1 EE Hope, Ark.
Hance Henry Watson 1 CE	Hays, Marshall Ambrose, 1 Ar
Hance, Henry Watson, 1 CE	San Antonio
Hancock Joe Mason 4 AgEd Morgan Mill	Head Virgil Jack 4 EE Brownfield
Hand. Cecil Vermillion, 2 ChE. Plainview Haneman, Albert, Jr., 2 CE. Bryan Hanks, Lester, 2 AA. San Augustine	Head, Virgil Jack, 4 EEBrownfield Heafer, John Benson, 3 LAHouston
Haneman Albert Jr. 2 CE Bryan	Healey, Gordon Byron, 1 CMWaxahachie
Hanks Lester 2 AA San Augustine	Healey, Gordon Byron, 1 CMWaxahachie Heap, John Arthur, 2 AATaylor
Hannig, Sylvan Julius, 3 CEVictoria	Heartsill, Charles Edwin, 3 AAMarshall
Harbin, Tilghman Anderson, 1 AA	Hedrick, August, 1 ArHouston
Sinton	Hedrick, August, 1 Ar
Hardcastle, Robert Dalton, 1 ArHouston	Hegemann, Otto Haenel, 4 ME
Hardcastle, Robert Dalton, 1 ArHouston Harden, Richard Harold, 3 LAHamlin	San Antonio
Harder, Paul Frederick, 3 AAMart	Heilhecker, John Wester, 3 ME
Hardin, David Bonner, 1 TETerrell	Chinicothe
Harder, Paul Frederick, 3 AAMart Hardin, David Bonner, 1 TETerrell Hardin, Henry Harrell, 3 ChEBeaumont	Hein, Harold Ernest, 2 LandSan Antonio
Hardin, Joe Lazzy, 1 CESan Angelo	Heise, Werner Carl, 1 AALa Grange
Hardin, Robert Ross, Jr., 2 CMTerrell	Hellums, Earle Coleman, 1 ChEYoakum
Hardin, Shirley Law, 1 LA	Hellums, Lee Nelson, 1 CMYoakum
Hardy, Floyd, 1 LACorsicana	Helmle, Fred, 1 TEKnippa
Hardy, Tyree W., 1 VMBig Spring	Helwez, Gottlieb Henry, Sp AgEdShiner
Hargis, Smallwood Basil, 3 EE	Henderson, Britten Lee, 1 REKurten
Okmulgee, Ok.ahoma	Henderson, David Leslie, 2 EELongview
Harlan, Irvine Felix, 1 CE	Henderson, George Theodore, 2 EE
Harper, Archibald Remulus, 1 MERoscoe	Henderson, Hugh Dunken, 2 Land Athens
Harper, Bob Early, 1 EEDallas	Henderson, Therman Alfred, 1 EE
Harper, Everett Charles, 2 ChEBrenham	McKinney
Harper, Henry Alton, 1 EECrowville, La.	Hendrick, Hugh Lee, 1 EEFort Worth
Harper, Murray Mac, 1 Ag Martindale	Henry, Horace Chastine, 1 ArAbilene
Harper, Robert Durward, 1 CERoscoe	Hensarling, Philip Hawthorne, Jr., 4 EE
Harper, Murray Mac, 1 AgMartindale Harper, Robert Durward, 1 CERoscoe Harrell, Frank Berry, 1 IALufkin	Bryan
Harrington, Harry Arthur, 4 MEDayton	Herbert, Robert Lafavette, 1 LALufkin
Harrington, Jack Omar, 1 ChEPlano	Horder Charles Ir 1 A A Weimar
Harrington, Harry Arthur, 4 MEDayton Harrington, Jack Omar, 1 ChEPlano Harris, Arthur Leonard, 1 AgEd	Herfurth, John William, 3 CEGarland Herren, John Charles, 3 EESan Antonio
Clarendon	Herren, John Charles, 3 EESan Antonio
Harris, Charles Arthur, 2 ArFort Worth	Herring, Chillord Rue, I E.EFort Worth
Harris, Emmett Gordon, 4 ArMcAllen	Herrscher, Gordon, 1 AAFort Worth
Harris, Houston Edgar, Jr., 1 LA San Angele	Hester, Leonard Howard, 1 AAHumble Heyne, Daniel Henry, 1 LAGlen Flora
Harris Marvin Lyle 2 AA Llano	Hickerson, Richard Benjamin, 2 LA
Harris, Marvin Lyle, 2 AALlano Harris, Nathan, 2 EEDallas	Rosebud
Harrison, Robert Daniel, 2 CMTerrell	Hickman, Hector Harrison, 1 LA
Hart, Malcolm, 4 MEAbilene Harter, James Kirwin, 1 CMFort Worth	Rising Star
Harter, James Kirwin, 1 CMFort Worth	Hicks, Carl Edward, 1 AgConroe
Hartman Monroe Arthur 2 AcEnc	Hieatt, Robert, 1 LADallas
Thrall	Hilger, George, 3 EE Sherman
Hartung, Louis Adolph, 3 AA	Hilger, John Allen, 2 MESherman Hill, Fred Keller, 3 AAElectra
San Antonio	Hill, Fred Keller, 3 AAElectra
Harty, Russell Kimbrough, 1 LA	Hill, James Garrette, Jr., 2 CE. Yoakum Hill, James Miller, 4 AgEdWaelder Hill, John Mayes, 2 SciCooledge
Harvey, Alexander Thomas, 1 EE	Hill John Moyer 9 Coi Cooledge
Galveston	Hill, Paul Thayer, 1 ChE
Harwell, Garrison Greenwood, 2 LA	Greenwood, Mississippi
Harlingen	Hilliard, Clifford Morris, 2 ArMarshall
Hammand William Edmand O ME Corne	Hillis, Hugh Wilcox, 2 ChE
Haslbauer, Alfred, 2 MESan Antonio	Tampico, Tamps, Mexico
Hastings, Guy Warren, 3 MEHouston	Hindman, Bernie Lain, 2 MEHarlingen
Haswell, Henry Matthew, 2 AgCedar Hill	Hindman, Charles Hampton, 4 AA
Hatch, Donald Wentling, 1 ChEDallas	Greenville
Hatch, Gerald Marvin, 1 AgrKerrville	Hiner, Carl Raymond, 2 AgGranbury
Harwood, william Edmund, 2 MECuero Haslbauer, Alfred, 2 MESan Antonio Hastings, Guy Warren, 3 MEHouston Haswell, Henry Matthew, 2 AgCedar Hill Hatch, Donald Wentling, 1 ChEDallas Hatch, Gerald Marvin, 1 AgrKerrville Hatch, Ctis Lamar, 2 LAKerrville Hatcher, Clarence, Mildren, 1 ME. Dayton	Hiner, Thomas Lynn, 2 EEGranbury
Hatcher Clarence Mildren 1 ME Desta-	Hinojosa, John Howard, 4 AARio Grande Hirons, Ray Acklam, 2 LAPharr
Hatcher, Clarence Mildren, 1 MEDayton Hawes, Albert Kennedy, 1 AADallas	Hirsel Fugers Edward 1 FF
Howking Douglass W-G-U	Hirsch, Eugene Edward, 1 EE Fredericksburg
Hawkins, Douglass McCullough, 1 EE Galveston	Hitt. Amon Wesley, 1 CE Vernon
	Hobbs, Louis Edward, 4 Ag. San Antonio
Hawley, James Leeper, 1 SciDallas	Hobbs, Louis Edward, 4 Ag. San Antonio Hobgood, Jack Davis, 1 LA. Greenville Hodge, Oliver Lloyd, 1 EE. Wharton
Haycock, Gus Harold, 3 AgSan Antonio	Hodge, Oliver Lloyd, 1 EEWharton
Haydari, Mohamed Darwish, 2 Ag	Hodge, John Franklin, Jr., 1 EEBandera Hodges, Robert Spessard, 2 AATaft
Baghdad, Iraq	nouges, Robert Spessaru, Z AATait

Hoff, Stuart Sheets, 3 CESan Antonio	Humphris, Robert Allen, 1 AgMarfa
Hofstetter, Fred Ward, 2 LASan Antonio	Hunnicutt, Jack Crawford, 3 AA
Hoke, Cecil Thomas, 1 CMShiro	Fort Worth
Holden, Horace, Jr., 2 EEFranklin Holland, Elton Allen, 1 EECollege Station	Hunnicutt. Sam Lloyd, 1 AA Fort Worth
Holland, Elton Allen, 1 EECollege Station	Hunt, Haskell Howard, I AADenison
Holland, Sam Bearden, 2 EESan Antonio	Hunt, Oliver Joel, 3 LATeague
Holland, Sam Bearden, 2 EESan Antonio Holleron, Tom Clary, 2 LASan Antonio	Hunter Albert Symes 1 CE
Holleron, William Kelly, 3 ME	Little Rock, Arkansas
San Antonio	Hunter, Raiph William, 2 EECrowell
Hollingsworth, Merle Cooper, 3 CE	Hunter von Drew 3 Mr. Kirovville
Hollingsworth, Ross Homer, 1 AgDenison	Hurley John Delhert, 1 EE Marfa
Hollingsworth, Ross Homer, 1 AgDenison	Hurst Don Leo 2 EE Ferris
Holloway, Marshall Hancock, 1 AA	Hurwitz, Meyers Joseph, 1 ChE
	lexas City
Holmes, Frank Leslie, Jr., 1 ArWaco	Hutson, Arthur Cary, 2 ChE
Holmes, Frank Leslie, Jr., 1 ArWaco Holmes, James Gordon, 4 AgEdTroup Holmes, John Moss, 2 TEFort Worth	East Orange, New Jersey
Holmes, John Moss, 2 TEFort Worth	Hyland, Joe, 3 ChECollege Station
Holsonbake, William B., 1 Ag	Ilse, John Henry, 1 LAD'Hania
Holt, Edward Garland, Jr., 1 CETyler Holt, George Hartzell, 2 EESan Antonio	Ilse, Lee August, 1 Ag
Holt, Edward Garland, Jr., 1 CETyler	Ingram, Charles Carol, 1 LAWharton
Holt. George Hartzell, 2 EESan Antonio	Ingrum, Robert Porter, Jr., 3 Ag
Holt, Lewis Franklin, 1 CEIowa Park Hood, Milton Oscar, 4 REBryan	San Antonio
Hood, Milton Oscar, 4 REBryan	Irwin, Ivan, 2 LA Dallas
Hooe, Kenneth Wilcox, 2 CM	Irwin, James Benjamin, 2 AAGarrison Ish, Frank Welcker, 2 AAWaco
Hooker, Joe Dick, 2 RECarthage	Ish, Frank Welcker, 2 AAWaco
Hooks, James Moore, 2 AADallas	Jackson, Columbus Smith, 2 AAFranklin
Hooton, Jefferson Manson, 1 CEHouston	Jackson, Harold Collins, 4 AgEng
Hopkins, Robert Orion, 4 EEFort Worth	Hereford
Horn, Homer Edward, 4 ME Dallas Horn, Joe Barthalow, 1 AA Dallas Horn, Merl Edison, 3 EE Sugarland	Jackson, Hiram Thomas Bartlett, 2 CM
Horn, Joe Darthalow, 1 AADallas	Garwood
Horn Wolter James 1 Av. Con Antonio	Jackson, Joe Beck, 2 LACollege Station
Horn, Walter James, 1 ArSan Antonio	Jackson, Judson George, 1 MEGainesville
Hornsby, Harold Richard, 1 LandAustin Horsak, Joe Louis, 1 MEWest	Jackson, Joseph Marvin, & AgAbhene
Howard Glenn Thompson 1 Sci Possesll	Jackson Monroe Homer 3 TE Sherman
Howard, Glenn Thompson, 1 SciPearsall Howard, Hartley Ernest, 4 AgDevine Howard, Henry Luther, 3 ChE	Jackson, Joseph Marvin, 3 AgAbilene Jackson, Jesse Olin, 2 ArHouston Jackson, Monroe Homer, 3 TESherman Jackson, Richard Ernest, 1 ArSilsbee Jackson, Ralph Semmes, 2 ChE
Howard, Henry Luther, 3 ChE	Jackson, Ralph Semmes, 2 ChE
Howard, John, 2 ChE. Dallas Howard, John, 2 ChE. Dallas Howard, Ryan Madden, 1 Land. Austin Howe, Roland John, 2 Ag. Seymour Howe, Ralph Waldo, 2 Ag. Seymour	San Antonio
Howard, John, 2 ChEDallas	Jacobs, Phillip Emil, 2 EEGalveston
Howard, Ryan Madden, 1 Land Austin	James, Forrest Coram, 3 ArPort Arthur
Howe, Roland John, 2 AgSeymour	James, Leslie Melvin, 1 EEWills Point
Howe. Ralph Waldo, 2 AgSeymour	James, Forrest Coram, 8 Ar. Port Arthur James, Leslie Melvin, 1 EEWills Point James, Sessions S., 4 IEForest
Howell, Charles Roy, I ArFort Worth	James, William Frederick, 2 Ar
Howerton, William Anociet, 4 E.E	Port Arthur
San Antonio	Janak, John James, Jr., 1 MEWeimar
Howze, Jim Sam, 1 Ag. Austra	Jancik, Edward Charles, 3 CEBryan
Hoyt, John Seymour, 2 MEFort Worth	Jefferies, Perry Doddridge, 1 ArLaredo
Hubbard, Thomas David, 1 ChE	Jancik, Edward Charles, 3 CE
Huckeba, William Claude, 2 AgEd	San Antonio
nuckeba, william Claude, 2 AgEd	Jelinek, Robert, 3 ArGranger
Hudnall, Millard Rufus, 3 ArTeague	Jenkins, John Holland, I LADallas
	Jenkins, John Holland, 1 LA Dallas Jennings, Joseph Weldon, 1 MEKosse Jennings, Robert Newton, 4 CE
Hudson, Charles Edward, Jr., 2 AgEng	Jennings, Robert Newton, 4 CE
Hudson, James Elmore, 1 Ar Houston	Jennings, William Bland, 1 LAParis
Hudson, Marion Edric, 1 ArWeatherford	Lett Edward Sharman 1 CM Houston
Hudson, Rupert Lorenza, 1 AgMart	Jett, Edward Sharman, 1 CM Houston Jett, John Absolum, 1 LA Houston
Hueske, Imanuel, 1 EE Brenham	Jett, Stonewall Jackson, 2 MESour Lake
Huey, Lloyd Alexander, 1 TESan Antonio	Jinks, John Fort, 1 ChEPlano
Huffaker, Booth Charles 1 Sci Denison	Jobson, Theron Simpson, 2 EE
Huffaker, Booth Charles, 1 Sci Denison Huffman, George Glenn, 1 CE Marshall	San Marcos
Huggins, Jim Box, 1 ArBelton	Johns, Gill Graham, 1 CMFort Worth
Huggins, Richard Sentell, 1 SciChildress	Johnson, A. B., 4 EEWaco
Hughes, Fitch Henry, 4 AAMuenster	Johnson, Afton Benton, 2 AALockhart
Hughes, Henry Waters, Jr., 1 ME	Johnson, Ben Hershel, 3 Ar., San Antonio
Brenham	Johnson, Cecil Clarence, 1 CE Hallettsville
Hughes, William Lycurgus, 1 Sci	Johnson, Clifford Lee, 4 ChE
College Station	Ardmore, Oklahoma
Hughes, Wray Payne, 4 EEWaco	Johnson, Daniel Hubbard, 3 ME
Hulsey, J. W., 3 SciMerit	San Antonio
Humason, Dan Will, 1 AAHouston	Johnson, Edgar Hayes, 2 EE
Humphreys, James Wendell, 1 AADenton	Elizabeth, Louisiana
	Johnson, Emerson Hubert, 2 AAHull
Humphries, Jennings, 3 AAAustin	Johnson, Harold Eugene, 3 MEYoakum

Johnson, Hans Patrick, 1 EEPalestine Johnson, James Raymond, 2 CEPharr Johnson, Louis Frederick, 1 EEHutto Johnson, William Charles, 4 ChE	Kilpatrick, Robert Emmett, Jr., 2 ME
Johnson, James Raymond, 2 CEPharr	Galveston
Johnson, Louis Frederick, .1 EEHutto	Kincaid, John Irwin, 4 AgKerrvill
Johnson, William Charles, 4 Che	Kincaid, Thomas Armstrong, Jr., 4 Ag
Johnston, Kenneth Howard, 1 CE Dallas	Ozona
Johnston, Kenneth Howard, 1 CEDallas Johnston, Lawrence Walton, 2 LA	Kincannon, G. E., Jr., 1 EEBruceville Kincannon, Louis Weldon, 1 CE
Fort Worth	Kincannon, Louis Weldon, 1 CE
Johnston, Murray Lloyd, 1 EEHouston	Kinchen, Albert Leonard, 3 CE
Johnston, Thomas Frazier, 2 EETrinidad Jones, Ben Lee, 1 MEHouston	Breckenridg
Jones Carol Lafavette 2 Sci Lufkin	King, Elias Dubose, Jr., 1 EE Bronson
Jones, Carol Lafayette, 2 SciLufkin Jones, Clyde Leon, 1 EEPort Arthur Jones, E. Bedford, 2 ArEastland Jones, Fred Jackson, 2 AgFarmersville	King, Elias Dubose, Jr., 1 EE Bronson King, James Devereaux, Jr., 2 LAEnni King, Jarmon Everett, 2 ArThrockmorton
Jones, E. Bedford, 2 ArEastland	King, Jarmon Everett, 2 ArThrockmorton
Jones, Fred Jackson, 2 AgFarmersville	King, Stewart Edmund, I CESan Antonio
Jones, Henry Murry, 2 AASan Amtonio	Kinnison, William Gaston, 2 SciEl Pase
Jones, Hubert Richmond, 1 TE Weatherford	Kirkpatrick, Arthur Maurice, 2 CM
Jones, Issac Grady, Jr., 1 EE Dallas	Kittrell, Bailey W., 3 EE Big Lake Kleber, Fred Michael, Jr., 2 AA Dalla
Jones, Jack Maresh, 1 Sci Houston	Kleber, Fred Michael, Jr., 2 AA Dalla
Jones, Joe Mac, 1 AADallas	Kiein, Eugene John, 2 Ar San Antonio
Jones, James Truett, 1 AAThornton	Kluttz, Robert Algustus, 2 AgEng
Jones, Roy Addison, 1 CMSan Antonio	Knopp Charles Balah 2 I.A. McKinney
Jones, Robert B., 1 ChELeesville, La.	Knapp, Charles Ralph, 3 LAArlington Knapp, Joseph Greer, 1 ArKaufman
Jones, Robert Steele, 2 ArEastland Jones, Tom Ingle, 4 CEDallas	Knapp, William Allen, 4 EE Kaufmar
Jones, Volney Hurt, 3 AgArlington	Knapp, William Allen, 4 EE Kaufmar Knight, Cam Black, 3 IA Temple
Jones, Weldon Everett, 1 AgHillsboro	Knipling, Edward Fred, 2 Ag., Port Layacs
Jones, Weldon Everett, 1 AgHillsboro Jones, William Leslie, 2 AgEdBryan	Knippa, Edwin William, 1 TEKnippa Knox, Edwin Boesch, 1 MEElectra
Jordan, Charles Henry, 4 IE Velasco Jordan, Leland Thomas, 3 ME Floresville Jorns, Cecil Forrest, 1 Sci Houston	Knox, Edwin Boesch, 1 MEElectra
Jorgan, Leiand Thomas, 3 MEFloresville	Knupp, Paul Raymond, 2 ArAmarillo Koehler, Albert Ernest, Jr., Sp CM
Juvenal, Preston Maurice, 1 EE	Dickinsor
Crystal City	Koehler, Henry Emil, 1 ME Weiman
Kaiser, George B., 4 EEWharton	Koenier, Rudolph Hugo, 1 ArDickinsor
Kallus, Vaclav Thomas, 2 AgHallettsville	Koerth, Robert Lee, 1 AAYoakum
Kaper, John, Jr., 1 MENederland	Konecny Johnny Frenk 1 J A
Kasprowicz, Billie Joseph, 2 AABrenham Kasprowicz, Max John, 2 ArBrenham	Konecny, Johnny Frank, 1 LABryar Kooken, Robert Andrews, 2 SciHamilton
Kauffman, Christian Daily, 1 EE	Nornegay, Ulifford Newton 4 AA Winton
Fort Worth	Kossbiel, Robert Claude, 3 CECuero
Kavanaugh, Frank Eugene, 2 ME	Kramer, Arnold Herman William, 1 ME
Vachen Wand-11 I	Kossbiel, Robert Claude, 3 CE
Keahey, Wendell Lowe, 1 AABluff Dale Keating, Thomas Morrison, 3 AgEd	Houstor Houstor
Cranduious	Kreager, D. J., 3 CE. Dallas
Keel, John Louis, Jr., 2 Ag	
Keen, Elza McDonald, 3 EEMcKinney	Kroulik, Alfred Raymond, 3 AA Bellville Kuehn, Alfred Adolph, 2 EE Taylor Kunitz, Marcellus Richard, 4 EE Sinton Kunitz, Kalph Albert, 3 Sci. Sinton Kunitz, Kalph Albert, 3 TE McGregot Kun, Howard Edward, 3 TE McGregot Kuykendall, William Elton, 2 EE
Keepers, Hugh Verner, 1 CEKarnes City	Kuenn, Alfred Adolph, 2 EE Taylor
Keeton, Harry Hampton, 1 LA	Kuniz Rainh Albert 2 Cai
Keeton, Wilbur Frank, 1 LA Devine Keifer, Harry Lee, 1 Sci. Healdton, Okla.	Kun Howard Edward 3 TE McCross
Keifer, Harry Lee. 1 Sci Healdton Okla	Kuykendall, William Elton, 2 E.E.
Keisling, Willis Newton, 1 EEStanton Keith, James Long, Jr., 1 ArBeaumont Keith, Joseph Pressley, 1 EEHouston	Kyser, Eugene Elliot, 2 AAMarlin
Keith, James Long, Jr., 1 ArBeaumont	Kyser, Eugene Elliot, 2 AAMarlin
Keith, Joseph Pressley, 1 EE	Laboa, Victor, 1 ChE Houston
Keith, James Robert, Jr., 3 ChECleburne Kelley, Ocie Custer, 1 CM	LaBoa, Victor, 1 ChE Houston Lace, Robert Gleen, 1 Ag. Burleson Lacey, Haden Eugene, 1 CM Cushing Lackey, Hubert Byron, 2 Sci Fort Worth
Kelly, Jack Walter, 3 AA Tayarkana	Lackey, Hubert Byron, 2 Sci Fort Worth
	Bucy, Francis Hickman, Jr., 1 AA
Kennedy, James Russell, 4 AADenison	Marble Falls
Kennedy, James Russell, 4 AADenison	Lacy, Graydon Samuel, 1 Ar. Carthage
Mc.ineuv. Kennein. I AA Livingston	
Kennedy, William LeRoy, 4 MEBeaumont Ketterson, Frank Andrew 3 ChF. Houston	Lacy, Richard Wells, 1 Ar. Breckenridge Lagow, Thomas Kenneth, 3 Ar. Dallas
Ketterson, Frank Andrew, 3 ChEHouston Ketterson, Thomas Bagby, Jr., 1 LA	Lairu, Urville, Z EE Mineral Wolle
	Lam, Frank Hampton, 1 EE Oglechy
Kezeler, James Linden, 2 EE	Lamb, Newton Willard, I Sci Dellac
Kezeler, James Linden, 2 EE Manitou, Colorado	Lamb, Raymond Thomas, I CM Houston
Kidd, Maurice Estes, 1 EEKatemcy	Lancaster, Joe John, 2 ChEBeaumont
Killian, Jim Gaddy, 2 AgAlvord	Lancaster, Jess Wade, 1 EEFort Worth
Killough, John Michael, 3 CEStephenville	Land, Robert Curtis, 1 AARogers
Stephenville	Landers, Tilman Brooks, 2 AgMenard

Lane, Robert Bruce, 2 CEJoaquin Laney, Jack Eugene, 1 ChEEastland	Lofstrom, Charles Pittman, 1 EE
Lang, Howard Anson, 1 AADallas	Lokey Walter Clemons 1 CM Runge
Lange, Howard Fred, 2 AALlano Langford, Henry Lee, 1 ChEHillsboro	Lomax, George K., Jr., 1 CEPort Arthu. Lorraine, George Bruce, 1 EEMarshal Loupot, Herman Max, 2 CMDallar
Langford, Stuart Smith, 3 EEFort Worth	Loupot, Herman Max, 2 CMDallas
Langford, William Burnard, 4 IEHillsboro	Love, Alan Cavitt, 1 MEBeaumon Love, George Elliot, Jr., 2 AgDel Ric
Langran, Robert Milton, Jr., 1 LA	Love, William Frank, 4 MESherman
Langridge, Unitional Richard, I EE	
Lanham, Sam Willis Tucker, Sp AgEd Waco	Lowe, Albert Edward, 4 AAWeatherfort Lowrey, Robert Dyer, 2 AASmithville Lowry, Burris Howard, 1 AAWeatherfort
Lanier, Granville Teaff, 1 LA	Lowry, Burris Howard, 1 AA
Laster, Lawrence Lafayette, 2 ChECuero	Luse, William Oscar, 3 EEBellville Lyon, Marlin Charles, 1 AATexarkans
Laster, Wylie Kerns, 1 MECuero Latta, James Edwin, 1 ChETyler	Lyon, Marlin Charles, 1 AATexarkans
Latta, James Edwin, 1 ChETyler	McAllister, Millard Fuller, 1 ChEDallas McAlpine, Richard Leftwich, 1 EEDallas
Laughlin, Elmo Burgess, 1 LAHouston Lawrence, Edwin Ralph, 4 AgHillsboro	McBride, Gerald Crews, 4 CE Leonard
Lawrence, Robert Franklin, 4 AgLuther Leaverton, Dave Nunn, Jr., 1 Arch	McBride, Gerald Crews, 4 CELeonard McBride, James Clark, 1 CEWacc
Leaverton, Dave Nunn, Jr., 1 Arch	McBurnett, Cecil Frederick, 2 ChE
Leckie, William Ray, 1 MERuston, La.	McCaffrey, Kermit Spangler, 1 CE
LeDoux, Francis, 1 EEEunice, La.	Palestine
Lee, Walter Best, Jr., 1 CESpur Leeman, George Berry, 1 LA	McCaleb, David Courtland, 1 CMAustin
Leeman, George Berry, 1 LA	McCann Kenneth Gale 2 CE Houston
Leffingwell, Sammie Dennis, 4_AA	McCann, Kenneth Gale, 2 CE Houston McCarthy, Glenn Herbert, 1 ArchHouston
Leftwich, Gus Stanley, 1 LAAmarillo	McCarthy, George Patrick, 3 AAEnnis
Leftwich, Gus Stanley, I LAAmarillo Leftwich, Herman Charles, 1 EE	McClaugherty, Sidney Earl, I AgEd
Fort Worth	McClelland, Hugh Milliken, 1 Ag
Legg, Eugene Pinson, 1 CE	McClumer Samuel Balant 1 May 1 May 1
Leggett, Raymond Francis, 1 LAMenard Lehde, Johnnie R., 1 LACaldwell	McCluney, Samuel Robert, 1 LA
Lehman, August John, 3 EEGiddings	McCollum, John L., 4 AAHaskel
Lehman, Herman Oswald, 2 SciGiddings	McCollum, Justin Pearman, 3 AA
Lehman, Herman Oswald, 2 SciGiddings Lehmann, Gus Adolph, 3 AgEdMason Lehrer, Charles Gerrard, 2 AAAbilene	McCorquodale, Wilmer Elmer, 1 ChE
Leidecker, Robert Augustus, 1 Ar	McCarthy, Glenn Herbert, 1 ArchHouston McCarthy, George Patrick, 3 AAEnnis McClaugherty, Sidney Earl, 1 AgEd McClelland, Hugh Milliken, 1 Ag Newton, Kansa; McCluney, Samuel Robert, 1 LA Waxahachi McCollum, John L., 4 AAHaskel McCollum, Justin Pearman, 3 AA Valley View McCorquodale, Wilmer Elmer, 1 ChE McCowen, D. Lloyd, 1 MECleburn McCown, Jack, 2 AAWhitney McCown, Robert Lawrence, 3 EE Fort Wortl
San Angelo	McCown Jack 2 AA White or
Lentz, Cody, 2 AARed Rock Lentz, Dennis Curry, 2 AARed Rock	McCown, Robert Lawrence. 3 EE
Lesikar, George. 4 F.E1emble	Fort Worth
Lesikar, Laddie John, 4 EETemple	McCrea, William Wilson, 4 EE Dalla. McCune, Elton Lewis, 3 ME Dalla.
Leslie, Frank Claude, 4 EE Dallas Leslie, Sydney Clyde, 1 CE	McCurdy, Bootie William, 1 Ar
Leslie, Sydney Clyde, 1 CEHouston Lester, Harry Vanderburgh, 4 EEDallas	McDaniel, Eugene William, 2 AAHubbar McDaniel, Hugh Hines, 4 TEHillsbor
Levene, Frank, 1 Sci	McDaniel, Eugene William, 2 AAHubbare
Lewellen, Thomas Wayland, 1 Ag	McDonald, Andrew Hughes, 2 CE
Plainview	Pilot Point
Lewie, George Phillip, 1 ChEGainesville Lewis, Alf Allen, 4 CEKaufman	McDonald, A. P., 3 EE Leesville, La McDonald Charles Claveland 4 CF
Lewis, Henry Lee, 1 ChEHouston	McDonald, Charles Cleveland, 4 CE
Lewis, Henry Lee, 1 ChE	McDonald, David Eugene, 1 ME
Liem, Edwin Mound, I AACenter	McDonald, Edward Owen, 2 MEJefferson
Lightfoot, Thomas Ewart, 1 ArHouston Ligon, Lenox Mahan, 1 AgLlano	McDonald, James Albert, 3 EECuero
Lindsey, Reginal Forest, 2 Ag	McDonald, Mitton Dilmus, 1 EE Abilene
Lister, Walter Sydney, Sp SciLivingston	McEvoy, Webster, Jr., 1 CE Houston McFadden, Elmer Herschel, 2 LA
Littlefield, William Morris, 3 CE	Howlen
San Benito	McFerland Clay 4 EF
Littleton, John Clay, 1 ArAbilene	McFatridge, Robert Frank, Jr., 4 Ag
Lively, Richard Price, 1 ArDallas	McGee, Paul Lafayette, 1 ME Bryan McGee, W. C., Jr., 1 CE Dodd City McGinney, Henry Frederick, 2 LA
Lloyd, Joseph Bowen, 1 LABryan	McGee, W. C., Jr., 1 CE Dodd City
Locke, Wallace Drummond, 1 LABryan	mcGinney, Henry Frederick, 2 LA
Lockett, Tyler Coleman, 2 LA	McGinnis, Charles Taylor, Jr., 4 AA
Chicago, Illinois	m 1

McGlaun, Shirley Holmes, 1 AA	Martin, Brice B., 1 SciWoodville
Sweetwater	Martin, Brice B., 1 Sci
McGowen, Edward Lerov, 1 ChEGenoa	Martin, Fred William, 1 EESintor
McGowen, Edward Leroy, 1 ChEGenoa McGrath, John Joseph, 1 SciSan Antonio	Martin Coorge Washington 2 FF Bruar
McGraw, L. G., 3 AgCenter	Martin, Harvey Bedford, 2 AABryan
McGuire, Jesse Hamilton, 1 MEAustin	Martin, John Albert, 3 EESan Antonio
McGuire, Thomas Campbell, 2 MEHouston	Martin, Harvey Bedford, 2 AA Bryan Martin, John Albert, 3 EE San Antonic Martin, Joe Morris, 1 Ag Mt Vernor Martin, Lloyd Earl, 1 ME Humble
McIntosh, Forrest Raymond, 1 EE	Martin, Lloyd Earl, 1 MEHumble
Long Beach, California	Martin, Marion Frank, 3 EEStephenville Martin, Prentice LeRoy, Jr., 1 AA
McIver, Alton Brooks, I CMSan Antonio	Martin, Prentice LeRoy, Jr., 1 AA
McKee, Jordan Rufus, Sp Sci	Fort Worth
College Station	Massey, Reid Anderson, 4 EE
McKelvy, Carl, 3 AAValley Mills	Mather, George Albert, Jr., 2 ME
McKinley, DeWitt, 3 MEFort Worth	Mather, George Albert, Jr., 2 ME
McKinley, William Wallace, 1 AA	San Antonio
Waling To 2 An Pearsall	Mathews, Jewel Pearson, 1 AA
McKinney, Leo T., 2 ArMarlin	Mathews, Walter Preston, Jr., 2 ArDallas
McKnight, Cyrus, 3 EEPampa McKnight, Lawrence Earnest, 2 ME	Mathia John A. In 1 FF
	Mathis, John A., Jr., 1 EE
McLeod, Gordon West, 3 LASan Antonio	Mathis I. T 1 CE Was
McLeroy, Ervin Balfour, 1 AgBryan	Mathis, Raymond Hicks, 3 AgEdBryar Matson, Luther August, 1 MEPort Arthur
McLeRoy Richard Ransom 2 ME Tyler	Matson, Luther August 1 ME Port Arthur
McMahan Allen George 2 TE Whitney	Mattern, Thomas William, 1 ArColumbus
McMahan, Robert, Lee, 1 EE Waco	Matthews, Clarence Harold 1 EE
McLeRoy, Richard Ransom, 2 METyler McMahan, Allen George, 2 TEWhitney McMahan, Robert Lee, 1 EEWaco McManus, Dudley Cullen, Jr., 2 CM	Breckenridge
Kenedy	Matthews, Joe Walter, 1 EEKaufmar Matthews, Will Clifford, 1 EEFort Worth
McMath, Charles Wallis, 3 ChEDenton McMurrey, William Cruse, 1 CE	Matthews, Will Clifford, 1 EEFort Worth
McMurrey, William Cruse, 1 CE	Mattiza, Odes Otto, 1 EE
McNallen, Paul James, 1 ArAmarillo McNeel, Day Pattison, 1 Land	DeRidder, Louisiana
McNallen, Paul James, 1 ArAmarillo	Mattiza, Odes Otto, 1 EESilsbee
McNeel, Day Pattison, 1 Land	
McNeill, Albert Raymond, Sp MEDallas McWatters, Herman Thornton, 1 ChE	Mauritz, Marcus Wilhelm, 1 LAGanade Maxwell, Curtis Fred, 3 SciCorsicans Maxwel, Robert Davisson, 1 Land
McNeill, Albert Raymond, Sp MEDallas	Maxwell, Curtis Fred, 3 SciCorsicans
McWatters, Herman Thornton, 1 ChE	Maxwel, Robert Davisson, 1 Land
McWhirter, Jim Ned, 2 ArRoby Mabry, Frank Merriwell, 4 EE	Maxwell, Walter Earl Syphrett, 1 ME
Mehry Frank Marrian II 4 EE	Maxwell, Walter Earl Syphrett, 1 ME
maury, Frank Merriwell, 4 EE	Mayfield, Owen Clifton, 1 EE Harlinger Mayo, Clyde Culberson, 3 AA Robstown Mehane Robert Fusco 3 MF
Machemehl, Louis Arnold, 2 AABellville	Mayo Clyde Culborgon 2 AA Delat
Machen, Henry Bailey, 1 AgSeymour	Mehane, Robert Eugene & MF Lockbow
Mackenson Otto 4 Ag San Antonio	Meeks, Rennon Felix 1 CM Abilem
Mackenson, Otto, 4 AgSan Antonio Maddox, Warren Vance, 2 AgEra	Meharg, Jack, 1 Ag Chilliagthe
Magill, James Rankin, Jr., 3 ME Dallas	Mebane, Robert Eugene, 3 ME Lockhar Meeks, Rennon Felix, 1 CM Abilene Meharg, Jack, 1 Ag Chillicothe Meharg, Joe, 1 Ag Chillicothe Meharg, Sam Grigsby, 1 Sci. Plainview
Magill, James Rankin, Jr., 3 MEDallas Mailhos, Charlie Elmer, 2 EE	Meharg, Sam Grigsby, 1 Sci Plainview
Elizabeth, Louisiana	
Mainer, Nicholas Jackson, 4 ArWaco Majors, Williford Horace, 2 AA	Meitzen, Ben Vaughn, 1 CE. San Antonic Menger, Herbert Emil, 2 Sci. San Antonic Mercer, Carl Silas, 1 EE. Alt Merren, Everett Jay, 1 LA. Port Arthu Messer, William Casher Casher
Majors, Williford Horace, 2 AA	Menger, Herbert Emil, 2 SciSan Antonio
Mallory, Cecil Fieldon, 1 ChEDallas	Mercer, Carl Silas, 1 EEAlto
Mallory, Cecil Fieldon, 1 ChEDallas	Merren, Everett Jay, 1 LAPort Arthur
Mangum, Bruce Robert, 1 CEPoteet Maniss, Harold Edwin, 1 ChEGainesville	
Maniss, Harold Edwin, 1 ChEGainesville	Metz, Milam Sutton, 2 SciKenedy
Manly, Clarence Edward, Jr., 1 AA	Hetz, Milam Sutton, 2 Sci
Mann Dudley Theres 2 A Cotulla	
Mann, Dudley Thomas, 3 AgTaylor	Meymarian, Albert Thomas, 1 Ag
Manner, Harold Eugene, 1 AADallas Manning, James Crawford, 1 AA	Michael, Joe Burke, 2 ChE Fort Worth
Ardmore, Oklahoma	Middlebrook, Edward Walker, 4 Ar. Middlebrook, Earl Williamson, 1 CE.
Manton, William James, 3 MEBellevue	Nacordopho
Maples, Ben Nevil, 1 Ar	Middlebrook, Earl Williamson 1 CE
Maples, Homer D., 2 ChE Dallas	
Markham, Ira Garrison, Jr., 1 ChE	middlebrook, vernon Eugene, Jr., 4 ME
Silshee	
Markle, Walter Hoarce 1 ME. Port Nechon	
Marmor, Raiph Anton, 1 ChE	
Moweagus Illinois	Miles, Robert Odell, 3 CEFort Worth Miller, Arthur Oliver, 1 AAKaty
Marrs, Cecil Douglas, 1 ChE West	Miller, Arthur Oliver, 1 AAKaty
Marshall, Berry Luther 1 AA Cilmon	
Marshall, Cilli Benton, 3 AA Silshee	
marshall, Carroll Laverne, 3 SciHouston	Miller, Daniel Bernard, I ME Utles
Marshall, Robert Theodore, 4 EEHouston	Miller, Edwin Benno, 1 EEKyle
Marshall, William Neill, 1 AAGilmer	Miller, Earl Camp, 2 MEDenisor
Martin, Albert Dow, Jr., 3 EEBryan	Miller, Erman Lanier, 1 ChE Abilene

Miller, George Edward, 4 AABeeville	Morris, Richard Enoch, Jr., 1 CE
Miller, Hilmer Alex, 2 AAKyle	Big Spring
Miller, Joseph Holman, 2 AA	Morris, Roger Jose, Jr., 2 CEDallas
San Augustine	Morris, W. C., Jr., 3 LAForreston
Miller, James Lewis, Jr., 1 Arch	Morris, W. C., Jr., 3 LAForreston Morrison, Walton Steve, 2 LABig Spring
	Morrow, W. Jack, I LALadonia
Miller, Robert Bailey, 1 Ag. Bishop Miller, Virgil Oscar, 2 Ag. San. Gabriel Mills, Tom Will, 1 LA. Groesbeck Milner, George Leeroy, 1 Ag. Winnsboro Mins, James Willis, 1 EE. Cleburne	Morse, George Wesley, 2 AALinden
Miller, Virgil Oscar, 2 AgSan. Gabriel	Mortellra, Ross Lee, 1 AAHouston Moseley, Sam Leon, 2 EEItaly
Mills, Tom Will, I LAGroesbeck	Mocher Edward Joseph A ME Dallas
Miner, George Leeroy, I Ag Winnsboro	Moss David Jackson 2 ME Cisco
Minkert, William Francis, 2 LABryan	Mosher, Edward Joseph, 4 ME Dallas Moss, David Jackson, 2 ME Cisco Motherspaw, Jack Martin, 1 ME
Minor, William Smoot, Jr., 4 CE	San Antonio
Minor, William Smoot, Jr., 4 CE	Mount, Glynn O., 1 LACrystal City
Minter, George Lockett, Jr., 1 LAAbilene	Mowery, Charles Leslie, 2 AgAlmeda
Minter, Joseph Oliver, Jr., 1 CE	Mueller, Cornelius Herman, 1 LACuero
Oklahoma City, Oklahoma	Munson, George Poindexter, 4 CE
Mitcham, John Dunklin, 2 EEMurchison	Columbia
Mitchell, Carl Alexander, 4 CEOrange Mitchell, Charles Edwin, 2 EEDallas	Munson, Hillen Armoor, 1 CEAngleton Muntz, George Thomas, Jr., 1 ME
Mitchell, Charles Edwin, 2 EEDallas	Port Arthur
Mitchell, Elzie Naylor, 4 EEChildress Mitchell, John Ellis, 3 CESan Antonio	Murchison, George Marshall, 3 ME
Mitchell Robert Francis 1 AA Frost	Grapeland
Mitchell, Robert Francis, 1 AAFrost Mitchell, William Gardner, 1 AA	Murchison, Weldon Octavious, 2 LA
Longview	Grapeland
Mixon, France Kell, 4 TE	Murchison, William Polk, 2 LACorsicana
Moehlman, C. B., 1 EEBryan	Murdock, Earl Sanders, 1 EEGrapeland Murphy, James Alton, 1 ArMineral Wells
Moers, Bertran August, Jr., 2 Ag	Murphy, James Alton, 1 ArMineral Wells
Rosenberg	Murphy, Leland Taylor, 1 ArLland Muzzy, Benjamin Dale, Jr., 4 IE
Mohler, Frank Leon, 2 CECameron	Muzzy, Benjamin Daie, Jr., 4 1E
Monaghan, Richard Paul, 1 AA	Myers, Clyde Purvis, 1 SciFloresville
Monk, Roy Marvin, 2 AgCenter	Myers, Kenneth Leonard, 2 EECleburne
Monroe, James Edward, Jr., 2 ArEl Paso	Myers, Samuel Benjamin, 3 LA
Montague, Walter Russell, 1 EE	San Antonio
Beaumont	Myers, Willie Homer, 3 EEValley View Myrick, James Leonard, 2 AgEdTerrell Nahas, Jack Nicholas, 1 EEBeaumont Nall Jerreld Hubert 1 FEPelestis
Montfort, John Harris, 3 ChEChatfield	Myrick, James Leonard, 2 AgEdTerrell
Montgomery, Feltus, 2 AADonna	Nahas, Jack Nicholas, 1 EEBeaumont
Montgomery, Sam H., 2 AAWhitewright Montgomery, Wilmon Newell, 1 EEDonna Montgomery Ollham 8 ME	Nall, Jerrold Hubert, 1 EE Palestine Nance, Alton Alonzo, 2 Sci
Montgomery, Wilmon Newell, I EEDonna	Nanney, Nunan Henry, 2 ArBreckenridge
Montrief, Richard Oldham, 2 ME	Naylor, Walter Estes, 1 CMSan Antonio
Moody, Dwight L., 2 EE Tehuacana	Neal, Clyve Milton, Sp ME Breckenridge
Moon, Lemuel Harold, 2 TE Troup	Neal, Raymond Edwin, 2 AATemple
Moon, Thomas Jefferson, 1 AgHarlingen	Neale, John J., 2 LADenton
Moore, Alvan Augustus, 1 AgItasca	Nealon, Clark Lionel, 1 LA San Antonio
Montrier, Richard Oldham, 2 ME Fort Worth Moody, Dwight L., 2 EE Tehuacana Moon, Lemuel Harold, 2 TE Troup Moon, Thomas Jefferson, 1 Ag Harlingen Moore, Alvan Augustus, 1 Ag Itasca Moore, Edwin Mathes, 2 LA Houston Moore, Frank Hill, 1 LA	Nedbalek, Ben William, 2 ME Bryan
Moore, Frank Hill, 1 LAMay	Nedbalek, Louis Edward, 2 MEBryan Needham, Earlie Buren, 1 CEColeman
Moore, George Harvey, 3 CE	Needham, Reginald Lee, 2 SciLorena
Moore, Joe Gregg, 1 LA Crystal City Moore, Lister Russell, 1 ChETexas City	Neeley, Frederick Earl. 4 EE Quanah
Moore, Samuel Ausburn, 2 AgMt. Vernon	Neeley, Frederick Earl, 4 EE. Quanah Neff, Judson, 4 ME. Laredo
Moore, Vin Welsh, 1 ArBelton	Neff, William Deyerle, 3 EEDallas
Morales Juan Antonio 1 LA	Neighbors, Charles Carroll, 3 ChETyler
Saltillo, Coah., Mexico	Neilson, Howard, 3 EESpearman
Morehead, William Foster, 1 Ar Albany	Nettles, Robert Clarke, 1 EE Dallas
Morgan, Albert Elanzo, Jr., 4 LA	Neubauer, Theodore Albert, 4 AATaylor Neuman, Vincent John, 1 Ar
Margan Charles Essential DE	Lukavice Czecho Slovelie
Morgan, Charles Emmett, I EEHouston Morgan, Charles McRae, 35 CE	Lukavice, Czecho-Slovakia Neumann, Erwin Reinhard, 1 Ag Perry
Camder Arkansas	Neumann, Wesley John, 1 Ag Perry
Morgan, John Caleb. 3 ChE bort Worth	Neumann, Wesley John, 1 Ag Perry Newberry, James Presnall, 3 ME
Morgan, John Caleb, 3 ChEFort Worth Morgan, Paul Luton, 1 EE	San Antonio
Morgan, T. A., Jr., 2 CMHouston	Newman, Carl Armand, Sp TE Houston
Morgan, T. A., Jr., 2 CMHouston	Newman, John Anton, 1 LA
Morgan, William Edgeworth, 2 AA	Newman Frank Hastings In 1 CE
Morris Angen Badeet 1 As	Newman, Frank Hastings, Jr., 1 CE
Morris, Anson Padget, 1 AgForreston Morris, Cline Eugene, 1 AgSeymour	Newsom, Allan Earl, 2 AALlano
Morris, Cline Eugene, 1 AgSeymour Morris, Edward Leroy, 1 AgSan Angelo	Newton, Walter Oliver, Jr., 1 LA
Morris, John Allison, Jr., 2 AA	Cameron
Beaumont	Nichols, Arthur Edgar, 4 EE Columbus
Morris, Joseph Cowell, 1 MEDallas	Nichols, Clyde Russell 3 EE Time

Nichols, George Butler, 2 ME San Antonio Nickle, Fern Lawrence, 4 Sci Gainesville Nixon, Daniel Decatur, 1 Ar Hondo Noake, Bulis Newton, 1 CM San Antonio Noel, James Meredith, 3 Ag McCall, La. Noel, Marshall Lee, 4 ME Rice Norman, Ben Frank, Jr., 3 ME Palestine Norman, George Henry, 2 TE Kaufman North, Harvey Steinle, 1 ChE San Antonio Northeutt, Clyde B., 1 AA Frisco Northrup, Claud Browning, Jr., 2 ME Dallas Norton, Jesse Leo, 2 Ar Greenville Norveol, Roy, 4 EE Ennis Norwood, Jack Kyle, 1 Ar Beaumont Novosad, August Joe Thomas, 1 AA	Pear:
Nivon Daniel Decetur 1 Ar Hondo	
Nooke Pulis Newton 1 CM Con Antonio	Pear
Noake, buils Newton, I CMSan Antonio	
Noel, James Meredith, 3 AgMcCall, La.	Pear
Noel, Marshall Lee, 4 MERice	Peav
Norman, Ben Frank, Jr., 3 MEPalestine	Peck
Norman, George Henry, 2 TEKaufman	Pede:
North, Harvey Steinle, 1 ChESan Antonio	Peep
Northcutt, Clyde B. 1 AA Frisco	Peets
Northrup Claud Browning Ir 2 ME	Pend
Delles	Pend
Nonton Tool O An Consulting	1 Chu
Norton, Jesse Leo, Z ArGreenville	D i
Norvell, Roy, 4 EE Ennis	Pend
Norwood, Jack Kyle, 1 ArBeaumont	Peop
Novosad, August Joe Thomas, 1 AA	Perd
East Bernard	Perk
Nowotny, Berthold Eugen, 1 ME	
New Braunfels	Perre
Nunez, Edward 4 AA Grand Chenier La	
Oakes James William 1 LA Amarillo	Perr
O'Rannon Frank Rurdotto 1 CM Dallag	Perse
O'Dall I amin Minhaal 1 TER TI-makes	Petri
O Dell, Louis Michael, I EEHouston	1 6011
Odom, William Frederick, 2 AAKurten	Dotte
Ohls, William Arthur, 2 AAMercedes	Petty
Oldham, Raymond Lee, I EERalls	Petty
Oliphint, Fred Meador, 3 CEHemphill	Peyto
Oliver, Charles Bey, Jr., 1 LACaldwell	
Oliver, Edis Tilden, 1 LA Caldwell	Peyto
Oliver, Gale, Jr., 2 AA San Antonio	
Oliver John Calvin 1 CE San Angelo	Peyto
Oliver James Parker 1 CM Caldwall	Pfan
Oleon Guetava Pohort 2 An Wass	
O'Noil Don Heath 9 IA Committee	Pfeif
O Neil, Dan Heath, Z LAGreenville	1 1011
Oprysnek, Cornelius, 4 AgNew Braunfels	Pfeu
Orchard, Charles David, 2 ChE	Fieu
Norwood, Jack Kyle, I Ar. Beaumont Norwood, August Joe Thomas, 1 AA. East Bernard Nowotny, Berthold Eugen, 1 ME. New Braunfels Nunez, Edward, 4 AA. Grand Chenier, La. Oakes, James William, 1 LA. Amarillo O'Bannon, Frank Burdette, 1 CM. Dallas O'Dell, Louis Michael, 1 EE. Houston Odom, William Frederick, 2 AA. Kurten Ohls, William Frederick, 2 AA. Mercedes Oldham, Raymond Lee, 1 EE. Ralls Oliphint, Fred Meador, 3 CE. Hemphill Oliver, Charles Bey, Jr., 1 LA. Caldwell Oliver, Gale, Jr., 2 AA. San Antonio Oliver, John Calvin, 1 CE. San Angelo Oliver, John Calvin, 1 CE. San Angelo Oliver, James Parker, 1 CM. Caldwell Olson, Gustave Robert, 3 Ar. Waco O'Neil, Dan Heath, 2 LA. Greenville Opryshek, Cornelius, 4 Ag. New Braunfels Orchard, Charles David, 2 ChE.	Phag
Ordonez, Carlos C., 2 Ar	
Girardot, Col., S. A.	Pheli
Orem, Arthur Buckanan, 2 SciHouston	
Orr, John Edward, 3 MEPort Arthur	Phife
Orr, Robert Windham, 4 EE. Dallas	
Ortolani, Lawrence, 3 CE Fort Worth	Phill
Osborne, Russell 3 LA Jefferson	Phill
Oshurn Jimmie Arthur 1 EE Big Spring	Phill
Overton Merritt Eugene 1 Ag Stemford	Phill
Owen John Wandell 1 EE Trans And	
Owen, John Wender, I EEHope, Ark.	Phill
Owens, Joe Reb, I EEFort Worth	Phill
Owens, Raymond Barton, 4 ArBonham	Phill
Pace, Julian Henry, I EEBeaumont	
Padgett, Herbert Augustus, Jr., 2 Ar	Philp
_ Fort Worth	Pian
Paez, Alexander, 3 EESan Antonio	D: 1
Palmer, Albert Luther, 1 EETerrell	Picka
Palmer, Edwin Parrish, 1 CMAlto	
Pampell, Vernon Collet. 1 CM Fort Worth	Picke
Parent, Frank Watson, 1 Sci Houston	Pigg,
Parish, Henry Everette 4 RE Resument	Pike, Pilch
Parker Colton Sidney 1 Ac Rankin	Pilch
Parker Finley Murdell 1 MF Towns City	Pilke
Parker Truett Cullon 1 Ag Hausten	Pints
Parker William Valo 9 ChE East Wood	Pipes
Opryshek, Cornelius, 4 Ag. New Braunfels Orchard, Charles David, 2 ChE	Pirio
Porrett Arthur Films 8 44	Pirie Poch
rarrott, Arthur Edger, 3 AAMart	Pogu
Parsons, Walter Herbert, Jr., 2 Ar	
Palestine	Polze
Parten, Leo Winn, 4 MEDallas	Pome
Patrick, John Ernest, 1 LA	Pool,
Patterson, James Alexander. 1 Sci Dallac	Pope
Patterson, James Alexander, 1 SciDallas Patterson, John Thomas, 1 SciAustin	Pope
Potton Jones Towns 9 4	Porte
Patton, James Lawner, 3 ArDallas	Porte
Patton, William Pannell, 3 AgLockhart	Porte
	Dont
Pausewang, Harold Meyer, 3 ME Marion	Porte

Pearson, Allen V., 1 AgDel Rio Pearson, Lawrence William, 1 LA
Pearson, Morse Samuel, 1 Ar. Houston Pearson, Richard O'Neale, 4 EE. Colorado Peavey, Floyd Edward, 1 Ag. Silsbee Peck, Elam Alpha, 3 Ag. Stephenville Peden, Richard Denny, 1 LA. Houston Peeples, Rufus Rodrick, 4 Ag. Tehuacana. Peets, George Halsey, 1 LA Galveston Pendleton, Alfred Moore, 1 AA. Dallas Pandleton, Homer Alexandar Lr. 1 AA.
Wichita Falls Pendleton, Hugh Halsell, 4 LA. Dallas Peoples, Allen Harlan, 4 LA. Dallas Perdue, Lovic Pierce, 3 EE. Texarkana Perkins, Malcom Gilbert, 1 AgEd.
Perrenot, Frederick Adrian, 1 EE
Perry, Robert Terrell, 1 CM. Cooper Person, Ernest Wilford, 1 EE. Stockdale Petrie, Benjamin Russell, 2 CE. Elkton, Kentucky
Petty, Joe Winston, 1 LATulsa, Okla. Petty, S. J., Jr., 3 EEDecatur Peyton, Andrew Hollingsworth, 2 Ag
Peyton, Chester Alan, 2 ChE.
Peyton, Francis Keith, I SciSan Antonio Pfannkuche, Henry Charles, Sp Ar
Pfeiffer, Elbert Halcyon, 1 ChE
Pfeuffer, Tug Somers, 3 AA
Phagan, Vernon, 2 AgEng Bellevue Phelps, William Hal, Jr., 1 Ar
Phifer, Alfred William, 1 Land
Phillips, Ewell Curtis, 1 ME
Phillips, John Edgar, 1 Ar. Dallas Phillips, John Oran, 2 EE Kirbyville Phillips, Roy Hill, 1 Ar Houston Phillp, James William, 2 EE Houston Pianta, Emanuel Nathan, 4 Ar.
Pickard, Wilford Frank, 1 ME
Pearson, Allen V., 1 Ag
Tofter, marvin Milton, 2 LACaldwell

Porter, William Albert, 2 AA
Prewitt, Joseph Kemper, 1 LA
Quisenberry, John Henry, 1 REGoodlett Ragsdale, Elmer Martin, 1 ChEMcAllen Ragsdale, Lewis George, 4 SciMcAllen Ragsdale, Lucien Guyton, 1 ME San Antonio Ramirez, Guadalupe, 1 AgMackay Ramsey, Charles August, 1 AABastrop
Randolph, Frederick Hunter, 1 Land. Rankin, Emmett Robert, 2 CE. Paris Rawlins, Alfred Henry, 1 ME. Ennis Rawlins, Francis Marion, 2 Ar. Lancaster Ray, Avriett Thomas, 2 CE. Temple Ray, Claris Boyd, 1 Ag. Lamesa Ray, John Allen, 1 EE. San Antonio Ray, John Wesley, 1 EE. Dallas Ray, William Oliver, 2 EE. Hereford Rea, Oscar J., Jr., 2 AA. Clifton Read, Arthur Edwin, 2 TE. Silsbee Read, Nathaniel Barkstell, 1 EE. Waco Reagan, Eugene Powell, 3 Ag. Beeville Reagor, James Gordon, 1 LA. Waxahachie Rechenberg, George Frederick, 1 LA. Rechenthin, Clifton Allen, 1 EE. San Antonio Redden, Clarence Rudolph, Jr., 3 EE. De Leon Redding, Howard, Howell, 3 EE. Handley
Rechenberg, George Frederick, 1 LA
Redden, Clarence Rudolph, Jr., 3 EE. De Leon Redding, Howard Howell, 3 EE. Handley Redfern, Percy Randolph, 2 TE. Mt. Pleasant Redinger, Joe Anthony, 2 ChE. Texarkana Redus, John Cleveland, 1 Ar. Palestine Reed, Eugene Clarence, 1 EE. McKinney Reed, Louis Phelps, 1 CE. Dallas Reed, Podge McCauley, 1 LA. Moody Reed, Woodley Wayne, 3 AgEd. De Leon Reese, Burton C., 2 ME. Ballinger Reese, Charles Keller, Jr., 3 CE. Houston Reese, E. P., Jr., 1 AA. Sweetwater Reichert, Fred Henry, 2 Ar. Fort Sam Houston Reid, Andrew Forest, 1 Ag. College Station Reiffert, Ralph Frank, 1 AA. Cuero
Reiffert, Ralph Frank, 1 AA Cuero Reilly, James Minard, 2 EE Dallas Rektorik, Jerome Alouis, Sp Sci Violet Renfro, John Edwin, 2 AAWest Columbia

Reordan, Richard Weston, 1 LA...Houston Rettiger, John Finis, 1 CE......Temple Revak, Joseph Anthony, 2 EE....Beaumont Revak, Joseph Anthony, 2 EE. Beaumont Reynolds, James Arthur, 2 AA. Bastrop Reynolds, Jordon Kennon, 2 EE. Pittsburg Reynolds, Marvin Pinkney, 1 EE. Combes Reynolds, Richard Wyatt, 4 EE. College Station Rice, Albert Murray, 1 Ar. San Antonio Rice, Edward Burns, 3 CE. Austin Rice, Elbert Rowe, 1 ME. Mexico D. F., Mexico Rice, Robert Roy, 1 EE. Aransas Pass Rice, Walter William, 2 Ag. Yoakum Richards, Charles William, Jr., 1 EE. Richards, Charles William, Jr., 1 EE.... Richards, John Wallace, 2 Ag......Waco Richards, Murdoch DeWitt, 1 AA..... Grapeland Richards, Phil T., 1 ME......Port Arthur Richardson, Charles Aaron, Jr., 1 LA..... Beaumont Richardson, Henry Phillip, 1 AgEd..... Richcreek, Dale Owen, 1 EE......Weslaco Richey, Harrell Orrell, 1 AA Richie, Silas Monroe, 3 EE...San Antonio Richmond, Thomas Rollin, 1 Ag Kyle Richter, Charles Edward, 3 LA Laredo Richter, James Donald, 1 ME Moulton Riedel, Harvey Alwart, 1 Ar Riced, Harvey Alwart, I Ar.

Chicago, Illinois
Riley, Clyde Fontaine, 3 EE...Lake Dallas
Riley, John William, 3 ChE.

Hazlehurst, Mississippi
Riney, Will Adams, 2 CE....College Station
Rippstein, Raymond Charles, 1 Arch. Rippy, Ben Ramey, 1 Ag. Sulphur Springs
Risien, Raymond Stanley, 1 LA.

Riter, Marshall Evans, 1 AA.

Fort Worth
Riter, Marshall Evans, 1 AA.

Forney
Robbins, Cooper Polk, 4 LA.

Ennis
Roberson, Clarence Wilbur, Jr., 4 AA. Roberts, Forrest Earle, 1 AA Terrell
Roberts, Forrest Earle, 1 AA Terrell
Roberts, Pius Philip, 1 CE Alvarado
Roberts, Raymond Rudolph, 3 Ag Hull
Robertson, Arthur Clyde, 2 EE Abilene
Robertson A T L CF Robinson, Aired Arnold, 1 CE. Galveston Robinson, Delbert Warren, 1 AA. Tuleta Robinson, Howard Grey, 2 Ag. Waelder Robinson, Harry James, 1 Sci. Beeville Robinson, Jesse Edwin, 1 EE. Spring Robinson, Jed Neal, 4 CE. Athens Rock, Frank Edwin, 1 EE. Cotulle Roden, Howard, 1 ChE. Yoakure Rodgers, Albert Washington, 1 LA. Rogers, Ben Thompson, 1 AA.....Austin Rogers, William C., 3 EEMarlin

Rogers, William Edward, 2 AACenter	Schuh, Frederick, 1 ME Port Arthur
	Cabubmann Willard Co. 1 AA Dallingan
Rohde, Clyde Nelson, 1 AAHearne	Schuhmann, Willard Gus, 1 AABallinger
Roland, Charles Albert, 3 AAEnnis	Schultz, William Kopple, 2 ArColumbus
Rolater, Coy S., 1 MECelina	Schultz, William Kopple, 2 ArColumbus Schulz, James Gerald, 4 LAThree Rivers
Roland, Charles Albert, 3 AAEnnis Rolater, Coy S., 1 ME	Schumann, Gerald Robert, 2 AABellville
San Antonio	Schutze, Walter, 3 AAAustin
Ronshausen, Francis Jackson, 3 AA	Schweers, Chester William, 3 EE
Port Arthur	San Antonio
Dage Oliver Durl 9 AgEd Whitney	Cahwana Chastan Adalah 1 CE Wasing
Rose, Oliver Buri, 2 Ageuwhitney	Schwope, Chester Adolph, 1 CEWaring
Rose, Oliver Burl, 2 AgEd Whitney Ross, Thomas M., 1 ME Waxahachie Rothe, Reinhart Louis, 2 Ar Hondo Rowe, Leslie Manly, 3 EE Wharton	Scoggin, William Conway, 1 CM
Rothe, Reinhart Louis, 2 ArHondo	San Antonio
Rowe, Leslie Manly, 3 EEWharton	Scoggins, Aubry Kelmar, 2 ME
Rowe, Marcus Gilbert, 3 MESour Lake Rowell, Joe Henry, 1 AAJefferson Rowland, William Clift, 3 EE	Danahastan
Rowell Joe Henry 1 AA Jefferson	Scott, Joe Edwin, 2 ME Plainview
Powland William Clift 9 FF	Scott John Pichard In C 1 Possille
Towiand, William Cint, o Element	Scott, Joe Edwin, 2 ME. Plainview Scott, John Richard, Jr., C 1 Beeville Scott, John William, 2 AA Denison Scott Marion Loseph 1 Ar Fort Worth
Tort worth	Scott, John William, Z AADenison
Ruffer, Frank Burrel, 1 Ar.	
Rumfelt, Henry Frederick Coats, 1 ME	Scott, Robert Wilkes, 3 LAGatesville Scott, William Winfield, 1 CEDallas
Rumfelt, Henry Frederick Coats, 1 ME	Scott, William Winfield, 1 CEDallas
Russell, Ernest Morton, 2 ArFort Worth	Scovell, John Field, 1 LA Wichita Falls
Russell Ernest Morton 2 Ar Fort Worth	Scudday, Edmon Daniel, 3 MEBrownwood Scully, William Thomas, 1 LADenison Seaberg, Ivan, 1 EEDayton
Russell, Hewlett Ausborn, 4 Sci	Scully William Thomas 1 I A Donigon
Russen, newiett Ausborn, 4 Sci	Contain Thomas, I LADenison
San Antonio	Seaberg, Ivan, I EEDayton
Russell, Jess Miller, 1 AAHereford	Seale, Edgar Allen, 1 LAJasper
Russell, William Perry, 1 ArBreckenridge	Searle, Harry, 1 EESan Antonio
Rutherford, James Alexander, Sp Ag	Segers, Joe William, 2 ME Tevarkana
Clausian d Ohia	Seifer, Joe Dunlan, 4 ChE Temple
Ryall, Noel Edwin, 4 AA. Jasper Ryall, Oscar L., 1 Ag. Jasper Rylander, Halley Garrison, 1 AA. Buda	Seifer, Joe Dunlap, 4 ChE Temple Sellers, Goodson, 1 Arch Abilene Sellers, John Dunbar, 1 Ag Mexia
Duali Ocean I 1 Am James	Sollows John Dunbon 1 Am Marin
Ryan, Oscar L., I Agassper	Contan Cliffer Dumbar, 1 AgMexia
Rylander, Halley Garrison, I AABuda	Senter, Clifton Burnish, 3 AgTeague
Rylee, Carl Milan, I EEGranbury	Servello, Thomas Angel, 4 Sci
Saibara, Robert, 1 EEWebster	Corpus Christi
Salazar, Hollis Lyons, 2 ME	Sessions, Hugh, 1 AAWells
Denver, Colorado	Sessions, Maurice, 1 AAAustwell
Samaras, George John, 2 EE. Fort Worth	Sewell, Frederick Perry, 1 EE Dallas
Samford Delton Wilson 1 CM	Shafer, Russell Edward, 3 EE.
Samford, Delton Wilson, 1 CM	Sharer, Russell Edward, 5 E.E.
Wills Point	Sheefen The Breckenridge
Samford, Thomas Clifton, 3 CE	Shaffer, Thomas Dayton, 2 CE Dallas
Wills Point	Shannon, Carl Steen, 1 LA Wharton
Sanders, Preston Randolph, 2 Sci	Shannon, Carl Steen, 1 LA Wharton Shannon, Dhuard Mobley, 1 ME
Big Spring	Normangee
Sanders, Robert William, 1 ChE Dallas Sands, Howard Roscoe, 1 AA Robstown	Shannon, Ivan Maurice, 1 ME
Sands Howard Roscoe 1 AA Robstown	
Sanguinet Fronk Fusens 1 Ar Fort Worth	Shaughnessy Welton Donnett 1 CE
Sanguinet, Frank Eugene, 1 Ar. Fort Worth	Shaughnessy, Walter Bennett, 1 CE
Sansom, Lin, 2 LA Alvarado	San Antonio
Satterfield, Walter Edwards, 1 ChEDallas Saunders, Jack Emmett, 1 ArDallas Savell, William Clarence, 1 CEMcKinney Scardino, Ned Anthony, 3 ChEBryan Scarlett, Wendell Ewing, 2 ChE. Houston Schade, Oscar Albert, 1 CEColumbus Schaefer, Chester Chris, 1 AA	Shaver, Raymond Elbert, 4 Ag. Tolar Shaw, Carroll Wiley, 3 TE. Henderson Shawver, Ernest Floyd, 3 EE. Dallas Shawwaf, Mahmud Saleb, 2 Ag. Beirut, Syria Sheckles, Lloyd Webster, Jr., 4 Sci.
Saunders, Jack Emmett, 1 ArDallas	Shaw, Carroll Wiley, 3 TEHenderson
Savell, William Clarence, 1 CEMcKinney	Shawver, Ernest Floyd, 3 EEDallas
Scardino, Ned Anthony, 3 ChE Bryan	Shawwaf, Mahmud Saleb, 2 Ag
Scarlett, Wendell Ewing 2 ChE Houston	Beirut Syrie
Schade Oscar Albert 1 CE Columbus	Sheckles Lloyd Webster Ir 4 Soi
Schaefer Chester Chris 1 AA	V1
betweeler, Ollester Chris, 1 AA	
San Antonio	Shellberg, John August, Jr., 1 EE
Schaefer, Carl Julius, 4 TE Schulenburg	Fort Worth
	Shelton, Cecil, 1 Land Dallas
San Antonio	Shelton, Thomas James, Jr., 2 LA
Scherer, Samuel Louis, 1 EEBeaumont	Plainview
Schier, Willie Henry, 1 AASealy	Shelton, Wasson, 1 ChE Plainview
Schiwetz, Preston George, 3 ChEPlacedo	Shelton, William Byron, 1 AgBerclair
Schlommor Hormon Fred 4 AA V-la	Shenardson Frank Albert 9 CE Du
Schlemmer, Herman Fred, 4 AAKyle	Shepardson, Frank Albert, 2 CE Dallas Sherrill, David Winfred, 1 Ag Kerens
Schmid, Edward Sigmund, 1 ArBrenham	Sherrin, David Winfred, 1 AgKerens
Schmidt, Carl Otto, C 2Mason	Shifflett, George Hardin, Jr., 1 ME
Schmidt, Carl Otto, C 2	Shifflett, George Hardin, Jr., 1 ME
Schmidt, Fred Charles, Jr., 4 EERosebud Schmidt, William Adolph, 1 EEYoakum	Snilling, John Milton, 1 MECotulla
Schmidt, William Adolph, 1 EE Voakum	Shirley, James A AA Vonue
Schnurr, Clark Edward, 1 ME	Shivel Robert Lee 4 AA Chamber
Manitou, Colorado	Shoemaker, Clarence Young, 2 AA
Schorlemer Poyel Charles 9 ME 7 1	T AA
Schorlemer, Royal Charles, 2 METivoli	Shock, Helbert Benjamine, 4 ME
Schriever, Bernhard Adolf, 1 Ar	BROCK, Reibert Benjamine, 4 ME
San Antonio	Shortal, Joe Adams, 3 MELufkin
Schrimpf, Lee Henry, 1 ChEDallas	Shortal, Joe Adams, 3 MELufkin
Schroeder, Aldrich Hale, 1 CE Houston	Shuffler, Ralph Henderson, 3 LAOlney
Schuessler, Norman George, 1 AgLlano	Shumate, Bruce Emmet, 2 ME Houston
,	Dudmate, Diuce, Emmet, Z ME Houston

Siddall, Cameron, 1 AgAnderson	Smith, Kenneth Campbell, 1 Land Bonhar
Biddan, Cameron, 1 AgAnderson	Similar, Kenneth Campbell, I DandDonnar
Siecke, Paul, 1 ChECollege Station	Smith, Leonard Clifton, 4 AgBeevill
Siemers, Herman Richard, 1 MEWaco	Smith Louis Dale 4 Ar Tyle
Cil Tl. V 9 DE T	Consider Malaria Arrana 9 ME Del Well
Sikes, Jules verne, a RELeonard	Smith, Louis Dale, 4 ArTyle Smith, Melvin Avery, 3 MEDel Vall
Sikes, Jules Verne, 3 RE Leonard Siler, William Stacy, Jr., 3 Sci	Smith, Meivin Avery, 5 ME. Del Van Smith, Ralph, 3 AA. Palestin Smith, Randall Leo, 1 ChE. Breckenridg Smith, Travis Logan III, 2 CE. Housto Snead, Isaac Cureton, 1 Ar. Wac Solomon, Roy Walter, 1 LA Brya. Sommers, Otto Wahrmund, 3 EE.
Fort Stockton	Smith Randall Leo 1 ChE Breckenridge
Cill T 1 T 1 T 1 T 1 T 1 T 1 T 1 T 1 T 1 T	C '11 m ' T ITT O CD IT
Silliman, Jack Evans, 1 SciFort Stockton	Smith, Travis Logan III, 2 CEHousto
Silva, Ignacio Joaquin, 2 CE	Spead Isaac Cureton, 1 Ar Wac
O Mi	Colomon Dow Wolton 1 TA Drugs
Oaxaca, Mexico	Solomon, Roy Waiter, I LABrya
Simank, Kermit Ernst, 2 AgEllinger	Sommers, Otto Wahrmund, 3 EE
Simmons, John Walton, 1 ChEOrange	San Antoni
Simmons, John Walton, 1 CheOrange	San Antoni
Simmons, William Gregg, 1 CEDenton	Sonntag, Adolph Ludwig, 2 IEGainesvill
Simons, Milam Travis, Jr., 1 MEEdna	Sorrells, Buel Cecil, 1 AA
Cimona Ctools White 1 TA Edna	Sorrelle Rufus Ford 4 MF Ponumon
Simons, Steele White, 1 LAEdna	Sorrells, Buel Cecil, 1 AA
Simpson, Benjamin Charles, 1 CMMarlin	Souther, Robert Elwin, 2 AARosebu-
Simpson, Charles Emerson, 1 EELaFeria	Sowell, Joe Lawson, 3 Ag Midway
Simpson Edward McCrosses 9 Ar Dellas	Sowell, Joe Lawson, 3 AgMidwa Sowell, Thomas Milton, 1 EECleburn
Simpson, Edward McGregor, 2 ArDallas	Dowell, Indinas Milwii, I EEClebulii
Simpson, Kos Morgan, 1 ME	Spahr, Harry Howard, 4 Ag
San Antonio	Benhams, Virginia
Simpson, Raymond Rodell, Jr., 1 EE	Sparkman Willard Riley 4 EE Recvill
Simpson, Raymond Roden, Jr., 1 EE	Sparkman, Willard Riley, 4 EEBeeville Spears, Fred Morgan, 1 CEBellevu
Dallas	Spears, Fred Morgan, I CEBellevu
Simpson, Stephen Harbert, Jr., 4 EE	Speary, Meyer Launcelot, 1 AgRung
Hollettewille	Spencer, H. Leo, 3 AgEdLiberty Hil
Hallettsville	Spencer, II. Leo, a AgeuLiberty Hil
Sims, Francis Able, 2 EE Jefferson	Sprott, Alton Conrade, 4 LALivingston
Sims, Rufus Jackson, 1 Sci Kingovilla	Sprott, Charlie Montgomery, 1 TE
Sims, Rufus Jackson, 1 SciKingsville Singleton, Alex Richard, 1 SciDallas	T :
Singleton, Alex Richard, 1 SciDallas	Sproule, Alexander Acheson, 1 Ar
Singleton, John William, 2 CEDallas	Sproule, Alexander Acheson, 1 Ar
Singleton, John William, 2 CEDallas Singleton, William Daniel, 3 MEDallas	Denisor
Sisson Homes Lee 4 CF James	Spurgin, Ray Basil, 1 ArMerke
Sisson, Homer Lee, 4 CEJasper	Ct. 1. T.1 All T.T.
Skaggs, Howard Calvin, 1 CEFort Worth	Stacks, John Allen, 1 EE Range
Skaggs, Howard Calvin, 1 CEFort Worth Skains, Jack Charner, 3 ArFranklin	Stafford, Jay Dunlap, 3 Ag
Skelton, Herbert Jefferson, 4 ME	Tennessee Colons
	Stafford, James Knight, 4 AARobstown Stafford, Ralph Leonard, 2 EEPasadena
Jacksonville	Starrord, James Knight, 4 AARobstown
Skipwith, Harold James, 3 ChE	Stafford, Ralph Leonard, 2 EEPasadens
Ardmore, Oklahoma	Stafford, Vernon Cecil, 1 ChEWellington
Claughten Tanas II. 11 0 TA D. 11	Steleun Louis Hull 4 Ag Sister
Slaughter, James Harold, Z LADallas	Stateup, Louis Hull, 4 AgSinton
Slaughter, James Harold, 2 LA Dallas Sleeper, Frederick George, 1 CE	Stalcup, Louis Hull, 4 AgSinton Stanchos, Alvin Arthur Emil, 1 ME
Alovondonia Tautaiana	Staples, William Duncan, 2 CE
Classes II A Mila to DE II	Stanley William Dunger 9 CE
Sleeper, Howard Miles, 1 EE Kerrville Sloan, Paul Joseph, 1 Ag San Saba Slocomb, Don B., 1 AA	Scaples, william Duncan, 2 CE
Sloan, Paul Joseph, 1 AgSan Saba	San Antonio
Slocomb, Don R. 1 AA Cameron	Stark, Atmar Robert, 1 SciGrovetor
Small Travia Hugh 9 ChE E W	Stark Wilfred Bishard 2 Ag Bortland
C. T. Tavis Hugh, 2 CheFort Worth	Stouling Caril Caril 4 A A 37 Trees
Sinney, Frank Andrew, 2 E.E Waco	Stark, Wilfred Richard, 2 AgPortland Starling, Cecil Gorden, 1 AANew Willard
Smith, Augustus Barnwell 1 Ac Jacob	Starnes, Robert Edgar, I VM Dallas Starr, Noles Charles, 1 ME
Smith Allen Lamar Sn MF Resument	Starr, Noles Charles 1 ME
Smith, Allen Lamar, Sp ME Beaumont Smith, Bellwood Lister, 2 CE Gainesville Smith, Charles Allen, 3 ChE Henderson	N D ()
Smith, Bellwood Lister, 2 CEGainesville	Stedman, Greer Pope, Jr., 3 ChE. Marshall
Smith, Charles Allen, 3 ChE Henderson	Stedman, Greer Pope, Jr., 3 ChEMarshall
Smith, Charles Douglas, 2 LADallas	Steele, Seth Hackett 2 CE Chilton
Smith Clair Edger 2 ME C. T.	Steele, Seth Hackett, 2 CE
Smith, Clair Edgar, 3 MESour Lake	Stein, Affied Effiest, I CE New Brauniers
Smith, Curtis Kenneth, 2 EE	Steinman, Frank Creighton, 2 VMHarrold
Louann, Arkansas	Steinmann, Chris August, 4 EE LaGrange
Smith, Cecil Ray, 4 MERoscoe	Steinman, Frank Creighton, 2 VM Harrold Steinmann, Chris August, 4 EE LaGrange Stephens, Turney Vertrees, 2 CE Houston
Smith Charles William 2 CD	Stephenson Coston 1 4-
Smith, Charles William, 2 CEAmarillo	Stephenson, Gaston, 1 Ag Timpson Sterling, Earl Fletcher, 2 Ar. Mesquite Stetson, Thomas, Jr., 1 LA Hebbronville Stevens, Edward Howard, 2 AA
Smith, Eugene Drayton, Jr., 1 AA	Sterling, Earl Fletcher, 2 ArMesquite
Andmore Okleheme	Stetson, Thomas, Jr., 1 LA Hebbronville
Cmith Edmand I	Stevens Edward Hammed O AA
Smith, Edward James, Jr., 1 ChE	blevens, Edward Howard, Z AA
Port Arthur	Stewart, Curtis Ness, 2 LAHull
Smith, George Daniel, 2 SciSan Antonio	Stewart, Curtis Ness, 2 LA Hull
Smith Coorge Comette 0 A.	Stewart, Harper Cole, 1 EE
Smith, George Garrette, 2 Ar	Ctament II
Smith, George Henry, 2 CE	Stewart, Herber Thomas, 2 AgEng
Smith, George Henry, 2 CE	Popularville Mississippi
College Ct-ti-	Stewart, James Kimble Vardaman, 4 Sci
Contege Station	Standard, Cames Rinnole Vardaman, 4 Sci
Smith, George Jefferson, 1 EEGonzales	Picayune, Mississippi
Smith, Harold Alton, 1 EEWaco	Stewart, Mortimer Henry, 1 EE
Smith, Houston Edward, 1 Ag	Schulophuse
, -Loudoui Liuwaid, I Ag	Stewart Murray Win- 1 DE
San Angelo	Stewart, Murray Winn, 1 REWaco
Smith, Hunter Leslie, 1 EE Dallag	Docward, Indinas Fritz. I Fif. Jacksonville
Smith, Jake, 1 CE	
Smith, James Bradley, 1 EE Dallas	Stieler, Bernard Herman, C 1 Comfort
Smith, James Bradley, I EE Dallas	Stieler, Bernard Herman, C 1 Comfort
	Stiles, Maurice Valentine, 2 Ag
Smith, James Caldwell, 1 AAWaskom	Stiles, Maurice Valentine, 2 Ag
Smith, James Caldwell, 1 AAWaskom Smith, John Herbert, 2 EE. Weatherford	Stiles, Maurice Valentine, 2 Ag
Smith, James Caldwell, 1 AAWaskom Smith, John Herbert, 2 EE. Weatherford	Stileer, Bernard Herman, C 1Comfort Stiles, Maurice Valentine, 2 Ag
Smith, James Caldwell, 1 AAWaskom Smith, John Herbert, 2 EEWeatherford Smith, John Holman, 2 CEColeman	Stiles, Maurice Valentine, 2 Ag. Stine, Walter Douglas, 2 EE. Beaumont Stiteler, Robert Harry, 1 Sci. Smithville
Smith, James Caldwell, 1 AAWaskom Smith, John Herbert, 2 EE. Weatherford	Stileer, Bernard Herman, C 1Comfort Stiles, Maurice Valentine, 2 Ag

Stoerner, Oswell Richard, 1 EE Waller	Taylor, Lewis, 1 AgCenter
Stone, Lindell Theodore, 8 Ag	Taylor, Lott Lanham, 4 ArLarede
Wichita Falls	Taylor William Arlington, 3 Sci.
Storey, Augustus Alexander, 3 AgLockhart	Taylor, Lewis, 1 Ag
Storey, Arthur Lipscomb, 2 CEHouston	Taylor Winston Francis, 2 LA Burleson
Storey Joe Kirby 4 CE Grand Cane, La.	Teague, James Eldric, 2 ArFort Worth
Storey, Joe Kirby, 4 CEGrand Cane, La. Storrie, Carl R., 4 LADenton	Teas, Edward John, 1 LandHouston
Strader, Otto Roy, 4 ChECorsicana	Tongley Samuel A 2 Sci Dallas
Strauer, Otto Roy, 4 ChinCorsicana	Teasley, Samuel A., 2 Sci
Stransky, Jason Upson, 2 LA	Terry, Dwight Lymann DeWitt, 1 LA
Street, Thomas Atkins, 2 LA	Terry, Dwight Lymann Dewict, I LA
Street, Inomas Atkins, 2 LA	Houston
Stribling, John Wilson, 2 EELlano Stribling, Sloan Hodges, 2 CE	Terry, Thomas Judson, 1 MEFort Worth
Stribling, Sloan Hodges, 2 CE	Terry, William Graves, 1 AALockhar
Throckmorton	Thalmann, Victor Waldo, 4 AgBanders Thames, William Rouse, 2 CEBeaumon
Stricker, Eugene Nelson, Z ME Waco	Thames, William Rouse, 2 CEBeaumon
Strickland, C. H., 2 AAGarrison	Theuman, Reuben Adam, 1 Sci
Strickland, George Washington, 1 CM	Eagle Lake
Dallas	Thomas, Charles Edward, 1 SciChillicothe
Strieger, Harvey Riley, 3 EE	Thomas, Dick L., 1 CMLake Charles, La Thomas, Frank, 2 AAHillsbord Thomas, Frank Winan, Jr., 1 AA
Stripling, Raiford Leak, 1 Ar	Thomas, Frank, 2 AAHillsbore
Stripling, Raiford Leak, 1 Ar	Thomas, Frank Winan, Jr., 1 AA
San Augustine	San Antonio
Strode Povell Meurice 9 Av McKinney	Thomas George Edwin 1 EE Egypt
Stromberg, Roland E., 2 IALockhart Stromberg, Weldon Bailey, 3 AgLockhart	Thomas Jesse DeWitt 1 CE Fort Worth
Stromberg Weldon Railey 3 Ag Lockhart	Thomas Norman Drug 1 AA El Campe
	Thompson Ed In 1 AA Cameror
Can Antonio	Thompson, Homor Edwin 1 AA
Strond Cloub Cloudes 1 Am Fort Worth	Thomas, George Edwin, 1 EE Egyp Thomas, Jesse DeWitt, 1 CE Fort Wort Thomas, Norman Drue, 1 AA El Camp Thompson, Ed, Jr., 1 AA Cameror Thompson, Homer Edwin, 1 AA
San Antonio Stroud, Clark Clarence, 1 Ar. Fort Worth Strumquist, Johnney Edgar, 1 EE.	Thompson, James McKinzie, 2 LA
Strumquist, Johnney Edgar, 1 EE	Inompson, James McKinzie, Z LA
Struwe, Earl Lee, 4 AA	Groesbeck
Struwe, Earl Lee, 4 AACaldwell	Thompson, Oliver Webb, 2 AgWinnsboro
Stuart, Omar Guinn, 1 EE	Thompson, Ralph Nelson, 2 CE
College Station	Fort Worth
Stuckert, William Albert, 1 Sci	Thompson, Thomas Bunnell, 3 Ar
San Antonio	Thompson, William Henry, 1 AADallar Thornal, Reuben Bruce, 2 SciSilsbee
Sublett, Frank Bolivar, Jr., 1 Ag	Thompson, William Henry, 1 AADallas
San Benito	Thornal, Reuben Bruce, 2 SciSilsbee
Suddath, Bert Talmadge, 1 CEWhitesboro	Thornhill, Otto Mackensen, 3 MELamesa
Sudderth, Earle Ward, 1 CELeonard	Thornton, Harkey Gibbons, 1 AgSan Saba
Sullivan, Denney Owen, 1 AAComstock	Threadgill, John Thomas, 1 ArBellevue
Sullivan, Orville Hugh, 3 AASilsbee	Threadgill, Truman Edwin, 4 CEBellevue
Sullivan, Robert, Augustus, Jr., 8 EE	Thurston, James Arthur, 1 LA
Tevarkana	Ardmore, Oklahoma
Summar, Charles Marion, 1 EE Dallas Summers, Elbert Joseph, 1 LA Palestine	Tiemann, Cordes Fredrich, 1 ArBrenham
Summers, Elbert Joseph, 1 LA Palestine	Timmerman, Henry, 1 EE Pflugerville
Surovik, Fred Andrew, 1 SciCaldwell	Timmerman, Walter C. J., 4 EE. Wharton Tinney, Joe Clifford, 2 AgForestburg
Surovik, John Henry, 4 AACaldwell	Tinney Ioe Clifford 2 Ag Foresthure
Susen, William, 1 ArDallas	Tinus William Cornelius 4 FF Was
Sutherlin, Jack, 2 LA Haskell	Tinus, William Cornelius, 4 EEWacc Tipton, Eugene Colston, 4 EEFort Worth
Sutton, Bruner King, 2 CECorsicana	Tipton, Eugene Coiston, 4 EEFort Worth
Swank, Walter Reagan, 1 CEWills Point	Tiedele Clemente Elment 9 Am Colemen
Sweetman Debert House O Am Fruit	Tall Issues Carrence Elwood, a AgColeman
Sweatman, Robert House, 2 AgEnnis Sweeney, Albert Vinson, 1 ArFort Worth	Tipton, Leonard Lafayette, 1 Ar. Troug Tisdale, Clarence Elwood, 3 Ag. Colemar Todd, James Samuel, Jr., 2 AA.
Sweeney, Albert Villson, I ArFort Worth	Todd, Lawrence Courtney, 2 CMAustin
Sweeney, Carey Porter, Sp ELAngleton	Todd, Lawrence Courtney, 2 CMAustin
Sweeney, Arbert Vinson, 1 ArFort Worth Sweeney, Carey Porter, Sp EEAngleton Swengel, George Melvin, 2 MEHouston Swift Edward Viscions In 1 Sci	Todd, Marvin Cullen, 1 AgAustir Toepperwein, Herman William, 3 LA
Switt, Edward Virginus, Jr., 1 Sci	Toepperwein, Herman William, 3 LA
Palestine	Menarc
Tackaberry, Allan Gordon, Jr., 1 ME	Toland, Merit Batson, 2 Ar. Houstor Tolson, Lester Bunion, 2 ME. Mexis Tom, Oscar Stanley, 1 CM. Rung Tomek, Frank Felix, 3 AA. Houstor
Houston	Tolson, Lester Bunion, 2 MEMexis
Taggart, William Wilson, 1 EEDallas Talbott, Robert Nealy, 3 LAMiles	Tom, Oscar Stanley, 1 CMRunge
Talbott, Robert Nealy, 3 LAMiles	Tomek, Frank Felix, 3 AAHouston
Talmage, Bernard Emmett, 1 AAHouston	Tomme, James Marion, Jr., 1 EECleburne
Tanner, Burford Maurice 3 CE Electra	Tompkins, Daniel David, 2 Ar
Tanner, Paul Octave, 2 AAMission	Corpus Christ
Tanner, Paul Octave, 2 AA Mission Tarver, John Albert, Jr., 2 AA Rosebud Tatum, Joseph Edward, 2 Ag Dublin Tatum, Weldon Clay, 1 EE Waco	Torn, Elmore Rudolph, 4 AATaylor
Tatum, Joseph Edward, 2 Ag. Dublin	Tottenham, Kinion Woodson, 1 CE
Tatum, Weldon Clay, 1 EEWaco	Brenham
Taylor, Benjamin Gilder, 3 MEHouston	Tracy, Carroll Adrain, 1 LA Houston
Taylor, Delbert Harry, 1 AgVictoria	Tracy, Horton Harold, Jr., 4 AATulis
Taylor, Everette Lee, Jr., 1 ArCommerce	Tracy, Percy Lee, 1 LA Houston
Taylor, H. W., 2 LAClarendon	Trail, James Arthur, 3 MEBallinger
Taylor, John Henry, 1 AgDublin	Trapp, Wallace William, 2 AAMission
Taylor, Joseph Harry. 2 EE	Trice, Bernie Amos, 4 CEDublin
	ALLOO, DOLLING TIMOS, A CERTIFICATION TO THE PROPERTY OF THE P

Trim, Kermit Floyd, 1 IA	Wa
Amarillo	Wa
Tubb. Billy Ira. 1 LandWaco	Wa
Tucker, Clarence Elmer, 1 AA Leonard	Wa
Tucker, Henry Leo. 4 Ar Ovalo	Wa
Tucker Ivan 1 CE Richland	Wa
Tueker Robert Lee 3 ME Fort Worth	Wa
Tuffly Alfred Andrew 1 CE Houston	Wa
Tuggle Inmes 1 CM Kemn	Wa
Tull Poginald D 4 AgEd Carlton	Wa
Tunatall David Davis 9 FF Wass	Wa
Tunbouille Author Per 9 MF Vooleum	Wa
Turbeville, Arthur Roy, 2 ME Toakum	W a
Turbeville, Lester Edwin, I Ag Yoakum	Wa
Turner, Cundall Eddie, I CEHouston	***
Turner, Drexyle Huger, 4 MEHouston	Wa
Turner, Francis Cutler, 3 CEFort Worth	***
Turner, John Henry, 2 ArHouston	Wa
Turner, William Fowler, 1 AgGainesville	Wa
Underwood, Virgil Austin, 3 AgEd	Wa
Bluff Dale	Wa
Urbanovsky, Elo Joe, 2 ArWest	Wa
Urquhart, W. B., Jr., 1 AgSan Saba	Wa
Utay, Simon, 4 TEDallas	
Vaden, Frank Samuel, Jr., 2 LA	Wa
San Antonio	
Valle, Calixto C., Jr., 2 ChE Rio Grande	Wa
Vandervoort, Randolph Usher, 4 LA	Wa
Houston	Wa
Van Nest, Arden LaVergne, 4 MEDallas	We
Van Steenbergh, Samuel Kermit, 2 Sci	
Foot Roward	We
Van Valkenburgh, John Carlson, 4 Land	We
Dallas	We
Von Zondt Curtin Iomen 1 AmEd	We
Van Zandt, Curtis James, 1 AgEd	We
Van Zandt Danes I me	We
van Zanut, Roscoe Lycorgus, I TE	We
Y-1- T 9 AA NOTE	w e
Variey, Logan, Z AAwhitesboro	***
Varnell, John Roy, 2 AgEdBarry	We
Varner, Ben Claiborne, Jr., 3 LADallas	We
Vaughan, Ellis Floyd, 1 MESan Antonio	
Vaughan, Ellis Floyd, 1 MESan Antonio Vaughan, James Waverly, 4 CE	We
Ardmore, Oklahoma	
Vaughan, Virgil Allen, 1 SciVernon	We
Vauter, William Winston, Jr., 2 CEParis	We
Vawter, Clyde Emmitt, 1 AAGenoa	
Velten, Earl Edward, 1 ArSan Antonio	We.
Vertress, William Campbell, 1 Ag	
Brownsville	We
Via, Raymond Marion, 2 EEBartlett	We
Vick, Gilbert Martin, 1 MEHeuston	We
Voelkel, Kermit Ernest, 2 AA Shelby	
Vogel, Werner Franz, 4 Sci	Wei
Buhler Switzerland	We
Vogt. Charles Clifford 2 EE San Antonio	Wes
Voot Paul William 1 AA Alnine	We
Volkman Walter Cruman 1 Ac Monard	We
Volkman, Walter Gruman, 1 AgMenard Wade, William Emil, 1 LATemple	Wes
Wagener, Raetzsch William, 1 AA. Yoakum	Wet
Waida John P. In 2 Ag Cangar	*** C
Wainen Commis 9 FF Con Colo	Wh
Walden Herbert Maren 1 IA Deute	
Walker Charles Lee 1 EE	Wh:
Wellier Mercellus Assertion 9 T. Temple	W n
Walker, Marcellus Augustus, 3 LAParis	Wh
waiker, Kay, 1 AgWolfe City	****
walker, Robert Lee, 1 CMShamrock	Wh
Wagener, Raetzsch William, 1 AA. Yoakum Waide, John B., Jr., 3 Ag. Sanger Waisman, Sammie, 2 EE. San Saba Walden, Herbert Moran, 1 LA. Denton Walker, Charles Lee, 1 EE. Temple Walker, Marcellus Augustus, 3 LA. Paris Walker, Ray, 1 Ag. Wolfe City Walker, Robert Lee, 1 CM. Shamrock Wallace, Joseph Astor, 1 Ag. Junction Wallace, Lloyd Keith, 3 EE. Kyle	Wh
Wallace, Lloyd Keith, 3 EEKyle	Wh
Wallace, Raddie Martin, 3 ChEDallas	
Wallace Wilhur Victor C 9 C-11	Wh
Wallace, Wilbur Victor, C 2Garland	Wh
Walton, Marion Martin, 2 AACorsicana	

Wamble Albert Cecil 1 ChE
Greenwood Mississippi
Word Clifford Allen 1 AA Henderson
Wamble, Albert Cecil, 1 ChE
ward, John Clayton, I ChE weatherford
Ward, James William, 2 SciAmarillo
Ward, Thomas Allen, 4 VMJacksonville
Ward, William Lewis, 3 IEAlvin
Ware Walter Scott 1 ME Monroe La
Warner Howell Raldwin 1 CE Dallag
Warner, Howell Baldwin, 1 CEDanas
warren, John Harold, 4 AgHouston
Warren, Jasper Otto, I AADublin
Warren, Kenneth Arnold, 1 CEParis
Warrick, Thomas Roscoe, 2 SciPittsburg
Washburn, Gene Benjamin, 3 AA
La Feria
Washburn Millard Franklin 1 Arch
Washburn, Millard Franklin, 1 Arch
meyworth, illinois
Watnen, Ben Southern, I LADallas
Watkins, Davis, 2 ChEBay City
Watkins, Edward Francis, 1 CEPost
Watson, Arthur James, 2 CM Mathis
Watson Ivan 4 Ag Coleman
Wateon Leonard Locanh 2 LA
Thom Coming
Title Spring
Watson, William Franklin, Jr., 1 EE
Dallas
Watson, Walter Robert, 1 AAGarland
Watterson, Travis Karl, 1 AABastrop
Watts, Richard George, 1 CE Dallas
Weatherhy Hurshel Heywood 3 Ag
Tillahana
TIV D.1 (O): 1 A T.1
weaver, Robert Oliver, 1 AgLondon
Webb, Hiram Cyrus, 2 ChEPoolville
Webb, James Carson, 4 EEItasca
Webb. John Edwin. 1 EEGreenville
Webster, Norman Allen, 3 EE
Tavarkana Arkanaa
Webner August William 1 CE
Tala Charles Tarisians
Lake Charles, Louisiana
Weisinger, Melvin K., 1 AgMontgomery
Weisinger, Winifred Burton, 1 Ag
Montgomery
Welgehausen, Kurt August, 3 AA
Frederickshurg
TI II T TILL TO THE TENTON TO
Wells, James Esli, 1 AgKerens
Welsh, Kenneth Ronie, 3 ME
Welsh, Kenneth Ronie, 3 MELafayette, Louisiana
Welsh, James Esli, I Ag
Welsh, Kenneth Ronie, 3 ME
Welsh, Kenneth Ronie, 3 ME
Watson, William Franklin, Jr., 1 EE. Dallas Watson, Walter Robert, 1 AA. Garland Watterson, Travis Karl, 1 AA. Bastrop Watts, Richard George, 1 CE. Dallas Weatherby, Hurshel Heywood, 3 Ag. Weaver, Robert Oliver, 1 Ag. London Webb, Hiram Cyrus, 2 ChE. Poolville Webb, James Carson, 4 EE. Itasca Webb, John Edwin, 1 EE. Greenville Webster, Norman Allen, 3 EE. Texarkana, Arkansas Wehner, August William, 1 CE. Lake Charles, Louisiana Weisinger, Melvin K., 1 Ag. Montgomery Weisinger, Winifred Burton, 1 Ag. Welsh, James Esli, 1 Ag. Kerens Welsh, Kenneth Ronie, 3 ME. Lafayette, Louisiana Welsh, Reuben Maverick, 1 Ag. San Antonio Wendt, Pier Ernet, 2 AA. Brenham
Wendt, Pier Ernest, 2 AA Brenham

White, Anderson Davoe, 3 ChEGustine White, Brown Weaver, Jr., 1 AA	Winn, Theophilus Newton, 4 AgPearsall Winship, Wilfred LaDelle, 2 AA
San Benito	San Antonio
White, Clarence Albert, 1 EEFort Worth White, Frank Marrion, 1 AgGoree White, Harvey Carl, 4 AgEdHuckabay	Wiseman James Presley, 2 AA Covington
White Harvey Carl 4 AcEd Huckahay	Witherspoon, Aran, 2 CE Ector Witherspoon, Beryl William, 1 IA
White, Horace Edward, 1 ChE	Hereford
Port Arthur	Witherspoon, Frank Gordon, I AA
White, Lasater Bradford, 1 CEAledo White Turner D., 3 AgEd Uvalde	Witte Herman Bryan, 2 ME Yoakum
White, Turner D., 3 AgEdUvalde White, Theron Festus, 1 EE	Wizig, Abe, 1 ChEWaco
College Station	Woltz, Robert P., 2 ArFort Worth
Whitehurst, Jay D., 1 CESan Angelo Whitener, George Rupert, 3 ChEBurton	Wood, Alan Gabert, 1 MEWaco
Whitener, W. A., 1 Ag	Wood, Mark Edward, 2 TEChildress
Whitley, Clauzell Clingman, 1 SciDayton	Wood, Seth, 2 AgHillsboro
Whitney, Herbert Wood, 3 EEBig Spring Whitten, Dudley Earl, 2 MEGalveston	Woodall, Russell Arvalee, 1 CECelina Woodley, Noel Henry, 1 ChEShamrock
Whitten, Marion Eugene, 3 ChECorsicana	Woodlief, Wallace Hill, 2 EE
Whittenburg, Marvin James, 1 CMDallas	Woodman, James Otis, 1 LandAustin
Wick, Ronald Foster, 4 EESan Antonio	Woodruff, Forester Ensign, 3 EEDallas Woodruff, Joe Earl, 2 AAKarnes City
Wiggins, Wiley Wagner, 1 Ar. Abilene Wilcox, Curtis Oscar, 4 AA. Bryan	Woods, Bryant Crawford, 1 CEKirbyville
wilcox, Leon Allen, 3 MEBryan	Woolford, Charles Woodman, 1 LA
Wilcox, Walter Wallace, 2 CEBryan Wilder, James Eugene, 2 EEHouston	Woolley, Herschel Pinckney, 2 EEHouston
Wilhoit, Clyde Willard, 2 AA	Woolsey, Wylie Jefferson, Sp. TE.
Wilkins, Milo E., Jr., 1 EEWaco	Woolverton, Anson Jones, 1 CE
Wilkins, Milo E., Jr., I EEwaco Wilkinson, Samuel Lawrence, 3 EE	Woolverton, Anson Jones, I CE
Stephenville	Wootton, Taylor Edward, 1 AgThorndale
Willard, Fred Crawford, 4 AA Giddings	Worden, Paul, 1 LAFarmersville
Willard, Marvin Shelley, 1 LAGiddings Willenbrock, Raymond, 1 EESan Antonio Williams, Carroll Lee, 1 SciSan Antonio	Worley, Francis Eugene, 1 LAShamrock Worley, Jack Seibert, 1 LAShamrock
Williams, Carroll Lee, 1 SciSan Antonio	Wren, Hermann, 3 LANormangee
Williams, Doyle, 3 MEMauldin, Arkansas	Wrenn, George Manning, 2 LA
Williams, Henry Lanham, Sp AgrRule Williams, Henry Swan, 3 EESan Antonio	Wright, Delbert Edwin, 3 ChELaredo Wright, Earl Eugene, 2 ME
Williams, Ira Lawson, 1 AgDallas	Wright, Earl Eugene, 2 ME
Williams, Luther Clifford, Jr., 3 CE	Garland, Arkansas
Williams, Marvin Reuben, 2 ChEHumble	Wright, John Clark, 3 AAMission Wright, Madison Brown, 1 Ar
Williams, Slaiter Hill, 1 CESmithville	' Throckmorton
Willingham, Juddie J., 1 Agr	Wuest, Charles Nicholas, Jr., 1 EE
Willis, Louis Hamilton, 1 Ar Abilene	Wulfman, Boysie Armen, 1 AA Farwel
Willis, Louis Hamilton, 1 ArAbilene Willke, Herbert Louis, 2 EEBoerne	Wyatt, Henry Clay, 1 CEKyle
Willmann, Walter Clarence, 2 AgMason	Wylie Horace Pierson 4 ChE Dallas
Willoughby, Roy Lynn, 1 AAJasper Wilmore, Burks, Jr., 1 VMMarshall	Wyly, John Harrison, 3 MEFort Worth Wyman, John Dickinson, 4 LACleburne
Wilmoth, George W., Sp TEDiboll Wilson, Chester Layton, 4 AgFort Worth	Yarborough, John Milton, Jr., 3 AA
Wilson, Chester Layton, 4 AgFort Worth	Voor Mourie Proch 1 FF Foot Wood
Wilson, Edward Wheellock, 2 ChE Cleburne	Yeary, Maurice Frank, 1 EEFort Worth Yeary, Orville Newton, 4 EEFort Worth
Wilson, John L., 1 EEHereford	Yentzen, Norman Joseph, 1 EENederland
Wilson, Paul, 1 AAHereford Wilson, Wallace Lee, 2 EEPearsall	Young, A. Prentiss, Jr., 4 IA. Stephenville
Winberly, James Rector, 2 CEAmarillo	Young, A. William, 1 AgUptor Young, Clarence Clinton, 1 VMGraham
Wimberly, Vernon Lane, 1 AAHouston	Young, Ralph Harris, 1 AgSan Antonio
Winckler, Rudolph George, 2 EE	Young, Winston Kyle, 3 AA Gonzales
Winder, Lafayette G., 3 MEDallas	Youngblood, Earl Owen, 1 ArPort Arthur Yung, Owen Burke, 2 EESan Antonio
Winders, Richard Norton, 1 TE Houston	Zachry, James Bradford, 1 EEJeffersor
Wingo, William Halbert, Jr., 2 AA	Zapalac, LeRoy Charles, 1 LAAustin
Wingo, William Thomas, 2 EE	Zarafonetis, George Harry, 1 ChE
Sulphur Springs	Zellner, Roy Means, 4 AgMar
Wingren, Harry Martin, 2 EEDenison	Zinn, William Ruffus, 2 AATemple

SUMMARY OF ENROLLMENT, REGULAR SESSION 1927-28

(Excluding short courses and extension courses)

By States and Foreign Countries

Texas 2 Alabama Arizona Arizona Arkansas California Colorado Illinois Indiana Iowa Kansas Kentucky Louisiana Mississippi Missouri New Jersey New Mexico New York Ohio Oklahoma South Carolina Tennessee Virginia	Columbia
Total	2548

SUMMER SESSION 1927

c—College cc—Cotton Classing e—Electric Meterman v—Veterinarian's Course

v—vecermanans course	Burks, Jack, c San Antonio Burks, S. V., c Poteet Burnitt, R. W., c Calvert
Acord W W c College Station	Burks S V c Poteet
Acord, W. W., c	Burnitt P W a Colvert
Adams, F. Q., e	Burrows, W. M., ccLufkin
Adams, Jack, e	Duran D U a Unveton
Adamson C VGeorgetown	Byars, R. H., c
Adamson, G. V., vSherman	Caillet, O. R., cDallas
Aguirre, M. G., ccTorreon, Coah., Mex.	Calhoun, T. P., ccLogansport
Aiken, Y. J., vLubbock	Callaghan, G. F., cHouston
Allen, W. R., cBryan	Callaway, T. W., ccQuanah
Alvord, Mina Cook, cCollege Station	Callaway, T. W., ce Quanah Camp, S. D., c Weatherford Campbell, S. M., c San Marcos
Amsler, Harryette, cCollege Station	Campbell, S. M., cSan Marcos
Anderson, J. F., cHillsboro	Cannon, C., cTexarkana
Anderson, Jessie P., eCorsicana	Cape, E., c
Anderson, M. A., cMarshall	Cardona, H. V., v. Fort Worth
Anderson, Tommie, cSilverton	Carley, H. R., ccSan Angelo
Anderson, W. I., cCuero	Carlisle, W. G., cc
Armstrong, Will Baker, ccBryan	Carr, H. C., e
Armstrong W D a What	
Armstrong, W. D., cWharton	Carroll, J. F., cc Premont
Arthur, C. L., cGroveton	Carter, A. E., cLuling
Ayala, F. M., ccTorreon, Coah., Mex.	Carter, W. G., c
Badon, A. J., Jr., ccBreaux Bridge, La.	Cartwright, B. P., ccSan Augustine
Badon, A. J., Jr., ccBreaux Bridge, La.	Casey, L. E., v
Dagley, I. B., C	Cashell, J. B., cGreenville
Barnett, P. E., Jr., cLufkin	Castillo, F., cSan Salvador, C. A.
Bartlett, Z. W., cMarlin	Chaney, E. W., cCollege Station
Beard, A. P., cBryan	Chapman, C. G., cForney
Beason, Laura Elliott, c	Chappell, R. F., vNavosota
Posts D U a	Chaudoin, J. C., ccEstelline
Beck, Hugh, cc Gadsden, Arizona Behrens, W. G., c San Antonio Bell, C. W., c Houston Bender, J. R., c College Station Bernhard, Dick, c Dallas	Childers, A. B., c Jasper
Behrene W C . Can Antonia	Clark, S. A., c
Poll C W a	Cleaver, M., c
Penden I D - G-11 G-11	Cline, Elizabeth, c
Bender, J. R., CCollege Station	Cline, Elizabeth, CBryan
Bernnard, Dick, C	Cline, Louise, c Bryan Cochran, V. E., c Houston
Dietschwale, A. J., C	Cochran, V. E., c
Bittner, F. J., cc Flatonia	Coker, W. R., cAthens
Black, W. L., vSonora	Collins, L. D., cEvanston
Blackaller, J. H., cPearsall	Conaway, Ella, cBryan
Blair, John C., cCorsicana	Conlee, Vivian O., cBryan
Blevins, Paul, cEl Campo	Conner, R. R., cCollege Station
Bock, Abe, c	Cook, F. G., v Paris
Bodine, W. R., cCleburne	Cooke, A. C. H., c
Rogue I A cc Timpoon	Cooper, J. T., cTemple
Bogue, J. A., cc	Corley, Q. M., c
Pooth T O	Corman A I a Dalla-
Booth, T. O., vFort Worth	Corman, A. J., c
Bostick, W. L., cBeaumont	Covacevicii, N. S., eHouston
Boswell, H. B., c De Leon	Covey, W. B., cCanutillo
Box, R. A., cStephenville	Cox, F. B., cWhitney
Boyd, W. E., cHouston	Cox, H. G., cFort Worth
Boyett, Anna Bess, cCollege Station	Coyle, R. C., ccMarlow, Okla.
Boyett, W. C., cCollege Station	Craddock, F., ccCrockett
Boyett, W. L., c. College Station	Craddock, T. D., Jr., cCrockett
Brader, W. H., eBeaumont	Craig, R. M., c
Bradford, R. M., cFort Worth	Creed, R. F., cBryan
Bradshaw, C. C., c Ahilene	Crocker, C. G., c
Brian, W. T., c	Crowson, C. L., ccWeldon
Brinkoeter, H. C., c	Crump J. H. c. Menard
Broad, B. C., c Brady	Crump, J. H., c
	Cunningham T C . Makingan
Broad, J. F., cAustin	Cunningham, T. C., c
Brock, W. G., v	Currey, E. A., ccA. & M. College, Miss.
Brockette, E. E., cGrandview	Curry, G. W., c El Paso
Broiles, Hiram, c Fort Worth Brown, F. R., c Dallas	Curtner, W. L., c
Brown, F. R., c Dallas	Cushing, E. C., cCollege Station
Brown, J. C., cCollege Station	Dahme, W. H., ccSan Antonio
Brown, J. J., cAustin	Dalton, L. A., cMcGregor
Brown, J. T., cEl Paso	Danhoff, Walter, cCorpus Christi
Brown, K. L., ccRunge	Dannelly, Perry, c
Brown, P. A., c Somerville	Dansby, R. C., cBryan
Buescher, V. A., c	Dansby, R. E., c Bryan
Bunton, S. E., cValentine	Darby, H. L., v Fort Worth
Burch, G. D., c	Darby, H. L., v

Rurgess H E c Hale Center
Durgess, II. E., CItale Center
Burgess, J. W., Crort worth
Burks, D., cSan Antonio
Burks, Jack, c San Antonio
Rurke S V a Potent
Down to D. W Colorest
Burnitt, R. W., CCaivert
Burrows, W. M., ccLufkin
Byars, R. H., c Houston
Caillet O P a Dallas
Caniet, O. R., CDanas
Calhoun, T. P., ccLogansport
Callaghan, G. F., cHouston
Callaway, T. W., cc. Quanah
Comp S D a Weatherford
Camp, b. D., C
Campbell, S. M., CSan Marcos
Cannon, C., cTexarkana
Cape, E., c San Marcos
Cardona H V v Fort Worth
Carlona, II. V., VFort Worth
Carley, H. R., ccSan Angelo
Carlisle, W. G., ccMineola
Carr. H. C., e Corsicana
Carroll I F as Promont
Contain A. F., CC Fremont
Carter, A. E., cLuling
Carter, W. G., cPort Lavaca
Cartwright, B. P., cc San Augustine
Coopy I. E. v. Dalla-
Casey, L. E., VDallas
Cashell, J. B., cGreenville
Castillo, F., cSan Salvador, C. A.
Chaney, E. W., c College Station
Channan C C a
Chapman, C. G., Crorney
Chappell, R. F., vNavosota
Chaudoin, J. C., ccEstelline
Childers A R c Jasner
Clork C A . White
Clark, S. A., Cwhitney
Cleaver, M., cDallas
Cline, Elizabeth. c Bryan
Cline Louise c Pryori
Cochron V F a Hauston
Coeman, v. E., Cnouston
Coker, W. R., cAthens
Coker, W. R., c
Coker, W. R., c
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Corles Viving C Bryan
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H. c Houston
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B. c Caputillo
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B., c Canutillo Covey, W. B., c Canutillo
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B., c Canutillo Cox, F. B., c Whitney
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B., c Canutillo Cox, F. B., c Whitney Cox, H. G., c Fort Worth
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Concer, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B., c Canutillo Cox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla
Coker, W. R., c Athens Collins, L. D., c Evanston Conaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B., c Canutillo Cox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, F., cc Crockett
Coker, W. R., c Athens Collins, L. D., c Evanston Conlaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B., c Canutillo Cox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, F., cc Craddock, T. D. T. a.
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Coker, W. R., c Athens Collins, L. D., c Evanston Conlins, L. D., c Bryan Conle, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B., c Canutillo Cox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, F., cc Crockett Craddock, T. D., Jr., c Crockett Craig, R. M., c Hamilton Crede, R. F., c Bryan
Coker, W. R., c Athens Collins, L. D., c Evanston Conlaway, Ella, c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Coox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, F., cc Craddock, T. D., Jr., c Crockett Craig, R. M., c Hamilton Creed, R. F., c Bryan Crocker, C. G., c
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Coker, W. R., c Athens Collins, L. D., c Evanston Conlins, L. D., c Bryan Conle, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Covey, W. B., c Canutillo Cox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, F., cc Trockett Craddock, T. D., Jr., c Crockett Craig, R. M., c Hamilton Creed, R. F., c Bryan Crocker, C. G., c San Angelo Crump, J. H., c Menard Cunningham, T. C. c Mexicon Consistency Consistency Consistency Crocker, P. C. Cockett Craddock, F., c Bryan Crocker, C. G., c San Angelo Crowson, C. L., cc Weldon Crump, J. H., c Menard Cunningham, T. C. c
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Coker, W. R., c Athens Collins, L. D., c Evanston Conlins, L. D., c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Coox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, T. D., Jr., c Crockett Craddock, T. D., Jr., c Crockett Craddock, T. D., Jr., c Mamilton Creed, R. F., c Bryan Crocker, C. G., c San Angelo Crowson, C. L., cc Weldon Crump, J. H., c Menard Cuellar, P. M., c Saltillo, Coah, Mex. Cunningham, T. C., c McKinney Currey, E. A., cc A. & M. College, Miss. Curry, G. W., c El Paso Curtner, W. L., c College, Station Cushing, E. C., c
Coker, W. R., c Athens Collins, L. D., c Evanston Conlins, L. D., c Evanston Conles, Vivian O., c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Del Rio Corman, A. J., c Del Rio Cova, F. B., c Houston Covey, W. B., c Canutillo Cox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, F., cc Trockett Craddock, T. D., Jr., c Crockett Craddock, T. D., Jr., c Trockett Craig, R. M., c Hamilton Creed, R. F., c Bryan Crocker, C. G., c San Angelo Crowson, C. L., cc Weldon Crump, J. H., c Menard Cunlingham, T. C., c McKinney Currey, E. A., cc. A. & M. College, Miss. Curry, G. W., c El Paso Curther, W. L., c College Station Debme W. H.
Coker, W. R., c Athens Collins, L. D., c Evanston Conles, Vivian O., c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooper, J. T., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Coox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, T. D., Jr., c Crockett Craddock, T. D., Jr., c Crockett Craddock, T. D., Jr., c Hamilton Creed, R. F., c Bryan Crocker, C. G., c San Angelo Crowson, C. L., cc Weldon Crump, J. H., c Saltillo, Coah, Mex. Cunningham, T. C., c McKinney Currey, E. A., cc. A. & M. College, Miss. Curst, W., c El Paso Curther, W. L., c College Station Dahme, W. H., cc San Antonio
Coker, W. R., c Athens Collins, L. D., c Evanston Conlins, L. D., c Bryan Conles, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Del Rio Corman, A. J., c Del Rio Cova, F. B., c Canutillo Cox, F. B., c Canutillo Cox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, F., cc Trockett Craddock, F., cc Bryan Crocker, C. G., c San Angelo Crowson, C. L., cc Weldon Crump, J. H., c Menard Cuellar, P. M., c Saltillo, Coah., Mex. Curningham, T. C., c McKinney Currey, E. A., cc. A. & M. College, Miss. Curry, G. W., c El Paso Curtner, W. L., c Houston
Coker, W. R., c Athens Collins, L. D., c Evanston Conles, L. D., c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooper, J. T., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Coox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, T. D., Jr., c Crockett Craddock, T. D., Jr., c Crockett Craddock, T. D., Jr., c Crockett Craddock, T. C. Bryan Crocker, C. G., c San Angelo Crowson, C. L., cc Weldon Crump, J. H., c Menard Cuellar, P. M., c Saltillo, Coah, Mex. Cunningham, T. C., c McKinney Currey, E. A., cc. A. & M. College, Miss. Curry, G. W., c El Paso Curther, W. L., c Houston Cushing, E. C., c College Station Dahme, W. H., cc San Antonio Dalton, L. A., c McGregor Danhoff, Walter, c Corpus Christi
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Coker, W. R., c Athens Collins, L. D., c Evanston Conles, Vivian O., c Bryan Conlee, Vivian O., c Bryan Conner, R. R., c College Station Cook, F. G., v Paris Cooke, A. C. H., c Houston Cooper, J. T., c Temple Corley, Q. M., c Del Rio Corman, A. J., c Dallas Covacevich, N. S., c Houston Coox, F. B., c Whitney Cox, H. G., c Fort Worth Coyle, R. C., cc Marlow, Okla. Craddock, T., cc Marlow, Okla. Craddock, T. D., Jr., c Crockett Craddock, T. D., Jr., c Crockett Craddock, T. C. Bryan Crocker, C. G., c San Angelo Crowson, C. L., cc Weldon Crump, J. H., c Menard Cuellar, P. M., c Saltillo, Coah, Mex. Cunringham, T. C., c McKinney Currey, E. A., cc. A. & M. College, Miss. Curry, G. W., c El Paso Curtner, W. L., c Houston Cushing, E. C., c Conahler, Conselvation Dalton, L. A., c McGregor Danhoff, Walter, c Corpus Christi Dannelly, Perry, c Dansby, R. C., c Bryan Dansby, R. E., c Bryan Dansby, R. E., c Bryan Dansby, R. E., c Bryan
Burgess, H. E., c

Dashiell, Albert, c Dallas Dashiell, W. N., c Mission Davenport, H. E., cc Quitman David, W. L., c Corsicana Davidson, A. H., c Kansas City, Mo. Davidson, R. W., c Wharton Davis, S. T., c Denton Davis, W. E., c Huckabay Davisson, A. W., c Corpus Christi Day, A. E., c Center Day, J. R., c Caddo Mills DeBardeleben, J. M., c Brownsville Deen, W. A., c Bryan Deering, P. A., c College Station Deering, P. A., c New Ulm DeMaret, A. N., c Bryan Dew, H. E., c Tyler Dew, H. E., c Tyler Dewald, J. G., c Copperas Cove Dick, L. G., c San Antonio Dickinson, W. C., c Gonzales Diers, A. G., c La Grange Dillon, E. A., c San Antonio Dolan, A. R., c Houston Dollinger, J., c Beaumont Dougherty, J. B., cc Bryan Delan, A. R., c Houston
Dashiell, Albert, c
Dashiell, W. N., cMission
Davenport, H. E., ccQuitman
Davidson A. H. a. Women City Mo
Davidson R W c Wherton
Davis, S. T., c Denton
Davis, W. E., c
Davisson, A. W., cCorpus Christi
Day, A. E., cCenter
Day, J. R., cCaddo Mills
Dear W. A Brownsville
Deering P A c College Station
Deering, Mrs. P. A., c
DeMaret, A. N., cBryan
de Steiguer, E. L., cBryan
Dew, H. E., cTyler
Diek I C a Copperas Cove
Dickinson W C c Gonzales
Diers, A. G., c La Grange
Dillon, E. A., cSan Antonio
Dolan, A. R., c Houston
Dollinger, J., cBeaumont
Dougherty, J. B., cc Bryan
Downard P W a Proposition
Dritt. J. R. c Mexico D F
Drummet, P. W., c
Duff, R. E., ccJefferson
Duffield, R. F., cHouston
Dungan, W. T., cMcKinney
Dunn C W v Abilana
Durham, J. J. c. Hico
Dwenger, A. T., c
Dyers, G. B., ccOlustee, Okla.
Dyers, J. E., c
Edding C W a Bynum
Eden, Josephene c Rryan
Eden, Nelle, c
Edge, C. H., cBryan
Edge, J. H., Jr., cBryan
Ellis I T Ir as College Station
Ellis O. B. cc Greenville
Embree, C. A., c Belton
Emmons, A. B., cClarendon
Endsley, W. L., vSan Antonio
Epp, C. E., c
Enpright E D cc Menor
Esparza, J. G., c Laredo
Essary, E. E., cPearsall
Eubank, L. C., eDallas
Evans, J. T., cPearsall
Ewing, T. P., cSpeegleville
Farquhar R E c Ennia
Farguhar, W. W., C. College Station
Farrell, J. M., vWichita Falls
Farrell, J. T., c
Fermier, Florence E., cCollege Station
Fighback A A a
Fischer H. O. c. Son A-4:
Fischer, W. A., c San Antonio
Fisher, A. D., cLongview
Fitzpatrick, D. B., vFalfurrias
Flagg, Ray, cCollege Station
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Henderson, Elva,	
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	cCaldwell
Henderson, Roy, c	cBoonville
Herfurth, J. W.,	cGarland
Herndon, Mrs. Ma	ude W. c Bryan
Hickman H H	c Riging Star
Trill T C	Vacluum
Hill, J. G., C	Yoakum
Hill, Mrs. Sallie	J., cYoakum
Hilliard, C. M.,	Marshall
Hinoiosa, J. H.	e Rio Grande
Hobdy W M v	San Antonio
Hobard I D	- Prises
Hoogood, J. D.,	CFrisco
Hoage, U. J., cc	w narton
Hodges, F. E., cc	Crockett
Hodges, R. C., c	Port Arthur
Hodges, R. H., v	Ranger
Hoff S S c	San Antonio
Hoffmanna A H	Wass
normeyer, A. n.	, ewaco
Holland, E. A., c	College Station
Hollingsworth, M.	C., cSan Antonio
Holt, G. H., c	San Antonio
Holzman, J. A. v	Dallas
Holzman Wilms	College Station
Homonn D E	Con A-4
Harley Y P	San Antonio
доокег, J. D., c	Carthage
Hopkins, B. H.,	cFarwell
Horning, J. G., v	Houston
Hornshy, F. G., e	Baton Rouge
Horstman A W	Wietowie
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nosking, r. J., c	Bryan
Hulam, George R	., eDallas
Howell, E., c	Bryan
Howell, Jewell M.	. cCollege Station
Hubbard, R. C., c	e Lamnasas
Hudnall M R c	Teague
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nugnes, w. L., c	College Station
Huisey, J. W., c	Merit
Hunt, H. H., c	Denison
Hutchinson, R. B	., ccMcAllister
Hutchison, M., cc	Brownwood
Hutson, B. B., c	Stockdale
Hyland Ice c	College Station
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Ilysaw, II., cc	Kenedy
ingranam. C. W.,	eBeaumont
Ingram, W. F., co	Durant, Okla.
Ingram, W. F., co Ireland, George, v	Durant, Okla.
Ingram, W. F., co Ireland, George, v Irving, D. F., c	Durant, Okla. Victoria College Station
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Ingram, W. F., ct. Ireland, George, V. Irving, D. F., cc. Ivie, H. D., cc. James, F. C., c. James, W. F., c. Jamison, J. P., c. Janison, J. P., c. Janison, J. P., c. Janeck, A. P., dancek, E. C., c. Jefferson, John R. Jelinek, R., c. Ireland, R., c. Irel	Durant, Okla. Victoria Victoria College Station Emory c East Prairie, Mo. Port Arthur Port Arthur Sterling City c Falls City Bryan Jr., c San Antonio Granger
Ingram, W. F., ct Ireland, George, v Irving, D. F., c Ivie, H. D., cc James, F. C., c James, W. F., c Jamesow, W. F., c Jamesow, J. P., c Janaeek, A. P., c Jancek, E. C., c Jefferson, John R. Jelinek, R., c Jennings, R. N.,	Durant, Okla. Victoria College Station Emory c East Prairie, Mo. Port Arthur Port Arthur Sterling City c Falls City c Falls City and France Granger c San Antonio Granger
Ingram, W. F., ct. Ireland, George, v. Irving, D. F., cc. Ivie, H. D., cc. James, F. C., c. James, W. F., c. Jamison, J. P., c. Janison, J. P., c. Janeck, E. C., c. Janison, John R. Jelinek, R., c Jennings, R. N., Johnson, A. A., e	Durant Okla Victoria College Station Emory c East Prairie, Mo. Port Arthur Port Arthur Sterling City c Falls City Bryan , Jr., c San Antonio Granger c Sanatorium Shreveport, La.
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Kellenor, C. W., CC	Charmon
	C Cake
Kelley, S. E., C	San Saua
Kelly, JW., C	Texarkana
Kemper, J. H., v	Grand Rapids
Kendall, E. J., c	Charleston, Ark.
Kennedy, Bill, cc	Personville
Kennerly A B c	Houston
Konna A III a	Pryon
Kerns, A. II., C	TIt
Ketterson, r. A., c	nouston
Khaira, R. S., e	College Station
Kiber, D. H., c	Arlington
Kibler, J. A., c	Gainesville
Killough, J. M., c	Stephenville
Kilnatrick R E c	Galveston
Vingoid T A a	Orona
Kincalu, I. A., C	D1il
Kinchen, A. L., C	Breckenriage
King, C. C., e	Houston
King, W. C., c	Denison
Kirtland, R. L., cc	Los Angeles, Calif.
Knight, W. A., v	Houston
Kolar Bill Kline cc	Flatonia
Vormoner C N	Window
Kornegay, C. N., C	winters
Kossbiel, R. C., c	Cuero
Krauel, T. A., c	Houston
Krausnick, Mrs. Maude,	cCollege Station
Krausnick, Walter, c	College Station
Kreager D J c	Dallag
Krouliek A P a	Pollwille
Variation dell V	Dt
Kuykendan, K., e	Bastrop
Kyle, Lily Bess, c	College Station
Lacy, J. C., cc	Dallas
Lagow, T. K., c	Dallas
Lambert, R. R., cc	Chireno
Lancaster I I c	College Park
Innanctor Mrs. I I	College Tark
Lancaster, Mrs. J. J., C	Conege Fark
Lane, R. B., C	Joaquin
Langford, J. D., c	Greenville
Langley, B. C., c	Bullard
Langlotz, W. E., c	Fayetteville
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Langnam, F., F., V	Amarillo
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Largen, D. F., c	San Antonio
Largen, D. F., c Lawrence, P. P., e	AmarilloSan AntonioHoney Grove
Langnam, E. F., v Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c	AmarilloSan AntonioHoney GroveTyler
Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc	AmarilloSan AntonioHoney GroveTylerJefferson
Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc Lee, R. C., c	AmarilloSan AntonioHoney GroveTylerJeffersonDenton
Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc Lee, R. C., c Lehman, A. J., c	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings
Largen, D. F., c Lawrence, P. P., e Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc Lee, R. C., c Lehman, A. J., c	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings Temple
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Largen, D. F., c Lawrence, P. P., e Lawrence, P. P., e Lawrence, P. P., e Lea, A. J., cc Lee, R. C., c Leshman, A. J., c Leslie, S. C., c Lewis, A. A., c Lindley, A. T., v Lipscomb, S. W., c Little, E. W., v Littlefield, W. M., c Lomax, G. K., c	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings Temple Houston Kaufman College Station Winters Houston Amarillo San Benito
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Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc Lee, R. C., c Lehman, A. J., c Lesikar, L. J., c Lesikar, L. J., c Lewis, A. A., c Lindsey, R. F., c Lindsey, R. F., c Lindley, A. T., v Lipscomb, S. W., c Littlefield, W. W., c Lomaine, L. J., v Lorgin, L. J., v	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings Temple Houston Kaufman College Station Winters Houston Amarillo San Benito Port Arthur
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Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc Lee, R. C., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, A. A., c Lindsey, R. F., c Lindsey, R. F., c Lindsey, R. W., c Little, E. W., v Littlefield, W. M., c Lomax, G. K., c Lovell, L. I., c Lowe, A. E., c	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings Temple Houston Kaufman College Station Winters Houston Amarillo San Benito Port Arthur Gonzales Galveston Weatherford
Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc Lee, R. C., c Lehman, A. J., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, L. J., c Lindsey, R. F., c Lindsey, R. F., c Lindsey, R. F., c Lindsey, A. W., c Little, E. W., v Littlefield, W. M., c Lowax, G. K., c Louraine, L. J., v Lovell, L. I., c Lowe, A. E., c Luby, A. S., cc	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings Temple Houston Kaufman College Station Winters Houston Amarillo San Benito Port Arthur Gonzales Galveston Weatherford Tom Bean
Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc Lee, R. C., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, A. A., c Lindsey, R. F., c Lindsey, A. T., v Lipscomb, S. W., c Littlefield, W. M., c Lomax, G. K., c Louraine, L. J., v Lovel, L. I., c Lowe, A. E., c Luby, A. S., cc McBride, G. C., c	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings Temple Houston Kaufman College Station Winters Houston Amarillo San Benito Port Arthur Gonzales Galveston Weatherford Tom Bean Leonard
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Largen, D. F., c Lawrence, P. P., e Lawver, E. A., c Lea, A. J., cc Lee, R. C., c Lebman, A. J., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, L. J., c Lesikar, R. F., c Lindsey, R. F., c Lindsey, R. F., c Lindsey, R. F., c Lindsey, A. T., v Lipscomb, S. W., c Little, E. W., v Little, E. W., v Lovell, L. I., c Lowe, A. E., c Luby, A. S., cc McCullough, A. C., c McCullough, W. R., v McCullough, W. R., v	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings Temple Houston Kaufman College Station Amarillo San Benito Port Arthur Gonzales Galveston Weatherford Tom Bean Leonard College Station Beryan Bryan
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Kellehor, C. W., cc Kelley, S. E., c Kelley, J. W., c Kelley, J. W., c Kemper, J. H., v Kendall, E. J., c Kennedy, Bill, cc Kennedy, Bill, cc Kennerly, A. B., c Keterson, F. A., c Ketterson, F. A., c Ketterson, F. A., c Kibler, D. H., c Kibler, J. A., c Kibler, J. A., c Killough, J. M., c King, C. C., e King, C. C., e King, W. C., c King, C. C., e King, W. C., c King, H. M., c King, W. C., c Kossbiel, R. C., c Krausnick, Walter, c Krausnick, Mrs. Maude, Krausnick, Mrs. C Kraus	Amarillo San Antonio Honey Grove Tyler Jefferson Denton Giddings Temple Houston Kaufman College Station Amarillo San Benito Port Arthur Gonzales Galveston Weatherford Tom Bean Leonard College Station Wimet Fort Worth Jefferson Tyler Bartlett Bryan Houston Tyler Bartlett Bryan Houston J Dallas College Station

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McGuilev. E. S., CC	Hubbard
McIntyre K. J. cc	Ardmore, Okla,
McKee I R c	College Station
McKee, s. 1t., c	Fort Worth
McKinley, D., C	Fort Worth
McLeod, G. W., C	San Antonio
McMillan, T. J., c	Chenango
McMurtray, H. D., c	Arlington
McNeill A R c	Dallas
McNess C W c	College Station
McNess, G. W., C	Uniege Station
McPherson, S. H., cc	namiiton
McWhirter, J. N., c	Кору
McWilliams, L. D., c	cTimpson
Magruder, A. D., e	San Antonio
Major M E v	Orange
Mainon N I	Wasa
Mainer, N. J., C	Trli-
Maione, L. T., cc	Hamiin
Mangelsdorf, Mrs. P. C	., cCollege Station
Mann, D. T., c	Taylor
Marburger, L. Laurine	. c College Station
Marney II E. v	San Antonio
Manaball C T	Uouston
Marshall, C. L., C	D-U
Marshall, E. E., C	Dainart
Martin, A. D., Jr., c	Bryan
Martin, Don, c	Bryan
Martin, E. C., c	Clint
Martin E D a	College Station
Martin Control E	Fort Worth
Martin, Gertrude F., c	Fort Worth
Martin, G. W., C	Bryan
Martin, Louise, c	Bryan
Martin, R. L., c	Fort Worth
Martin, Vernon, c	Bryan
Matejowsky T A co	Lyone
Matheway C. T.	Townshane
Matnews, C. I., c	texarkana
Mathews, M. P., c	Bryan
Mathis, John A., Jr.,	cGilmer
Mathis, Lela F., c	Bryan
Matthews, James, cc	Durant. Okla.
Matthews T L c	Chanel Hill
Maywell C F c	O Mary Del
	Corriegna
Manfield D M .	Corsicana
Mayfield, D. M., c	Corsicana Navasota
Mayfield, D. M., c Means, Florence, c	Corsicana Navasota Bryan
Mayfield, D. M., c Means, Florence, c Mey, J. S., c	Corsicana Navasota Bryan Del Rio
Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches
Mayfield, D. M., c Means, Florence, c Mey, J. S., c Middlebrook, E. W., c Mika, E. L., cc	Corsicana Navasota Navasota Bryan Del Rio Nacogdoches Ballinger
Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth
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Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn.
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Mayfield, D. M., c Means, Florence, c Mey, J. S., c My, J. S., c Middebrook, E. W., c Miles, R. O., c Miller, C. A., c Miller, V. O., c Miller, V. O., c Miller, V. G. Minkert, W. F., c Minor, W. S., c Mitchell, C. A., c Mitchell, J. E., c Mitchell, E. N., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn. Orange San Antonio Childress
Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn Orange San Antonio Childress e, c Bryan
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Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn. Childress e, c Bryan Greenville Greenville Center Center
Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn Orange San Antonio Childress e, c Bryan Bryan Greenville Center
Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn. Orange San Antonio Childress e, c Bryan Bryan Greenville Center Lovelady
Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn. Orange San Antonio Childress e, c Bryan Greenville Center Lovelady Quanah
Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Orange San Antonio Childress e, c Bryan Greenville Center Lovelady Quanah La Grange
Mayfield, D. M., c Means, Florence, c Mey, J. S., c Mey, J. S., c Middlebrook, E. W., c Mika, E. L., cc Miles, R. O., c Miller, C. A., c Miller, V. O., c Miller, V. O., c Miller, V. S., c Minkert, W. F., c Mitchell, C. A., c Mitchell, J. E., c Mitchell, J. E., c Mitchell, J. E., c Mitchell, May Catherin Mizell, J. L., c Mockford, J. P., v Moffett, F. L., c Monzingo, L. H., cc Moore, C. L., cc Moore, G. H., c Moore, G. H., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn. Orange San Antonio Childress e, c Bryan Greenville Center Lovelady Quanah La Grange Dallas
Mayfield, D. M., c	Corsicana Navasota Bryan Del Rio Nacogdoches Ballinger Fort Worth Coleman San Gabriel Carencro Bryan Sailors Rest, Tenn. Orange San Antonio Childress e, c Bryan Bryan Greenville Center Lovelady Quanah La Grange Dallas Bonham
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Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Roeder, L. M., cc Rogers, A. M., c Rogers, A. M., c Rogers, Virginia, c Rollins, J. W., c Ross, M. J., cc Ross, M. J., cc Rothe, R. L., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Samford, T. C., c Sanderson, W. R., v Scarlett, W. E., c Scherz, N. E., cc Schmidt, Hubert, v Schrade, A. R., e Schulz, J. G., cc Schulz, J. G., cc Schulz, J. T., cc	Cotulla McAllen McAllen Shiner Brenham Cotulla Port Arthur Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Waco Port Arthur
Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Rodder, L. M., cc Rogers, A. M., cc Rogers, A. M., c Rogers, Virginia, c Rollins, J. W., c Ross, M. J., cc Ross, M. J., cc Ross, M. J., cc Rowe, L. M., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Samford, T. C., c Samford, T. C., c Schmidt, Hubert, v Schrade, A. R., e Schulz, J. G., cc Schulz, J. G., cc Schulz, J. G., cc Schord, A. K.	Cotulla McAllen Shiner Brenham Bonham Cotulla Port Arthur Whitney Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Vaco Port Arthur Three Rivers Three Rivers
Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Roeder, L. M., cc Rogers, A. M., c Rogers, A. M., c Rogers, Virginia, c Roslins, J. W., c Ross, M. J., cc Ross, M. J., cc Ross, M. J., cc Rothe, R. L., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Samford, T. C., c Sanderson, W. R., v Scarlett, W. E., c Schulz, J. G., cc Schulz, J. G., cc Schulz, J. G., cc Schulz, J. T., cc Scoggins, A. K., c	Cotulla McAllen Shiner Brenham Bonham Cotulla Port Arthur Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Waco Port Arthur
Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Roeder, L. M., cc Rogers, A. M., c Rogers, A. M., c Rogers, Virginia, c Rollins, J. W., c Ross, M. J., cc Ross, M. J., cc Ross, M. J., cc Ross, M. J., cc Rowe, L. M., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Samford, T. C., c Sanderson, W. R., v Scarlett, W. E., c Scherz, N. E., cc Schmidt, Hubert, v Schrade, A. R., e Schulz, J. G., cc Scott, C. F., c Scott, C. F., c	Cotulla McAllen Shiner Brenham Bonham Cotulla Port Arthur Whitney Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Waco Port Arthur Three Rivers Dorchester Richmond
Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Roeder, L. M., cc Rogers, A. M., c Rogers, A. M., c Rogers, Virginia, c Rollins, J. W., c Ross, M. J., cc Ross, M. J., cc Rothe, R. L., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Samford, T. C., c Samford, T. C., c Schult, W. E., c Schridt, Hubert, v Schrade, A. R., e Schulz, J. G., cc Schulz, J. G., cc Schulz, J. G., cc Scott, C. F., c Scott, C. F., c Scott H. J. cc	Cotulla McAllen Shiner Brenham Bonham Cotulla Port Arthur Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Vaco Port Arthur
Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Roeder, L. M., cc Rogers, A. M., c Rogers, A. M., c Rogers, Virginia, c Rollins, J. W., c Ross, M. J., cc Ross, M. J., cc Rothe, R. L., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Samford, T. C., c Sanderson, W. R., v Scarlett, W. E., c Scherz, N. E., cc Scherz, N. E., cc Schult, J. G., cc Schulz, J. G., cc Schulz, J. G., cc Scott, C. F., c Scott, H. L., cc	Cotulla McAllen Shiner Brenham Cotulla Port Arthur Whitney Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Waco Port Arthur Three Rivers Torchester Richmond Navasota
Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Roeder, L. M., cc Rogers, A. M., c Rogers, A. M., c Rogers, Virginia, c Rollins, J. W., c Ross, M. J., cc Ross, M. J., cc Ross, M. J., cc Rothe, R. L., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Samford, T. C., c Samford, T. C., c Sanderson, W. R., v Scarlett, W. E., c Scherz, N. E., cc Schmidt, Hubert, v Schnidt, Hubert, v Schulz, J. G., cc Schulz, J. G., cc Schulz, J. T., cc Scott, C. F., c Scott, H. L., cc Scott, C. F., c	Cotulla McAllen Shiner Brenham Bonham Cotulla Port Arthur Whitney Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station College Station Three Rivers Dorchester Richmond Navasota Waco
Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Roeder, L. M., cc Rogers, A. M., c Rogers, A. M., c Rogers, Virginia, c Roslins, J. W., c Roslins, J. W., c Ross, M. J., cc Ross, M. J., cc Rothe, R. L., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Sanderson, W. R., v Scarlett, W. E., c Schul, Fred, c Schul, J. G., cc Schulz, J. G., cc Schulz, J. T., cc Scott, C. F., c Scott, W. W. c	Cotulla McAllen Shiner Brenham Bonham Cotulla Port Arthur Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Waco Port Arthur Three Rivers Three Rivers There Rivers Collester Richmond Navasota Waco Double
Robinson, J. N., c Rock, F. E., c Rodgers, A. P., c Roeder, L. M., cc Rogers, A. M., c Rogers, A. M., c Rogers, Virginia, c Rollins, J. W., c Ross, M. J., cc Ross, M. J., cc Ross, M. J., cc Ross, M. J., cc Rowe, L. M., c Rowe, L. M., c Ruddell, J. E., cc Rugeley, S. W., cc Russell, Paul, cc Rylander, R. R., c Samford, T. C., c Sanderson, W. R., v Scarlett, W. E., c Scherz, N. E., cc Schmidt, Hubert, v Schrade, A. R., e Schulz, J. G., cc Schulz, J. G., cc Scott, C. F., c Scott, H. L., cc Scott, W. W., c	Cotulla McAllen Shiner Brenham Bonham Cotulla Port Arthur Whitney Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Waco Port Arthur Three Rivers Dorchester Richmond Navasota Waco Dallas
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Pratt, E. R., cc Price, C. E., cc Price, C. E., cc Privette, W. P., c Provine, W. D., cc Pruitt, G. W., cc Pruitt, G. W., cc Pruitt, G. V., cc Quillen, G. R., e Ragan, G. W., v Ragsdale, L. G., c Raniney, Anson, c Ramirez, G., c Randolph, Lalla Dean, c Rau, L. C., e Rawlins, F. M., c Rector, G. W., cc Redefarn, P. R., c Redefarn, P. R., c Reded, W. W., c Reichart, F. H., c Reid, A. F., c Reid, A. F., c Reid, D. H., c Reilly, J. M., c Reinert, W. F., cc Reynolds, G., e Reynolds, G., e Reynolds, G., e Reynolds, Mary Jane, c Reynolds, R. W., c Rice, E. B., c Rice, W. W., c Ricke, W. W., c Ricke, W. W., c Ricker, C. E., c Ricker, W. G., c Roberts, H. D., c Roberts, Catherine, c Roberts, Catherine, c Roberts, Catherine, c Roberts, Catherine, c Roders, A. M., c Roders, A. P., c Roders, A. M., c Rogers, A. M., c Rogers, A. M., c Rosson, J. N., c Rosson, J. N., c Rosson, J. N., c Rosson, J. N., c Rose, O. B., c Rosson, J. N., c Rosson, J. R., c Rosson, R. R., c Rosson, J. R., c Rosson, R. R., c Rosson,	Cotulla McAllen McAllen Shiner Brenham Bonham Cotulla Port Arthur Willis Hondo Wharton El Campo Bay City Vera Buda Wills Point Brownwood Houston Timpson College Station Waco Port Arthur Three Rivers Three Rivers Dorchester Richmond Navasota Waco Dallas Bryan Dallas Bryan Dallas Teague Henderson

Shaw, J. J., cFort Hancock
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Skains I C a Franklin
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Smith K C a Panham
C- '-1 T D
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Smith, M. A., c Del Valle
Smith S B co Huntaville
Silita, b. D., cc
Smotherman, E. C., vHillsboro
Smotherman, Macv. v Corsicana
Snody P D co Poniomin
Color, It. D., CoBenjamin
Solana, J. L., ccSan Antonio
Sonntag, A. L., c
Sorv E. M. a Davier
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Stotchik, Julius, v Houston
Street, T. A., c Waco
Stribling I W a
City 11 C
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Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, Wm., c Dallas Sutton, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra
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Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, Wm., c Dallas Sutton, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Llano Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, Wm., c Dallas Sutton, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert. H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Llanco Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Taylor, W. F., c Burleson
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, Wm., c Dallas Sutton, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Llano Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Terry, R. C., c
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, W. M., c Dallas Suston, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Terry, R. C., c De Leon
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, Wm., c Dallas Sutton, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Illano Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Tarlery, R. C., c De Leon Thomas, L. E., cc Seymour
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, W. M., c Dallas Suston, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., ce Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Llano Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Terry, R. C., c De Leon Terry, R. C., c Seymour Thompson, J. L., e Dallas
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, Wm., c Dallas Sutton, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Llano Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. A., c Mt. Pleasant Taylor, W. F., c De Leon Thomas, L. E., cc Seymour Thompson, Mrs. J. C., c College Station Thomson, Mrs. J. C., c College Station Thomson, Mrs. J. C., c College Station Trousday College Station Thomas, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Tousless Target Station Tourise Taylor, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Tourise Taylor, Mrs. J. C., c College Station Taylor, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Taylor, Mrs. J. C., c College Station Taylor, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Taylor, Mrs. J. C., c College Station Thomason, Mrs. J. C., c College Station Taylor, Mrs. J. C
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, W. M., c Dallas Suston, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Llano Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Terry, R. C., c Seymour Thompson, J. L., e Dallas Thomson, Mrs. J. C., c College Station
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, Wm., c Dallas Sutton, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Llaruo Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Taylor, W. F., c Burleson Terry, R. C., c De Leon Thomas, L. E., cc Seymour Thompson, J. L., e Dallas Thomson, Mrs. J. C., c College Station
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, Wm., c Dallas Sutton, B. K., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tate, R. B., c Llano Taylor, H. C., e Llano Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Terry, R. C., c De Leon Thomas, L. E., cc Seymour Thompson, J. L., e Dallas Thomson, Mrs. J. C., c College Station Thornhill, O. M., c Lamesa Thomson, J. C., c College Station Thornhill, O. M., c Lamesa
Strickland, C. H., c Garrison Strode, R. M., c McKinney Strong, W. G., c Beaumont Stuermer, H. J., c Nordheim Susen, W. G., c Beaumont Susern, W. G., c Corsicana Sweatman, R. H., c Ennis Sypert, H. C., cc Longview Tampke, A. A., c Huckabay Tanner, B. M., c Electra Tatle, R. B., c Llarno Taylor, H. A., cc Lufkin Taylor, H. C., e Houston Taylor, L. L., c Laredo Taylor, S. G., c Bertram Taylor, W. A., c Mt. Pleasant Taylor, W. F., c Burleson Terry, R. C., c De Leon Thomas, L. E., cc Seymour Thompson, J. L., e College Station Thornhill, O. M., c Laresa
Shaw, J. J., c Shawver, C., cc Seymour Shawwaf, M. S., c Beirut, Syria Sheaver, W. L., cc Galveston Sheckles, L. W., c Houston Sheppard, H., v Wichita Falls Shimura, I., cc Sheman Shull, J. S., c Durant, Okla. Shumate, B. E., c Houston Shett, G. F., e Wichita Falls Siddall, Elizabeth, c Sheman Shull, J. S., c Durant, Okla. Shumate, B. E., c Houston Silva, I., c Oaxaca, Mex. Sigleton, J. W., c Jalasper Simpson, S. H., c Jacksonville Skains, J. C., c Skinner, L., c Small, T. H., c Small, T. H., c Smith, G. E., e Smith, G. E., e Smith, G. E., e Smith, G. E., e Smith, K. C., c Smith, K. C., c Shimer, L., c Shimer, L., c Shimer, L., c Small, T. H., c Smith, S. E., c Sun Antonio Smith, L. D., c Smith, K. C., c Smotherman, E. C., v Hillsboro Smotherman, E. C., v Hillsboro Smotherman, Macy, v Corsicana Snody, R. D., cc Benjamin Solana, J. L., cc San Antonio Sonntag, A. L., c San Antonio Sontar, L. J., c Spencer, H. L., c Spencer, H. Spencer, H. Spencer, H. Spencer, H. Spencer, H. Spencer, H. Spe

Threadgill, T. E., cc Bellevue Timmins, L. V., cc Waskom	•
Timmins, L. V., ccWaskom	ı
Tinney, C. W., cPost	t
Tippit, H. A., eSan Antonio	,
Tisdale, C. E., cColeman	1
Trout, I. J., ccStigler	•
Tucker, H. L., cOvalo)
Turbeville, B. F., cYoakum	1
Turner, D. L., c	1
Turner, F. C., cFort Worth	1
Turner, H. C., c	1
Turner, J. H., cSan Antonio)
Vaden, F. S., Jr., c San Antonio)
Van Burkleo, J. S., vDetroit	t
vance, F. M., cBryan	1
Vance, Mrs., Lena, cBryan	ı
Vance, Dolores, c Bryan	ı
Vandervoort, R. U., cLa Porte	
Vandervoort, R. U., c La Porte Van Steenbergh, S. K., c East Bernard Van Valkenburgh, J. C., c Dallas	ı
Van Valkenburgh, J. C., cDallas	3
Varnell, E. H., cCisco)
Varnell, E. H., c	
Vauter, W. W., cParis	3
Vest, J. G., ccCameron	ı
Vest, R. R., ccCameror	
Vick, H. G., cLland)
Vidrine, G. C., cSan Antonio	
Von Rosenberg, H. C., vHallettsville	è
Waisman, Sammie, cSan Saba	Ł
Waldrop, A. M., cBryan	1
Walker, Lily Rush, cBryan	1
Wallace, T. H., cBeaumont	t
Walls, A. W., ccCleburne	3
Ward, S. J., vHoustor	ì
ward, T. A., cJacksonville	•
Ward, W. L., c	1
Warrell, T. J., vMemphis	3
Watkins, Ruth D., cCollege Station	
Watson, F., eBeaumon	t
Watson, J. S., vMexis	L
Webb, G. J., cSnyder	
Welch, L. M., eBeaumont	
Wellborn, C. F., cAlto)
Wenck, A. W., c Hearne Wendlandt, Ted, c Austin	3
wendlandt, Ted, c	ı
Wenzel, W. C., cCollege Station	ı.

Westmoreland, C. S., c	Waco
Wester F H	San Antonio
Weston, F. H., c Weyrick, F. F., c	San Antonio
Weyrick, F. F., C	Eagle Pass
Whalen, H. W., c	Beeville
Wheat, D. P., c	Beaumont
Wheeler Charles T. c	Rrvan
Wheeler N W v	Winnshoro
Wheeler, N. W., v	Auetin
White, H. C., c	. TT1 L
white, H. C., c	нискавау
White, R. W., cc	El Paso
White, Taylor, c	Muleshoe
White, D. T., c	Uvalde
White, D. T., c	College Station
Whitten D E c	Galveston
Wilcox W W c	Bryan
Wilcox, W. W., c	Dallas
Williams Danis	Constitution
Williams, Doyle, c	Granbury
Williams, E. L., c	College Station
Williams, Jack, c	
Williams, J. C., c	De Leon
Williams, J. M., c	Wellborn
Williams, L. C., Jr., c	
Williams N F v	Fort Worth
Williams, N. F., v	Floydada
Williams, O. 1., C	Don't Woodh
Williamson, M. A., v	Fort worth
Willingnam, J. J., c	Gilmer
Wilmans, Robert, cc	Dallas
Wilson, A. R., e	Alvin
Wilson, C. B., c	Kirbyville
Wilson, E. W., e	Palestine
Wilson F. E. cc	Lawton
Wilson, F. H., e	San Antonia
Winchester, C. L., v	Townshann
Winenester, C. D., V	Will Die
Wingo, W. H., c	Wills Point
Wiseman, H. W., cc	Floresville
Wolma, F. J., v	San Antonio
Woodman, V. W., c	Austin
Woodruff, F. E., e	Dallas
Woods, Flora, c	College Station
Wright D. E. c	Laredo
Wright, D. E., c Wupperman, Walter, c	Austin
Wyly, J. H., c	Fout Wouth
Vott D D	Monkle Tell
Yett, R. P., cYoung, R. L., e	warbie Falls
	Eastland
Young, W. K., c	Cheapsid e
Zinn, Bennie A, c	Hearn e

SUMMARY OF ENROLLMENT, SESSION 1927-28

(June 1, 1927 to April 1, 1928).

,
Agr AA AgEng Land LA Sci Arch ChE CE EE ME TE CM VM AgEd IA IE RE Totals
Graduate
55 1 33 . 19 30 28 39 75 57 11 2 9 4 1 1
62 101 5 4 78 36 54 39 71 111 68 6 23 1 4 4 2
$120 \ 106 \ 7 \ 13 \ 106 \ 50 \ 79 \ 67 \ 114 \ 180 \ 89 \ 11 \ 44 \ 4 \ 8 \ 4 \ 1 \ 4$
296 318 20 19 249 137 184 148 271 440 264 39 71 10 34 14 11 18 2543
Non-Collegiate Two-Year Course in Agriculture
Total Regular Session
Summer Session, 1927: 1. College 519 519 519 519 519 519 519 519 519 519
reeders
Metermen
Farmers' Short Course2
Total Summer Session
6969

DEGREES CONFERRED FEBRUARY 2, 1927

Master of Science

In Agriculture (1)

Edward Hobbs

B. S., A. and M. College of Texas, 1923

Bachelor of Science

In Agricultural Administration (2)

Reuben Knight Lothrop

1-

In Agriculture (7)

Oscar Jerome Hanszen Ralph Willard Hutchins Clyde Britton Kennington John Dile Langford, Jr.

William Henry Olivarri Newell H. Riveire Tehrlin E. Tutt

Joyce Andrew Schnable

In Agricultural Engineering (1)

Carl Frederick Gorman

In Civil Engineering (2)

Edwin Jasper Axline

George Everett Bean

In Electrical Engineering (1)

Loran Laughlin

In Agricultural Education (1)

Theodore Herman Roensch

In Industrial Education (2)

Frank Hall Cheaney

Waldo Willie Powers

In Rural Education (1)

Ralph Howard Mitchell

Doctor of Veterinary Medicine (1)

Anderson Vaughn Young

DEGREES CONFERRED AT THE FIFTY-FIRST ANNUAL COMMENCEMENT

May 31, 1927

Master of Science

In Agriculture (4)

Joseph Carraway Brown B. S., A. and M. College of Texas, 1922

Henry Ellis Dunlavy

B. S., Okahoma A. and M. College, 1919 Nathaniel Foote

B. S., University of Nebraska, 1926 Franklin Sherman, III

B. S., Clemson Agricultural College, 1926

In Agricultural Administration (2)

Joel Franklin Hembree

B. S., A. and M. College of Texas, 1926 John Leroy Watson

B. S., A. and M. College of Texas, 1915

In Chemical Engineering (1)

Marion Thomas Harrington

B. S., A. and M. College of Texas, 1922

In Civil Engineering (2)

Thomas Orion Foster, Jr.

B. S., A. and M. College of Texas, 1922 Martin Burger Killian

B. S., A. and M. College of Texas, 1926

In Electrical Engineering (1)

Leroy Levi Fouraker B. S., A. and M. College of Texas, 1914

In Rural Education (4)

James Oscar Lowe

B. S., Sam Houston State Teachers' College, 1924 Leighlus Ermon Sheppard

A. B., Baylor University, 1926

William Charles Wenzel

B. A., Southwest Texas Teachers' College, 1924

Carl Bassett Wilson

B. A., Baylor University, 1926

In Science (1) Edward Earl Vezey

B. S., Oklahoma A. and M. College, 1910

Civil Engineer (2)

Oscar Seward, Jr

B. S., A. and M. College of Texas, 1907 Arthur Herbert Woolverton

B. S., A. and M. College of Texas, 1921

Bachelor of Arts In Liberal Arts (7)

Samuel Joshua Ball Bailey S. Birdsong Willson Davis John Lockett Shelton Lanoar Skinner Sam Henry Tabor Robert Hendon Thomason

Bachelor of Science

In Agriculture (45)

James Daily Amend James Clyde Appleman Sinclair Baker Stanley James Baker William Giles Boyd Herbert Brehmer Herbert Brehmer Sam Findley Brewster Ben Roberts Chambers Raymond B. Cleveland Elmo V. Cook Joseph Barr Corns Paul Alonzo Cunyus Roy B. Davis Norman A. Donges John Temple Evans Albert Jourdaine Florey Frederico Gomez Calhoun T. Greenwood Gordon Lee Hart Otto Frank Haslbauer Richard Edward Homann Paul Rufus Johnson John B. Kiber

William Lecel Lee Alvin Charles Longino Fritz Luckenbach, Jr. Vernon Orville McCoy Walter D. McElroy John H. Miller Orville D. Morris Carl Muenzenberger Ross James Newton William P. Orme John Martin Parks Willard Gray Ralph Harvey Lee Richards Kirk Hamilton Scott Gordon F. Stark Samuel Irwin Stratton, Jr. Charles Judson Todd Donald Turner Reginald Jesse West Vernon Wilton Woodman Ernest E. Young Leroy James Young

In Agricultural Administration (53)

Zach Abney
John Ridgley Adkerson
John Bernice Bell
Foreman R. Bennett
Laurin Dougal Black, Jr.
Harry E. Braeuer
Ernest Hudgins Bruss
John S. Burgess, Jr.
Andrew Liston Castleman
Sanger A. Clark
John Scott Coleman, Jr.
Maurice Royce Cooper
Willis David Cowan
Simon Joseph Dielman
Lewis Edward Driver
James J. Durham
John Oge Flannery
Cornelius Mayhard Florer
Victor Prentice Gayle
Sylvester R. Gohmert
Richard Allen Goodson
Thomas Gilmore Harris
Raleigh James Hightower
Sam Huggins
Gordon James
Berry Edward Jones
James Caughey Landon

Adam D. Leatherman
Frank Candler McClendoa
Allie Granville McGee
Allen Russi Menger
Davis T. Montfort
Gilmer A. Morriss
Joe Farr Newnam
Frank Nash Newsom
Alfred Oscar Nicholson
Joseph Louis Reitch
Brady Franklin Risinger
Raymond I. Schumacher
Charles B. Seidenglanz
Raymond L. Stern
James Abner Stevens
Robert Bradshaw Tate
William Harold Torian
Estell Augusta Vance
Noland Varley
Robert Clinton Wakefield
James Bruce Waterfield
Robert D. Wilcox
Roy Alfred Wilson
Mack Woodrum
Robert Loyall Woody
Karl H. Word, Jr.

Frierson A. Lloyd Henry Lanham Williams

In Agricultural Engineering (2)

Robert E. O. Sloan

In Architecture (18)

Oscar Clifford Hallmark Engelbert A. Jelinek, Jr. Herbert Ernest Kellner Harold Jackson McKenzie Harold Mayes Phillip Middleton Price Eugene H. Rice Gordon Morse Smith Claren Elmer Wooldridge

In Chemical Engineering (12)

Frank A. Knox Harold Arthur Olivey Oney Pinkney Puryear Robert Stevens Ross Fredric Humsaker Towsend John Alexander Witherspoon

In Civil Engineering

Orrin H. Pilkey
William Charles Rettiger
Harry Jerome Sessums
Everett James Shelby
Frank Miller Smith, Jr.
Ralph T. Smith
Robert Bruce Tatum
Stuart Reed Wagstaff
Gilbert Ainsworth Youngs
Edwin Julius Ernest Zapp

In Agricultural Education (5)

Milligan Bethel Roy Alton Box Wood Rolls Coleman

George Selman, Jr.

Robert Marshall Bacher Horace Ellisor Belsher Hall H. Blair Otto J. Bohlmann Berry Thomas Bowlin, Jr. Ira Douglas Clarke Cecil Norton Dunlap Daniel Flores, Jr.

Blake Marable Caldwell Steve A. Coleman, Jr. Isaac Flores Egmont Froehlich James Gladney Gibson Carl Davis Hays

William Caldwell Haley

Elmer Vernon Boyt
William Boyd Cox
Clarence C. Davis
Clarence Reid Davis
Francis Marion Davis
Louis Hopkins Durst
LeRoy Hudson
Temple B. Ingram
Gilbert E. Loew
Robert Lee McMillian
William Leroy Perry

In Electrical Engineering (52)

Edwin Joseph Allen Carl Albert Altenbern Lloyd Clifton Bell Oluf Guy Carlson Bernard John Carroll Will T. Clark Thomas Hugh Daniel John Ralph Dickey Edwin A. Dietel W. Tinsley Ellis Fred Allison Elliston Roy Turner Falkenberg Martin Amble Foster Summer B. Foster
Henry Oran Good
Lewis McDowell Haupt, Jr.
Guo Diedrich Heye Fred Brooks Hornby John Hume, Jr. Joseph Lawrence Hurff J. Edwin Jennings George Frederick Kent Randhir Singh Khaira Ulrich Langhammer Meredith Townsend Lewis George Hendrick Lovell

Robert Noel McCollom
John T. McLamore
Leon H. Maddox
Jack Ralph Meador
Haydon Lee Miller
Erhard Henry Mittanck
Corder Cole Munn
Rogers E. Peters
William Norman Petzing
Moran Johnson Pickett
Louis Weete Ramsey
Horace LaFayette Reynolds
Horace G. Schiller
Theodore Schultz
John Paul Smith
Will Dick Snelling
Jonnie Roscoe Taylor
Emil E. Umlang
James Elmo Watkins
Lemuel W. Webb
Robert Barron Webb
William Wendt, Jr.
Arthur Boone Wilson
William Earl Woodard
Frederick J. Zak
Lundy Leroy Zeigler

In Industrial Education (3)

James T. Wheeler

W. Bert Cook Richard H. Jones

Thomas Calhoun Bain

Rubie Arnold Baker Clifford M. Cockrell Dan B. Courville Willmot W. Craig Oran Dorsett Disch Claude Belmont Donovan, Jr. James Clifford Fleming Joseph Franklin Francis Philip H. Frank Earl Ben Frels George S. Fuller Fritz William Glitzch, Jr.

Hans Carl Glitzch Daniel B. Keller In Mechanical Engineering (30)

Frank J. Konecny
Wilton H. Leverett
Wayne E. Long
Weidon McGlaun
Elmer Clayton Nichols
Robert Franklin Olsen
William Norman Petzing
Jack Lipman Pink
Raymond Herbert Rosales
James Leslie Sewell
Walter M. Stephens
Alton LeRoy Strieber
Lewis E. Taylor
L. Monroe Tibbals
Roy Matthew Wingren

In Rural Education (2)

Louis Gunther Dietrich

Henry Webb Townsend

In Science (5)

Gus Levin A. H. McNaughton

Floyd Burney Crumley James A. Davis William James Graber, Jr.

In Textile Engineering (13)

Bailey S. Birdsong Joe E. Furneaux Sam William Floca Joe E. Furneaux Willmot Garrison Hill William Edward Keeton Theodore A. Kittlitz

Sidney Kline
Morton L. Levy
Paul Allen Nelson
Samuel Dodd Triplett, Jr.
Alvin Benjamin Welsch
John Robert Wood

Without Specification as to Course (6)

Lipscomb Anderson Dennie C. Arnold Robert L. Edgar Lamoyne Goodwin Hugh Donald McConaughey William Henry Meyers

Doctor of Veterinary Medicine (2)

Richard Alexander Self

Mervyn Benson Starnes

DEGREES CONFERRED

August 29, 1927

Master of Science

In Agriculture (2)

Daniel Henry Kiber

B.S., A. and M. College of Texas, 1917.

Robert Alvin Rix

B. S. Sam Houston Teachers College, 1922

In Agricultural Administration (1)

Floyd James Hosking

B. S., University of Minnesota, 1924

In Agricultural Education (2)

Tillman Marion Moore

B. S., A. and M. College of Texas, 1921

Ross Carter Patterson

B. S., A. and M. College of Texas, 1923

In Rural Education (4)

John R. Bender

A. B., University of Nebraska, 1905; M. A., Washington State College, 1907 LL. B., St. Louis University, 1912; LL. M., University of Tennessee, 1920 Ernest W. Chaney

B. S., Abilene Christian College, 1924

John Dile Langford

B. S., A. and M. College of Texas, 1927

Edwin David Martin

B. A., Abilene Christian College, 1923

Bachelor of Arts

In Liberal Arts (1)

James Serge Shull

Bachelor of Science

In Agriculture (4)

Tom Henry McDougal Thomas Lewis Matthews Elma Price Pearson Robert Ray Rylander

In Agricultural Administration (5)

James Matthews Robert Quincey Oaks Ted Wendlandt Cecil Sylvester Westmoreland Ralph Phillips Yett

In Agricultural Education (4)

Samuel V. Burks William Robert Heizer Taylor White Oscar Terrell Williams

In Architecture (2)

Lucius Edwin O'Bannon

Anson Rainey

In Civil Enginereing (3)

Walter Norris Dashiell Oliver Preston Gill Ernest Parker, Jr.

In Electrical Engineering (2)

George William McNess

Thomas Hiram Wallace

In Industrial Education (3)

Milton Benjamin Chilcoat Wilburn Edward Langlotz

Boyd Franklin Turbeville

In Mechanical Engineering (2)

William L. Curtner

James Hoyt Shelton

In Rural Education (3)

James Bethel Cashell Norman Henry Gottwald

Raymond Curtis Terry

In Science (1)

Roy Leon Cleere

In Textile Enginerieng (2)

John Hanson Crump

William Casey King, Jr.

Without Specification (1)

Thomas Joseph McMillan

SUMMARY OF DEGREES CONFERRED

(Jan. 28, 1927 to Aug. 27, 1927)

Advanced:	•	
Master of Science	~~~~	25
Baccalaureate Degrees:		
Bachelor of Arts	In Liberal Arts	8
Bachelor of Science	In Agricultural Administration	60
	In Agricultural Education	10
	In Agricultural Engineering	3
	In Agriculture	56
	In Architecture	20
	In Chemical Engineering	
	In Civil Engineering	
	In Electrical Engineering	55
	In Industrial Education	8
	In Mechanical Engineering	32
	In Rural Education	
	In Science	6
	In Textile Engineering	15
	Without Specification as to Course	7
Doctor of Veterinary	Medicine	
TOTAL	3	354

DISTINGUISHED STUDENTS

Session 1926-27

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."

Freshman Class

Acres, R. L.
Allison, J. E.
Anderson, C. E.
Bierschwale, A. J.
Billman, C. C.
Boswell, A. D.
Dean, W. F.
Deeg, C. O.
Ericksen, C. E.
Franks, R. W.
Garcia, J. M.

Hargrove, H. H.
Horn, W. J.
Howard, J.
Johnston, T. F.
Focke, G. M.
Knupp, P. R.
Lentz, C.
Maples, H. D.
Morgan, W. E.
Mosley, S. L.
Moss, D. J.

Jackson, R. S.
Rankin, E. R.
Ray, W. O.
Shepardson, F. A.
Taylor, L. L.
Thompson, O. W.
Valle, C. C., Jr.
Vogt, C. C.
Ward, J. W.
Watkins, D.
Wilson, E. W.

Andrews, E. L. Beams, G. W. Coleman, W. T., Jr. Engel, M. C. Giesecke, C. G. Gudger, G. B. Gunn, J. E. Hoff, S. S.

Sophomore Class

Horn, M. E.
Johnson, A. B.
Kennerly, A. B.
Kunitz, R. A.
Loving, J. J., Jr.
Martin, A. D., Jr.
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