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College of Mines and Metallurgy
(A Branch of The University of Texas)

MEMBER

of

Texas Association of Colleges
Southern Association of Colleges

El Paso, Texas

The benefits of education and of useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

Sam Houston

Cultivated mind is the guardian genius of Democracy, and while guided and controlled by virtue, the noblest attribute of man. It is the only dictator that freemen acknowledge, and the only security which freemen desire.

Mirabeau B. Lamar

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BOARD OF REGENTS

OFFICERS

J. R. PARTEN, *Chairman*
LESLIE WAGGENER, *Vice-Chairman*
LEO C. HAYNES, *Secretary*

MEMBERS

Terms Expire January, 1941

GEORGE D. MORGAN _____ San Angelo
J. R. PARTEN _____ Houston
FRED C. BRANSON _____ Galveston

Terms Expire January, 1943

E. J. BLACKERT _____ Victoria
LESLIE WAGGENER _____ Dallas
H. H. WEINERT _____ Seguin

Terms Expire January, 1945

K. H. AYNESWORTH _____ Waco
MRS. I. D. FAIRCHILD _____ Lufkin
H. J. LUTCHER STARK _____ Orange

STANDING COMMITTEES

ATHLETICS: Weinert, Stark, Parten.
AUDITING: Stark, Morgan, Waggener.
BUILDING: Mrs. Fairchild, Blackert, Stark.
COLLEGE OF MINES: Morgan, Mrs. Fairchild, Weinert.
COMPLAINTS AND GRIEVANCES: Stark, Mrs. Fairchild, Waggener.
EXECUTIVE: Branson, Stark, Parten.
FINANCE: Waggener, Blackert, Weinert.
LAND: Morgan, Weinert, Parten.
LEGISLATIVE: Parten, Blackert, Weinert.
LIBRARY: Aynesworth, Stark, Waggener.
MEDICAL: Branson, Aynesworth, Parten.
PUBLIC RELATIONS: Blackert, Aynesworth, Morgan.
BOARD FOR LEASE OF UNIVERSITY LANDS: Aynesworth, Mrs. Fairchild.

CALENDAR
of the
COLLEGE OF MINES AND METALLURGY

1941

- JUNE 16, MONDAY. Section 1 of Summer Surveying begins.
- JULY 14, MONDAY. Section 2 of Summer Surveying begins.
- SEPTEMBER 4, THURSDAY. Examinations for admission.
- SEPTEMBER 6, SATURDAY. Condition, advanced standing, and postponed examinations. Petitions must be in the office of the Registrar not later than September 2.
- SEPTEMBER 8, MONDAY. Compulsory freshman examinations at 9 A.M. and 1 P.M. in Holliday Hall.
- SEPTEMBER 9, TUESDAY. Freshman convocation at 9 A.M.
- SEPTEMBER 9, TUESDAY. Faculty registration conference at 2 P.M.
- SEPTEMBER 10-11, WEDNESDAY-THURSDAY. Registration.
- SEPTEMBER 12, FRIDAY. Classes begin.
- SEPTEMBER 18, THURSDAY. Deferred examinations.
- SEPTEMBER 20, SATURDAY. Last day students may add or substitute courses.
- SEPTEMBER 20, SATURDAY. Last day of registration for the first semester.
- NOVEMBER 11, TUESDAY. Armistice Day, holiday.
- NOVEMBER 20-22, THURSDAY-SATURDAY. Thanksgiving recess.
- DECEMBER 20, SATURDAY. Christmas recess begins at the close of the last class which meets on Saturday.

1942

- JANUARY 5, MONDAY. Classes are resumed.
- JANUARY 19-24, MONDAY-SATURDAY. Examinations for the first semester.
- JANUARY 21, WEDNESDAY. Examinations for admission.
- JANUARY 22, THURSDAY. Freshman convocation at 9 A.M.
- JANUARY 23-26, FRIDAY-MONDAY. Registration of new students.
- JANUARY 30-31, FRIDAY-SATURDAY. Registration of readmission students.
- JANUARY 31, SATURDAY. Condition, postponed, and advanced standing examinations (not for Engineering students).
- FEBRUARY 2, MONDAY. Classes begin.
- FEBRUARY 7, SATURDAY. Last day students may add or substitute courses.
- FEBRUARY 7, SATURDAY. Last day for registration in the second semester.
- MARCH 28, SATURDAY. Condition examinations for Engineering students.
- APRIL 3-7, FRIDAY-TUESDAY. Easter holidays.
- MAY 2, SATURDAY. Major examinations.
- MAY 22-28, FRIDAY-THURSDAY. Examinations for the second semester.
- MAY 30, SATURDAY. Alumni and class day.
- MAY 31, SUNDAY. Baccalaureate Services.
- JUNE 1, MONDAY. Commencement.

COLLEGE OF MINES AND METALLURGY

ADMINISTRATIVE OFFICERS

- DOSSIE MARION WIGGINS, Ph.D., *President*.
B.A., Simmons, 1919; M.A., Yale, 1925; Ph.D., 1930.
- CHARLES ALEXANDER PUCKETT, M.A., *Dean of Arts and Sciences*.
- JOHN WILLIAM KIDD, E.E., *Dean of Engineering; Superintendent of Buildings and Grounds*.
- NORMA EGG, M.A., *Dean of Women*.
- FRANK JUNELL, M.A., *Registrar; Director of Publicity*.
B.A., Hardin-Simmons, 1934; M.A., Missouri, 1937.
- MARSHALL LEE PENNINGTON, B.B.A., *Business Manager and Instructor*.
B.B.A., Texas, 1935.
- BAXTER POLK, B.S., *Librarian*.
B.A., Hardin-Simmons, 1935; B.S. (Library Science), Oklahoma, 1936.
- BURT FRANKLIN JENNESS, M.D., *Health Officer*.
- MARY ELLA POOL, B.S., *Director of Dormitories*.
B.S., Texas, 1930.
- MRS. LOUISE F. RESLEY, B.A., *Social Director of Dormitory for Women*.
- WILLIAM S. STRAIN, M.S., *Curator of Museum*.
- FORREST JACK ACEE, M.A., *Director of Student Life*.

FACULTY

Professors

- FREDERICK WILLIAM BACHMANN, *Professor of Modern Languages*.
B.A., Stanford, 1922; M.A., 1924; Ph.D., Chicago, 1931.
- ANTON HELMER BERKMAN, *Professor of Biological Sciences*.
B.A., Texas, 1924; M.A., 1926; Ph.D., Chicago, 1936.
- JOHN FRASER GRAHAM, *Professor of Mining and Metallurgy*.
B.S., Michigan College of Mining and Technology, 1905; E.M., 1924.
- JOHN WILLIAM KIDD, *Professor of Engineering*.
B.S., Oklahoma Agricultural and Mechanical College, 1904; E.E., Texas Agricultural and Mechanical College, 1909.
- EDWIN JOHN KNAPP, *Professor of Mathematics and Physics*.
Ph.B., Wisconsin, 1921; Ph.D., 1931.
- WALTER S. KNOX, *Professor of Physical Education*.¹
B.A., Iowa, 1927; M.A., Texas Christian University, 1934; Ph.D., Iowa, 1935.
- WILLIAM WALTER LAKE, *Professor of Chemistry*.²
B.S., Ohio State, 1913; M.S., 1921.
- THOMAS ERL MORRIS, *Professor of Economics and Business Administration*.
B.B.A., Texas, 1931; M.B.A., 1932.
- CHARLES ALEXANDER PUCKETT, *Professor of Education*.
B.A., Texas, 1911; M.A., Harvard, 1916.
- HOWARD EDMUND QUINN, *Professor of Geology*.
E.M. (Geology), Minnesota, 1918; M.S., 1926; Ph.D., Harvard, 1932.
- JOSEPH MOSES ROTH, *Professor of Philosophy and Psychology*.
B.A., New York University, 1919; M.A., 1920; Ph.D., 1923.
- FRANKLIN HUPP SEAMON, *Professor of Chemistry*.
M.E., Missouri School of Mines, 1891.

¹Appointment effective September 15, 1940.

²Appointment as Professor of Chemistry effective September 15, 1940.

CHARLES LELAND SONNICHSEN, *Professor of English.*

B.A., Minnesota, 1924; M.A., Harvard, 1927; Ph.D., 1931.

JOHN LEROY WALLER, *Professor of History.*

B.S., Oklahoma, 1923; M.A., Colorado, 1925; Ph.D., Texas, 1929.

ASSOCIATE PROFESSORS

FORREST JACK AGEE, *Associate Professor of Education.*

B.A., Howard Payne, 1928; M.Ed., Texas, 1937.

PEARL WHITFIELD DURKEE, *Associate Professor of Physics.*

B.A., Acadia University, 1903; B.S. (Electrical Engineering), McGill University, 1906; M.S., Cornell, 1935.

LLOYD ALVINO NELSON, *Associate Professor of Geology.*

E.M., Texas College of Mines, 1916; M.S. (Geology), Colorado, 1929; Ph.D., 1937.

MACK SAXON, *Associate Professor of Physical Training.*

EUGENE McRAE THOMAS, *Associate Professor of Mining and Metallurgy.*

B.S. (Mining Engineering), Texas College of Mines, 1926; M.S., Massachusetts Institute of Technology, 1939; E.M., Texas College of Mines, 1940.

MRS. ISABELLA CORBETT ZIMMERMAN, *Associate Professor of English.*

B.A., Occidental, 1925; M.A., 1926; Ph.D., University of Southern California, 1934.

ASSISTANT PROFESSORS

WILLIAM ROBERT AVRETT, *Assistant Professor of Modern Languages.*

B.A., Texas, 1927; M.A., 1928.

FLOYD ARCHIE DECKER, *Assistant Professor of Engineering.*

B.S. (Electrical Engineering), Kansas State College, 1927; E.E., 1932.

NORMA EGG, *Assistant Professor of English, Dean of Women.*

B.A., Texas, 1913; M.A., 1928.

MRS. LENA ELDRIDGE, *Assistant Professor of Modern Languages.*

B.A., New Mexico Normal University, 1919; M.A., Washington, 1927.

GLADYS GREGORY, *Assistant Professor of Government.*

B.A., Southwestern, 1915; M.A., Texas, 1926; Ph.D., 1937.

BURT FRANKLIN JENNESS, *Assistant Professor of Biological Sciences.*

M.D., Dartmouth, 1899; Lt. Comdr. M.C., U.S. Navy, Rtd.

GLEN R. JOHNSON, *Assistant Professor of Music; Director of Band and Glee Clubs.*

B.A., Baylor University, 1936.

A. D. BEACH LANGSTON, *Assistant Professor of English.*³

B.A., The Citadel, 1933; M.A., Claremont, 1935; Ph.D., North Carolina, 1940.

DOROTHY McCUSKEY, *Assistant Professor of Education.*⁵

B.A., College of Wooster, 1929; M.A., Radcliffe, 1930; Ph.D., Yale, 1936.

LEON DENNY MOSES, *Assistant Professor of English.*

B.A., Columbia, 1923; M.A., 1924.

RICHARD HUBBELL OLMSTED, *Assistant Professor of Modern Languages.*

B.A., Minnesota, 1922; M.A., 1932; Ph.D., 1934.

EUGENE O. PORTER, *Assistant Professor of History.*³

B.A., Ohio Wesleyan, 1920; M.A., Ohio State, 1936; Ph.D., 1939.

MRS. MARY KELLY QUINN, *Assistant Professor of Sociology.*⁴

B.A., Wellesley, 1922; M.A., Boston University, 1930.

NATHAN SCHWID, *Assistant Professor of Engineering and Mathematics.*

B.A., Wisconsin, 1930; M.A., 1932; Ph.D., 1934.

MAC FRANCES SMITH, *Assistant Professor of Economics and Business Administration.*

B.B.A., Texas, 1931; M.B.A., 1934.

³Appointment effective September 15, 1940.

⁴Absent on leave, 1940-1941.

REX WALLACE STRICKLAND, Assistant Professor of History.

B.A., Austin College, 1927; M.A., Southern Methodist University, 1929; Ph.D., Texas, 1937.

VERA WISE, Assistant Professor of Design and Interior Decorating.

B.A., Williamette University, 1920; Chicago Academy of Fine Arts; Kansas City Art Institute.

INSTRUCTORS

JOHN LEO ABERNETHY, Instructor in Chemistry.³

B.A., University of California at Los Angeles, 1936; M.S., Northwestern, 1938; Ph.D., 1940.

WILLIAM HENRY BALL, Instructor in Chemistry.

B.S., Chicago, 1922; M.S., Iowa State College, 1925.

MRS. MYRTLE EVELYN BALL, Instructor in Public Speaking.

B.A., New Mexico Normal University, 1926.

THOMAS GROCARD BARNES, Instructor in Mathematics.

B.A., Hardin-Simmons, 1933; M.S., Brown, 1936.

CHARLES EDWARD BOUNDS, Instructor in Journalism.

B.A., Missouri, 1939; B.J., 1939.

LEON CAMP, Instructor in Mathematics.⁵

B.A., North Texas State Teachers College, 1927; M.A., Columbia, 1928; Ph.D., Texas, 1940.

MRS. ISABELLE KELLY FINEAU, Instructor in Modern Languages.

B.A., Texas, 1905; M.A., 1931.

HERBERT WALTER HARGRAVES, Instructor in Economics.³

B.A., Nevada, 1935; M.A., Clark, 1936.

MAURINE HOWELL, Instructor in Public Speaking.⁵

B.A., Texas College of Mines, 1938.

JOSEPH HOPKINS JAMES, JR., Instructor in English.

B.A., Alabama, 1929; M.A., 1931.

MRS. JULIA IDA KANE, Instructor in Physical Education.

B.A., North Dakota, 1919; M.A., Arizona, 1930.

VIRGINIA DEAN KING, Instructor (Part-time) in English.

B.A., Wellesley, 1936; M.A., University of California at Los Angeles, 1937.

JOSEPH S. LEECH, Instructor in Mathematics and Engineering.⁶

B.A., Oklahoma, 1927; M.A., 1928.

BULAH A. LILES, Instructor in Mathematics.

B.A., Texas, 1921; M.A., Chicago, 1927.

JAMES A. MOORE, Instructor in Sociology.⁵

B.A., Texas, 1929; M.A., 1931.

MRS. ELIZABETH Y. NEALON, Instructor (Part-time) in English.

B.A., Converse College, 1901.

HARRY B. PHILLIPS, Instructor in Physical Education.

B.A., Texas College of Mines, 1933.

PEARL OLIVE PONSFORD, Instructor in English.

B.A., Wellesley, 1919; M.A., University of Southern California, 1930.

MRS. LOUISE F. RESLEY, Instructor in Mathematics.

B.A., Texas College of Mines, 1939.

MRS. BERTHA REYNOLDS, Instructor in Education.

B.A., Colorado, 1921; M.A., 1922.

JACKIE ROE, Instructor in Music.

B.A., Texas College of Arts and Industries, 1939.

GEORGE PERRY STEEN, Instructor in Engineering.

B.S. (Civil Engineering), Missouri School of Mines, 1933; M.S., 1938.

³Appointed for Long Session 1940-1941 only.

⁶Absent on leave, 1940-1941.

WILLIAM S. STRAIN, Instructor in Geology.

B.S., West Texas State Teachers College, 1932; M.S., Oklahoma, 1937.

JUDSON F. WILLIAMS, Instructor in Journalism.⁷

B.A., Hardin-Simmons, 1934; M.A., Missouri, 1940.

ASSISTANTS

MRS. MARY ELEANOR DUKE, Laboratory Assistant in the Department of Biological Sciences.

B.A., Texas College of Mines, 1939.

HAYNES FINCH, Laboratory Assistant in the Department of Economics and Business Administration.

JACK HUNT, Laboratory Assistant in the Department of Economics and Business Administration.

ROBERT C. MATTHEWS, JR., Laboratory Assistant in the Department of Chemistry.

B.S. (Chemical Engineering), Tennessee, 1939.

JOHN SHAMALEY, Laboratory Assistant in the Department of Mathematics and Physics.

CLYDE W. TURNER, Laboratory Assistant in the Department of Geology.

B.A., Texas, 1940.

ADMINISTRATIVE ASSISTANTS

MRS. MONICA G. ADAMS, Assistant (Part-time) in the Museum.

JOHNELL CRIMEN, Clerk in Office of the Business Manager.

B.A., Texas College of Mines, 1938.

MARJORIE ERWIN, Assistant Librarian.

B.A., Texas College of Mines, 1934; B.S. (Library Science), Pratt Institute, 1935.

MR. MAURINE SMITH JERRELL, Assistant Business Manager.

B.A., Texas College of Mines, 1935.

FRANCES LUELLA JOB, Secretary and Transcript Clerk, Office of the Registrar.

B.A., Texas College of Mines, 1935.

MRS. ISABEL ABDOU JOSEPH, Assistant Bookkeeper and Voucher Clerk, Office of the Business Manager.

B.A., Texas College of Mines, 1933.

MRS. ELIZABETH Y. NEALON, Assistant Librarian and Instructor.

B.A., Converse, 1901.

MARGARET NEELY, Secretary to the Faculty.

VAYNE PORTEIL, Assistant Registrar.

MRS. FRANCES SMITH STEVENS, Secretary to the President.

BETTY JOE YOUNG, Switchboard Operator.

CRITIC TEACHERS IN ELEMENTARY TEACHER TRAINING

(El Paso Public Schools)

ESTHER ATKINSON.

B.A., Texas College of Mines, 1939.

RUBY COLE.

B.A., Texas Technological Institute, 1936.

LOZIER CONDON.

B.A., Alabama, 1924; M.S., University of Southern California, 1939.

MILDRED DUNLAP.

B.A., Sul Ross State Teachers College, 1932.

⁷Appointment effective September 15, 1940.

- PINA MAE EARP.**
B.A., Texas College of Mines, 1940.
- BESSIE FARQUHARSON.**
B.A., Colorado State Teachers College, 1934.
- DOROTHY SCAIFE.**
B.A., Sul Ross State Teachers College, 1939.
- GRACE SMITH.**
B.A., Texas College of Mines, 1934.
- VIVIAN SWANSON.**
B.A., Texas College of Mines, 1939.
- MARJORIE TALLEY.**
B.A., Arkansas, 1931.
- MARION TATUM.**
B.A., Texas College of Mines, 1938.

CRITIC TEACHERS IN HIGH-SCHOOL TEACHER TRAINING

(El Paso Public Schools)

- MATILDE ALONZO.**
B.A., Institute de Guipuzco, San Sebastian, Spain, 1904.
- MARGARET BIVINS.**
B.A., Texas College of Mines, 1936.
- ESTHER BROWN.**
B.A., Southern Methodist, 1918; M.A., New Mexico, 1927.
- ELIZABETH BRYANT.**
B.A., Hanover College, 1931.
- SADIE BUCK.**
M.A., Chicago, 1913.
- CLARA BELLE BUTLER.**
B.A., Baylor, 1924; M.A., Sul Ross State Teachers College, 1940.
- CORDELIA CALDWELL.**
B.S., Arizona, 1926; M.A., Arizona, 1928.
- THELMA CAMPBELL.**
B.A., Arkansas, 1926; M.A., Columbia, 1933.
- FRANCES CULLIGAN.**
B.A., Arizona, 1928.
- JOSEFINA ESCAJEDA.**
B.A., Texas College of Mines, 1936.
- CATHERINE FLYNN.**
B.A., Texas College of Mines, 1932.
- VERNON HILL.**
Ph.B., Baylor, 1904.
- LUCIA HUTCHINS.**
Leland Powers College.
- WILLIE HERBERT INGELS.**
B.A., College of Industrial Arts, 1924.
- ROSALIE IVEY.**
B.A., Baylor, 1929.
- C. M. JERDEN.**
B.S., North Texas State Teachers College, 1931; M.S., 1938.
- ANNE KELLY.**
B.A., Texas, 1925.
- GRACE LONG.**
B.A., Texas, 1911; M.A., Texas, 1931.
- VERA MICHAEL.**
B.A., Texas College of Mines, 1933.

ELAINE MORREL.

B.A., Texas, 1913; M.A., Texas, 1936.

LEILA OLIVER.

B.S. in Ed., Michigan, 1927.

ELIZABETH REDIC.

B.A., North Texas State Teachers College, 1932.

HELEN REYNOLDS.

B.S., Oklahoma Agricultural and Mechanical College, 1929; M.A., 1935.

CARLOS RIVERA.

B.A., Texas College of Mines, 1938.

LUCILE SHAVER.

B.A., Missouri, 1921.

MARIE STAMPS.

B.A., Baylor, 1923.

RUBY TAPPER.

B.A., Wellesley, 1920.

LEWIS TEEL.

B.A., Texas College of Mines, 1934; M.A., Columbia, 1939.

MARJORIE THOMPSON.

B.S. in Ed., Virginia State Teachers College, 1923.

LOLA TICNER.

B.A., Arizona, 1928.

KATHLEEN TILLEY.

B.A., Texas College of Mines, 1936.

JEWELL WALLACE.

B. of Ed., Texas Christian, 1927.

GENERAL INFORMATION

History

An announcement of a course in mining first appeared in The University of Texas catalogue in 1900-1901. From then until the session of 1910-1911, an arrangement of courses leading to the degree of Mining Engineer appeared annually. The catalogue of that year contained a statement that thereafter freshmen would not be enrolled in mining, and the arrangement of courses leading to a degree in that subject was subsequently omitted.

The Thirty-third Legislature, at its regular session in 1913, passed an act creating the State School of Mines and Metallurgy, to be located in El Paso. By the terms of the act, the School of Mines was placed under the control of the Board of Regents of The University of Texas. Early in 1919, by act of the Thirty-sixth Legislature, the school was made a branch of The University of Texas.

The location of the school at El Paso was conditioned upon the donation by the city of the former Military Institute buildings and grounds. The necessary funds for this donation were secured through the activity of the Chamber of Commerce, and the school was opened in September, 1914. On October 29, 1916, the Main Building burned. It was then decided to remove the institution to a more suitable site on the west side of Mount Franklin, donated for that purpose. The Thirty-fifth Legislature voted an emergency appropriation of \$100,000 to erect new buildings.

In 1927 the Legislature authorized further expansion along academic lines.

In 1931 the Board of Regents authorized the conferring of the Bachelor of Arts degree, vesting administrative powers in a President.

In 1940 the Board of Regents authorized the conferring of the degree of Master of Arts.

LOCATION

Texas is the largest and most populous state which supports a separate college of mining and metallurgy. The location of the College of Mines and Metallurgy is advantageous in several ways. The City of El Paso stands at the crossing of several of the oldest highways established by white men on this continent. With a population of 100,000, more than 30 per cent of which is engaged in technical industries, it is the most important city south of Denver, between San Antonio or Fort Worth and Los Angeles.

El Paso's primary resources include mining, agriculture, livestock, and timber. The United States Government has spent \$10,000,000 on a great irrigation project to provide a cheap and unfailing water supply for the Rio Grande Valley above and below El Paso.

Its extreme dryness and medium latitude, combined with a moderately high altitude (3800 feet), give El Paso a delightful and healthful climate all the year round.

Within a radius of from one to ten miles of El Paso are found in great variety those geological formations and structures that are usually associated with the *mineral industry*, not only in metal mining, but in coal mining, oil fields, and non-metallic deposits as well. In opportunity for geological study, no mining school in the United States is more favorably located.

El Paso is the industrial center of a large area, and is especially suitable for the location of a college instructing in mining, metallurgy, engineering, the sciences, and technology. The second largest custom smelter in the world is situated about a mile from the College of Mines and Metallurgy. It uses the most modern methods of smelting and treating ores containing copper, lead, gold, silver, and other metals. Within a few miles is also the most modern electrolytic copper refinery, which has a capacity of 20,000,000 pounds of copper in process. There are also nearby a large cement plant, two large brick plants, and three oil refineries. Various manufactories of lime, tile, and other non-metallics are located in the immediate neighborhood of the College. There are other varied industries, such as cotton spinning and weaving mills, cotton oil mills, wood-working mills, etc. There are also large power plants and substations, foundries, machine shops, and other service enterprises of technical nature. Thus it will be seen that the environment is highly favorable for first-class instruction in *engineering and technology*, all of the industries cooperating fully with the College to this end.

Buildings and Grounds

The campus consists of forty-eight acres. There are thirteen buildings, as follows: Library and Administration Building, Main Building, Holliday Hall (the gymnasium), Burges Hall, Chemistry Building, Kelly Hall, Seamon Hall, Engineering Building, Museum Building, a dormitory for women, a dormitory for men, and a small dressing-room for women, donated by the Woman's Association of the College of Mines. The Main Building contains various lecture rooms, and laboratories for the departments of physics and geology. The Chemistry Building houses the laboratories for chemistry. In the Engineering Building are located the engineering laboratories and the heating plant. Burges Hall houses the biological laboratories, offices, and lecture rooms. Kelly Hall is used for lecture rooms and offices. Seamon Hall houses metallurgy and assaying equipment and laboratories. All the buildings are of stone and are fireproof. The City of El Paso is holding a reservation of approximately fifteen acres for the future use of the College.

Library

The book collection of 25,000 volumes is housed in the beautiful new library building, situated between the two main building groups on the campus. The nucleus of the book collection was the library of the late W. H. Seamon, a mining engineer and member of the faculty. His legacy has been augmented by gift and by purchase from year to year. Noteworthy among these gifts is the library of the late Dr. Hugh W. Crouse—a collection of books and periodicals pertaining to every phase of medicine and surgery.

The geology, mining, language, economics and medicine sections of the library are especially strong. The library is a depository for a select group of government publications and contains an invaluable collection of United States Geological Survey and Bureau of Mines bulletins, some volumes of which are no longer obtainable.

The library regularly receives 297 periodicals—literary, scientific, and technical. Files of these are being accumulated, bound, and preserved, forming a valuable reference collection. There is also a very up-to-date pamphlet collection of miscellaneous subjects to which the students are given full access.

Students are given full use of the excellent facilities of the El Paso Public Library, a collection of 115,000 books, pamphlets, and documents. The Public Library contains an especially strong collection of literature pertaining to the Southwest. The Teachers' Library of El Paso Public Schools may also be used. It is located in the Bailey grade school building.

Museum

The El Paso Centennial Museum, allocated by the Commission of Control for the Texas Centennial Celebrations, was erected by the State under the supervision of the State Board of Control at a cost of \$50,000. This thoroughly modern and spacious museum building was located on the campus of the College of Mines through the authority of the El Paso County Advisory Committee. It is beautifully situated and graces the entire college campus. The College is truly proud of it and will devote every effort toward the development of a great museum for the entire Southwest. The public is welcome to visit the Museum and students will find an excellent opportunity for studying the various phases in the evolution of the civilization of this part of the country.

The mineralogical collection is especially fine. It includes the Reckhart collection and the Ledwidge collection, a gift of the Women's Auxiliary of the College, in addition to many other beautiful and rare specimens of minerals and ores that have been supplied to the College by purchase and by gift from mining men and geologists of the Southwest.

The paleontological collections are excellent. The invertebrate paleontological material comprises a splendid study group, containing specimens from most of the important geological horizons of the United States and particularly of Texas. There is also a fine group of specimens from European horizons.

Through the coöperation and assistance of the Works Progress Administration a large quantity of dinosaur bones, comprising a mountable skeleton, have recently been secured for the Museum. Additional vertebrate paleontological material consists of a collection of Pleistocene mammals principally *Elephas* remains.

Valuable additions have been made to the historical collection recently, through the loan of the El Paso Pioneer's Association and the El Paso

Volunteer Firemen's Association collections. Both collections are a source of much valuable information pertaining to the early history of El Paso and the Southwest.

The biological collection, composed of both zoological and botanical specimens, occupies space both in the El Paso Centennial Museum and on the third floor of Burges Hall. The zoological collection includes preserved specimens and skeleton material representing the classes and orders of the vertebrates, arranged for study of comparative anatomy, and preserved material representing the phyla and classes of marine and land invertebrates. Dried specimens of the local flora, ferns from the various regions of North America, and preserved fungi of the local region make up the botanical collection.

The archeological collections have been greatly augmented through the gifts of the Women's Auxiliary of the College, and the permanent loan of the El Paso Archeological Society Collection. These collections include some of the finest archeological specimens to be found in Texas, especially those of Chihuahua, Chupadero, and El Paso Polychrome pottery. The Museum has recently acquired some excellent El Paso Polychrome Pottery and is constantly adding to the archeological collections by field work.

Through the cooperation of the Museum and the Art Department a series of Art exhibits are brought to the Museum each year. The work of nationally and internationally famous artists is included in each exhibit. All exhibitions are open to the public and the people of the city are cordially invited to view them.

The Museum is being developed as an auxiliary instructional device, particularly in the science fields. The collections are therefore arranged with special preference to educational use.

DORMITORIES

There are two modern residence halls, Harry Yandell Benedict Hall for women and Stephen H. Worrell Hall for men, both made possible through the Public Works Administration. Worrell Hall accommodates sixty students and Benedict Hall provides ample facilities for forty students. The dining room for both men and women is located on the first floor of Benedict Hall. The student rooms are attractively furnished. Each room has ample closet space and full-length mirrors are provided in each room of the hall for women. Separate study tables with large size study lamps are provided for each student. The buildings are fireproof, steam heated, and are located at a most convenient place on the campus. They are under supervision of a manager well trained in dormitory housing and management.

GENERAL POLICIES OF THE COLLEGE

GENERAL STATEMENT

The College offers the degree of Bachelor of Science in Mining Engineering, the degree of Bachelor of Arts, with liberal choices of major subjects in both instances, and the degree of Master of Arts. Students are encouraged to determine as early as is possible their choices in pursuing the work leading to the undergraduate degrees.

The College seeks to provide liberal education for its engineering students. In scientific and technical subjects the student's knowledge is reinforced by such practice and application as to prepare him for entrance into the industries, especially those related to the natural resources of Texas. Various of the many industries of the region cooperate with the College to promote the technical and general knowledge of the students. The Faculty is experienced and expert.

A study of the requirements leading to the degree of Bachelor of Arts which are shown in tabular form will indicate the standard of work required. Definite information in regard to admission to candidacy for the Master's degree may be found outlined elsewhere in this catalogue.

Both the academic and technical courses offered in the Engineering School are sufficient to enable students wishing to graduate in other lines of engineering to complete in this College at least two years of work leading to degrees in the various scientific, engineering and technical branches, as offered by other institutions.

The College of Mines and Metallurgy gives instruction to resident students only. No extension classes are provided off the campus, nor are correspondence courses given. However, an attempt is made through general correspondence to aid worthy citizens of the State, who are engaged in mining or prospecting, by giving them suitable advice on application.

Without entailing graduate study at the College, the degree of Engineering of Mines is granted, subject to regulations made by the Faculty and approved by the Regents, to those graduates of the College prior to 1931, who have demonstrated proficiency in responsible positions and who have made a written contribution of some importance regarding some phase of their work.

As an agency for furthering the best development of the State, the principal duty and major interest of the College lie in advancing and perfecting knowledge of mining and metallurgy as applied to the natural resources of the State by means of research and cooperation with existing agencies and industries. Future efforts and developments will probably be largely concerned with salts and minerals of potash, soda, fluorine, and mercury, as well as with those of gold, silver, copper, lead, and zinc.

The College also acts as an examination center for other agencies and institutions, such as the College Entrance Examination Board, the American College of Life Underwriters, etc.

SPECIAL LECTURES

During the long session, prominent lecturers, educators and specialists address the student body and Faculty. These lectures, held at special convocations, extra class meetings, seminars, or gatherings of the several student organizations, are free.

The student has also ample opportunity of participating in and enjoying the civic, cultural, and artistic efforts of the local community.

DETERMINATIONS AND TESTS

General principles.—The College of Mines and Metallurgy is charged with teaching and research in mining, metallurgy, and allied subjects in order to further the safe and economical development and exploitation of the natural resources of the State. In order to advance this object the College is glad to receive gifts of materials for determinations or tests, whether or not they originate within the State. Such work will be done free of charge, but it should be borne in mind that the College will not compete with regularly established consultants, but rather direct, supplement, and advance their work along new or more advanced lines. Persons shipping materials to the College must prepay all freight charges, and, upon agreement, the charges which they have to incur with outside consultants, such as charges for assays, etc. All such materials shipped to the College must be regarded as gifts to it, and become its property upon receipt. The determinative and testing work will be done largely by advanced students under the personal direction of a suitable professor in charge, and will be carefully checked to insure that the results are as precise as the material and tests warrant. Beyond this the College can not assume responsibility. Since all work done by students becomes part of their regular schedules, the rapidity of determinative and testing work depends upon the number of advanced students and the condition of their schedules. The College is glad to assist in the solution of any problem allied to its objectives, and to incorporate them in its regular instructional and research work. Shipments should be made, and correspondence and inquiries addressed, to the President, College of Mines and Metallurgy, El Paso, Texas.

Rocks, minerals, fossils, ores, geological specimens.—Rocks, minerals, fossils, ores, and other geological specimens will be received gladly for determination and incorporation in the Museum and working collections. Acknowledgment is always accorded to donors. Materials are generally studied first from a geological and mineralogical point of view before being referred to other departments as indicated below. Collectors and museums may find it advantageous to correspond with the College to arrange exchanges and sales of important material.

Analyses and assays.—The College will not make analyses or assays in competition with professional consultants. Those who have special reasons for wishing work done should write to the President explaining the circumstances.

Metallurgical tests.—Shippers of ores desiring tests for process of treatment should see to it that the material submitted is a representative or average sample of the part of the mineral deposit concerned; otherwise, the results of the testing will be commercially worthless.

EXPENSES

FEES AND DEPOSITS

Registration and laboratory fees are payable on a semester basis at the beginning of each semester. Students are not permitted to enter class or laboratory until their fees and deposits have been paid.

Tuition.—Resident students: Each resident student is required to pay tuition at the following rate for each semester:

12 or more semester hours.....	\$25.00
11 semester hours.....	22.92
10 semester hours.....	20.83
9 semester hours.....	18.75
8 semester hours.....	16.67
7 semester hours.....	14.58
6 semester hours.....	12.50
5 semester hours.....	10.42
4 semester hours.....	8.33
3 semester hours.....	7.50

Non-resident students: Each non-resident student who registers for twelve or more semester hours of work per semester is required to pay tuition in the amount equivalent to the amount charged students from Texas by similar schools in the State of which the said non-resident student is a resident, said amount to be determined and fixed by the Board of Regents, but in no event will such amount be less than that charged to students resident in Texas.

Each non-resident student who registers for less than twelve semester hours of work per semester is required to pay a sum proportionately less than that prescribed for non-resident students taking twelve or more semester hours per semester, but in no event will such amount be less than \$7.50.

A non-resident student is defined to be a student of less than twenty-one years of age, living away from his family and whose family resides in another state, or whose family has resided in Texas for a period of time less than twelve months prior to the date of registration, or a student of twenty-one years of age or over who resides out of Texas or who has resided in Texas for a period of less than twelve months prior to the date of registration.*

*Sections of the non-resident fee law have been interpreted by the Attorney General of Texas to mean that: (1) a minor cannot acquire a domicile of choice during his minority; (2) the residence of a minor follows that of the father, or if the father is dead, that of the mother; (3) if both parents are dead the residence of the minor follows that of the grandparent, provided the minor lives with the grandparent; (4) the minor whose parents

Information concerning the tuition required of non-resident students can be secured from the Business Manager.

Refund of registration and tuition fee.—Refund of the registration and tuition fee is made under the following conditions and no others:

Upon presentation to the Registrar of his receipt from the Business Manager showing payment of the fee any student withdrawing officially (a) during the first week of class work of a semester will receive a refund of 70 per cent of the *applicable portion of the fee*; (b) during the second week, 60 per cent; (c) during the third week, 40 per cent; (d) during the fourth week, 20 per cent; (e) during the fifth week and thereafter, nothing.

In no case shall the total refund exceed 70 per cent of the registration and tuition fees paid.

An immediate refund will not be made to a student who withdraws within fifteen days after the payment of his fees, but, upon request, a check covering all refunds due will be mailed to the address left with the Business Manager.

A student who enters the second semester, not knowing his first semester grades, and is required to withdraw because of failure in the work of the first semester will have all of his registration and tuition fee for the second semester refunded.

No refund provided for above will be granted unless applied for within one year after official withdrawal.

Laboratory fees.—For each course of three semester hours or less which is accompanied by laboratory work, a fee of \$2.00 is charged, and for each such course of four hours or more, a laboratory fee of \$4.00 is charged.

General property deposit.—Every student must make a general property deposit of \$7.00. This deposit is subject to charges for property loss or damages or breakage or violation of rules in any College library or laboratory, failure to return keys furnished by the College, or for damage to or loss of any other College property. If the charges incurred in any term or semester exceed fifty per cent of the deposit, the student, upon notice from the Business Manager, will be required to restore the deposit to the original amount by paying such charges immediately. Students having charges in excess of the deposit must pay the excess immediately; pending payment, no credit will be allowed on the work of that semester or term, and the student will be ineligible to reënter the College. Loss and damage items charged

and grandparents are dead would not be assigned the domicile of any other relatives with whom he lived; (5) a self-supporting minor who comes to Texas after the death of his parents who are residents of another state is a non-resident; (6) a person over twenty-one years of age must reside in Texas at least twelve months after attaining his majority in order to be classified as a resident student.

The burden of registering under proper residence is placed upon the student; and it is the duty of each student, at or before registration, if there is any possible question of his right to legal residence in Texas under the State law and College rules, to raise the question with the Business Manager and have such question settled prior to registration. Attempt on the part of a non-resident to evade the non-resident fee will be taken seriously and may lead to expulsion.

against general property deposits shall be credited to the department or other unit in which the loss or damage occurred.

Deposits will be refunded in cash in the Business Manager's Office for twenty days after the close of the session. Checks will be made for those which have not been called for within that time and will be mailed to the home address which the student gave at the time of his registration.

Non-credit students.—A student not registered for credit in a course or courses is required to pay the same fees and deposits as a regular student.

Exemption of ex-service men.—Men and women enlisted in the service during the World War, who are citizens of Texas, are exempted from fees, but not from deposits. To secure this exemption, the service record or discharge must be presented to the Business Manager each time the student registers.

Students' Association fee.—The Students' Association fee is \$10. Payment of this fee at the beginning of each session is necessary in order that students may receive valuable training in extracurricular subjects. In addition to the usual athletic and social activities, important training is given with respect to literary activities, publications, dramatics, current events, advanced and special application in science and engineering, etc. At least 50 per cent of the subscription price of the *Prospector*, College newspaper, shall be taken from the regular student association fee.

HOUSING REGULATIONS FOR STUDENTS

The College of Mines considers it a distinct advantage for all boarding students to live in the dormitories on the college campus. Every attention will be given for the improvement of the social and educational life of those who live on the campus.

The Texas College of Mines and Metallurgy has two very modern and conveniently located residence halls, one for men and one for women. Each of these halls is fireproof in construction, and modernly furnished, and adequate equipment is provided for supplying meals. Facilities also include recreation rooms which provide for a pleasant social life for all resident students.

A room deposit of \$5 is paid in advance in order to make proper room reservation. This deposit is refunded at the close of the semester, provided the student does not withdraw from the dormitory before that period, and provided there is no deduction for breakage. The fee will be returned to those students who can not be accommodated in the college dormitories and to those applicants who cancel their reservations ten days prior to the opening of the college session.

In event any student desires to change his place of residence at the end of the semester, it is required that a notice of ten days be given in order that the room in occupancy may be rented.

Room will be furnished in each of the dormitories at a rate of \$45 per semester. Board is provided at the rate of \$112.50 per semester. Room and board may be paid in monthly installments at the rate of \$35 per month in advance on the 5th, 6th or 7th of each month. Unless arrangement is made prior to payment date with the Business Director, delinquency in payment will incur a fine of 25 cents for the first day and 10 cents for each school day thereafter.

In event students are ill and live in a local hospital for more than three days, all charges for board are remitted. Only room rent is charged.

The management furnishes each student with sheets and pillowcases. The student is requested to furnish blankets, bedspreads, towels, and such other personal linens as may be desired. Since the climate is delightfully mild during the winter months, students will not need more than two or three blankets.

OPPORTUNITIES FOR SELF HELP

To a student who is working his way, a city of the size of El Paso offers a large field of opportunity. A students' employment service is maintained by the College, and every effort will be made to assist the student, but the College assumes no responsibility except to the extent of trying to help. *No student should enter the College for the first time without funds sufficient for at least the first semester.*

LOAN FUNDS

The amount of an individual loan which will be granted from Loan Funds administered by the College is limited to the sum of fees and deposits, and repayment is required within the semester or term for which the loan is granted.

Academic Loan Fund.—This fund is maintained for academic students who have been in attendance for at least one semester and who have achieved an average grade of *B* in at least twelve semester hours of work. The fund is administered by a faculty committee.

Engineers' Loan Fund.—This loan fund is maintained by the Engineering Department for the benefit of engineering students who have been in attendance at least one year and who meet other special requirements. The fund is administered by the Dean of Engineering.

Ex-students' Memorial Loan Fund.—Under the will of the Late William Clifford Hogg, \$25,000 was granted to the Ex-Students' Association and the College for the establishment of this loan fund. Only the income from the fund may be loaned. It is administered by a board of directors consisting of the administrative officers of the College and the Ex-Students' Association.

Robert E. Lee Loan Fund.—The Robert E. Lee Chapter, No. 1060, United Daughters of the Confederacy, offers an annual loan of \$150. Applicants

must be mining engineering students, must have completed one full year of attendance at the College of Mines and Metallurgy, and must be direct descendants of Confederate soldiers or sailors.

The loan is paid the student as follows: \$50 at the time of the Fall registration and \$12 each month during the school year. The loan is repayable without interest to the Chapter one year after graduation. After the first year following graduation, the loan or the unpaid portion of it will draw three per cent interest.

Spanish-American Loan Fund.—Establishment of and additions to this loan fund are made by residents of the region who are of Spanish descent. Loans are made to students of Spanish descent who are needy and of high scholastic standing. The fund is administered by a faculty committee.

Women's Auxiliary Emergency Loan Fund.—This loan fund was established by the Women's Auxiliary for the College of Mines of El Paso. Loans are made to needy students of high scholastic standing. The fund is administered by a faculty committee.

SCHOLARSHIPS

High school.—The College offers on the following terms and conditions one scholarship annually to the valedictorian, boy or girl, graduating from an accredited secondary school, the honor graduate being certified through the State Department of Education: 1. The school must be located in Texas and must hold at least fifteen units accredited by the State Department of Education. 2. The successful applicant must make the highest record among all the students graduating that calendar year, including winter, spring and summer graduating classes, and must make an average of at least 90 per cent in the senior year. If no member of the class makes an average of 90 in the senior year, no award will be made. 3. Under no circumstances are these scholarships transferable. 4. The financial benefit is exemption from the registration fee of \$50 in the College. 5. The scholarship is valid during the first long session after the holder's graduation from high school, and no other, and in no summer session. 6. The scholarship must be presented before or at the time the holder registers in the College. Holders failing to do this will pay the registration fee and will not be reimbursed therefor. 7. The conduct of scholarship holders must be satisfactory to the faculty.

REGULATIONS AFFECTING STUDENT LIFE

STUDENT GUIDANCE

Special attention is given to students entering college for the first time. A member of the faculty is assigned to each student as an adviser, so that the student will have a mature friend to whom he may submit his troubles and problems. The adviser earnestly endeavors to know his advisee and to effect an expeditious adjustment of the student to his new environment. In many ways he acts as a representative of the advisee's parents. His aim is to put the student in the way of developing all phases of his personality. The advisory work of members of the faculty is considered one of their most important functions.

PHYSICAL WELFARE

B. F. JENNESS, M.D.	Health Officer
MACK SAXON	Instructor
JULIA I. KANE	Instructor
H. B. PHILLIPS	Instructor
JEANETTE JAYCOX	Registered Nurse

Throughout their residence at the College all students are encouraged to develop physically to their best advantage. They are stimulated to participate in systematic exercises and sports.

Under the direction of Dr. B. F. Jenness, Health Officer, an effort is made to guide the physical development and health of all students by examinations, compilation of records, advice, health bulletins, and lectures. The health officer also acts as adviser on campus sanitation, and minor medical and surgical treatment of an emergency nature is given in the health office. The health officer may examine students in verification of suitable vaccination prior to their admission and require acceptable certificates.

Special attention is given to all freshmen, who are subject to physical examination. A registered nurse is in attendance at the school clinic. She resides in the girls' dormitory, attends to the health of resident students, supervises special diets, and gives talks on personal hygiene.

PHYSICAL TRAINING

Physical training is required of each student with rank below that of sophomore in the College of Mines and Metallurgy, unless the student has credit for at least one year of physical training. At the discretion of the student's dean, the physical training requirement may be waived in the case of students over 23 years of age. The exercises prescribed in physical training may be correctional, developmental, or recreational, and, dependent on individual conditions, may vary from absolute rest to strenuous exercise and sports. A student failing to pass the work in any semester will be required to repeat that semester's work. Attendance at lectures in hygiene is required. A fee

of \$2.00 per semester is required for every student registering for physical training. The course numbers for women are Physical Training 02 and 012; for men, Physical Training 01.

Attendance in physical training exercises is subject to the provisions under heading *Class Attendance and Absences*, page 38, with the exception that a student who must be absent from an exercise or exercises due to illness is required to report said case of illness to the Health Officer of the College immediately. Work missed due to illness may be made up, make-up cards to be secured from the instructor. Such absences must be made up within two weeks of return to class by attending one additional class in Physical Training for each absence.

OFFICIAL NON-ATHLETIC EXTRACURRICULAR STUDENT ACTIVITIES

List of organizations.—Believing that students are greatly benefited by participation in extracurricular activities, the College sponsors clubs and organizations of various types. Among those now active and officially recognized are the following:

General Organizations

- Academic Association
- Association for Childhood Education (Student Branch)
- Camera Club
- Co-Ed Association
- College Band
- College Players (Dramatics)
- Forensic Society (Debating)
- Gold Diggers (Women's Pep Squad)
- Independent Women's Association
- International Relations Club
- Latin-American Club
- M Association (Athletics)
- Mining Club
- Orange Shirts (Men's Pep Squad)
- Pre-Law Club
- Pre-Medic Club
- Press Club
- Scientific Club
- Student's Association (the organization of Student Government)
- Varsity Singers
- Women's Athletic Association

Publications

- The Prospector* (Weekly)
- The Flowsheet* (Annual)

Social Organizations

- Alpha Chi (National Honorary Society)
- Alpha Phi Omega Fraternity (Local Engineering Fraternity)
- Alpha Psi Omega (National Dramatics Fraternity)
- Chi Omega Sorority (National)
- Delta Delta Delta Sorority (National)
- Kappa Sigma Kappa Fraternity (Local)
- Newman Club (Catholic-Social)
- Rho Sigma Phi Fraternity (Local)
- Rho Sigma Tau Fraternity (Local)
- Sigma Delta Pi Fraternity (National Honorary Spanish Fraternity)
- Zeta Tau Alpha Sorority (National)

General regulations.—These extracurricular activities of the non-athletic type are considered of such great importance that they are placed under the supervision of Faculty committees and Faculty sponsors and function under certain regulations for operation and the eligibility of participants. These special regulations are printed annually and are so easily available to all students that each student is charged with notice and knowledge thereof.

In addition to the foregoing, the officers of each organization are charged with the responsibility of acquainting all of their pledges and members with the rules of procedure for organizations and for social affairs as set up by the Faculty Committee on Student Activities and its subcommittees. These rules may be obtained from the chairman of the committee.

Rules for participation.—1. The following are the activities to which the rules of participation are to be applied: (a) serving as editor, assistant editor, managing editor, business manager, or assistant manager on any official student publication; (b) membership in any listed organization for which funds are appropriated from Student Association fees, or participation in any local or out of town performance given by, or in the name of these organizations; (c) becoming a candidate for, or serving as president, vice-president, secretary, treasurer or manager in any listed organization for which funds are appropriated from Student Association fees; (d) serving as a member of student committees or councils; (e) being a member or serving in an official capacity in any listed organization which obtains no funds from Student Association fees. (Eligibility requirement *e* of paragraph 2 not applied in this classification.)

2. The consensus of the Faculty Committee on Student Activities is that participation by students in the various extracurricular activities is a privilege that is to be earned by maintaining the standards of scholarship and conduct of the College.

On the basis of the foregoing paragraph the following students are eligible for such participation:

- a. Those who are not subject to any phase of disciplinary action.
- b. Those who are taking twelve or more credit hours of regular college work.

- c. Those who, during their last semester in attendance, passed a minimum of nine credit hours. Two consecutive terms of summer school may be counted as one semester.
 - d. Those who are not on Final Trial.
 - e. Those who have paid Student Association fees.
3. Eligibility requirements for holding office. Only those who maintain a C average in any twelve credit hours may hold office in any extracurricular activity. (See Rules for Participation, Section a and c, for the definition of office.)

Eligibility at the beginning of a semester holds good throughout the semester unless the student has become ineligible under the above provisions. A student ineligible at the beginning of a semester by reason of the foregoing regulations becomes eligible when the scholastic or disciplinary disability has been removed. First year students are eligible immediately upon entering, provided they are carrying the twelve semester hours of credit work.

ATHLETICS

Rules and regulations governing intercollegiate athletics at the College of Mines and Metallurgy are those effective in the Border Intercollegiate Athletic Conference. These rules and additional rules governing freshman participation in athletics are published in a booklet issued by the Border Intercollegiate Athletic Conference.

A program of intramural sports offers competition and recreation for men who are not members of varsity teams. Competition is provided for in touch-football, basketball, softball, boxing, and tennis. Other sports will be added according to student interest and available facilities.

CONDUCT

It is assumed that students come to the College for a serious purpose, and that they will cheerfully conform to such regulations as may be, from time to time, made by the Faculty.

It is the aim of the Faculty so to administer the discipline of the school as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present as his own the work of another, or any work which he has not honestly performed, or to pass any examination by improper means, is regarded by the Faculty as a most serious offense, and renders the offender liable to immediate suspension. The aiding and abetting a student in any dishonesty is held to be an equally serious offense.

On examination or quizzes the student is expected, (a) to remain in the examination room until his examination is finished, (b) to refrain from talking, (c) to refrain from bringing notes and books into the examination room.

The possession of any material not allowed by the instructor during an examination is considered prima facie evidence of intention to use such material illegally.

DISCIPLINE

General statement.—1. Through matriculation at the College of Mines and Metallurgy, a student neither loses the rights nor escapes the responsibility of citizenship.

2. Obedience to the law being a primary duty of the citizen, the conviction of the student for violation of law renders him subject also to disciplinary action on the part of the College.

3. A jury indictment for a felony or other offense of serious character suspends the student, without prejudice, until acquitted.

4. Illegal conduct, such as the drinking of intoxicating liquors, gambling, and dishonesty, renders the student subject to discipline.

5. The College, in common with other institutions, has for its orderly and efficient conduct, special regulations additional to the laws of the land. These special regulations are so easily available to all students that each student is charged with notice and knowledge thereof.

6. Persons not registered in the College when accused of misconduct that affects college life and work, if former or prospective students, will have the known circumstances inscribed in their record as a presumption against their moral character. They will not be later admitted to the College unless they can prove moral desirability.

7. All students are expected to show respect for properly constituted authority and to observe correct standards of conduct. Conduct inconsistent with general good order, or persistent neglect of work, or failure to respond promptly to official notices, may subject the student to discipline.

Students are trusted to conduct themselves properly. If, however, it becomes apparent that any student, by misconduct or by neglect of studies is doing harm to himself, to others, or to the College, the Faculty will use appropriate means of discipline.

The following penalties may be imposed: admonition; probation; suspension of social rights and privileges; suspension of eligibility for official athletic and non-athletic extracurricular activities; suspension of eligibility for any student office or honor; publication of the name of the offender, his offense, and the penalty imposed; increase in the number of courses required for a degree; cancellation of credit for scholastic work done; suspension from the College; expulsion; or such other penalty as in the opinion of the Faculty Committee on Discipline seems proper.

Probation.—Disciplinary probation will be for a definite period and carries with it the following condition during the period of such probation: any further violation of College regulations during the time of probation will cause such student to be suspended for a period to be determined by the Faculty Committee on Discipline.

A student on probation may not hold office in any organization connected with the College, nor represent the College in any of its activities.

A student on probation who absents himself from any class exercise or neglects any class work, except for reasons considered imperative by his

Dean, will thereby drop his name from the College rolls for the remainder of the session.

Absences and neglect on the part of such student, not explained to his Dean within one day—beforehand if possible—will be presumed to be without excuse and will effect the dropping above mentioned.

A student on probation may not be initiated into any social or honorary organization.

Suspension from the College.—A student suspended from the College shall remain off the campus of the College during the entire period of his suspension, excepting when summoned by an administrative official of the College, or when an appointment with an official has been previously arranged. A student while under suspension may not room or board in a fraternity or sorority house, dormitory, or rooming house where other students are living. He may not be initiated into an honorary or social organization. A student under suspension may not receive credit at the College of Mines and Metallurgy for college work done, by correspondence or in residence, at either this or any other institution during the period of suspension, except when allowed by the Faculty Committee on Discipline. This privilege shall not be allowed in cases involving cheating.

Expulsion from the College.—A sentence of expulsion means permanent severance from the College. A sentence of expulsion shall be reviewed by the administrative officers, who, when in doubt about its propriety, shall return the case to the trial committee with its reason for so doing.

These penalties may be imposed singly or in any combination upon individuals, or groups, or organizations.

In every case in which a student is found guilty of any offense by the Faculty Committee on Discipline and in any other matter in which an emergency arises, parents or guardians will be informed and asked to cooperate with the authorities.

Debts.—The College is not responsible for debts contracted by individual students or by student organizations, but the College will use all possible measures to force the payment of debts justly and regularly contracted by such persons. The College expects all students and student organizations to conduct themselves honorably in all commercial transactions.

Hazing.—A student who violates his pledge of hazing, or who engages in, instigates, or encourages any type of class rush not specifically approved by the College, will be liable to suspension or expulsion.

Bad checks.—A student who gives the College a bad check, the fault not being that of the bank, and who does not make it good within five days will be dropped from the College. The College will not accept a check from a student who has once given a bad check.

ADMISSION REQUIREMENTS

Control over admission.—Admission to the College is under the control of the Faculty and administered by the Registrar.

GENERAL REQUIREMENTS

Sex.—Applicants of both sexes are admitted to all branches of the College on equal terms.

Age.—An applicant must be at least 16 years of age.

Character.—An applicant must furnish satisfactory evidence of good moral character.

Vaccination.—An applicant must present a certificate showing that he has had smallpox or has been successfully vaccinated or that attempts at vaccination have been made recently enough to satisfy the Health Officer.

Hazing pledge.—The Legislature having forbidden hazing and rushing in State educational institutions under penalty of fine and imprisonment, each applicant is required to sign the following pledge:

"I pledge myself on my honor not to encourage or participate in hazing during my attendance at the College."

GENERAL SCHOLARSHIP REQUIREMENTS

Units.—Entrance requirements are stated in terms of units. A unit represents nine months of study in a subject in a secondary school, constituting approximately a quarter of a full year's work. A four-year secondary school curriculum should be regarded as representing not more than sixteen units of work.

Unit requirements.—For admission fifteen units, with high school graduation (see "Methods of Obtaining Admission Units"), are required as specified below. World history may not be counted if early or modern European history, either or both, is offered; and biology may not be presented by a student offering either botany or zoology. A student may enter with a condition in any one subject or group, except English, provided he has a total of at least fifteen acceptable units. In no case will more than four units be accepted from Section B.

	UNITS
1. English (required of every student)	3
2. From the Mathematics Group in Section A below.....	2
3. Two units from each of any two of the three other groups in Section A below (Foreign Language Group, Natural Science Group, Social Science Group), total	4
4. Additional from any group or groups in Section A.....	2
5. Additional from Section A, or from Section B, or from Sections A and B together	4
Total	15

Section A

(The units column shows the number of units that may be offered in each subject.)

SUBJECT	UNITS	SUBJECT	UNITS
English Group		Natural Science Group	
English	3-4	Biology	1
Foreign Language Group		Botany	1
Czech	2-3	Chemistry	1
French	2-3	General Science	1
German	2-3	Physics	1
Greek	2-3	Physiography	½
Latin	2-3-4	Physiology and hygiene	½-1
Spanish	2-3	Zoology	1
Mathematics Group		Social Science Group	
Algebra	1-½-2	Early European history	1
Plane Geometry	1	Modern European history	1
Solid Geometry	½	World history	1
Trigonometry	½	English history	½-1
General	1	American history	½-1
		Civics	½-1
		Economics	½

Section B

Any other accredited subject or subjects (but not fragments) counted toward graduation by the accredited secondary school except (1) drill subjects, such as penmanship, physical education, military training, etc.; (2) extracurricular subjects, such as band, glee club, etc; and (3) diversified occupations. A single unit in a foreign language may be counted in this section. ½-4

Quality provisions.—Quality, however, is more important than quantity. A course thoroughly mastered is worth more than one completed with low or even medium grades. Therefore any applicant ranking in the highest quarter of his graduating class in any fully accredited secondary school and also ranking in the highest quarter of the freshman class in the scholastic aptitude test given by the College in September may enter without admission conditions.

Furthermore, any conditional first-year freshman student (but not an "individual approval student") who makes, in the College, in his first long session or its equivalent, at least thirty semester hours with an average grade of *C* will thereby absolve his admission condition. Otherwise it must be removed as provided under "How to Absolve Admission Conditions."

Advice as to subjects in high school.—The evidence is strongly in favor of the Group A subjects as giving the best preparation for college. High-school students expecting to go to college are therefore strongly advised to choose as nearly as possible all of their subjects from that group. Certainly those expecting to specialize in foreign languages in college should begin in

high school, and those looking forward to college work in the sciences, mathematics, engineering, medicine, business administration, statistics, or law should take at least one and a half years of algebra and one year of plane geometry in high school.

METHODS OF OBTAINING ADMISSION UNITS

The admission units specified are usually obtained by graduation from an accredited school, or by examination, or by a combination of the two. Limited opportunity is also offered by the University's Extension Teaching Bureau at Austin for units to be made by correspondence study. In addition, a teacher's certificate known as a high-school certificate of the second class yields the holder a few units, depending upon the number of acceptable subjects taken for the certificate.

(1) Graduation from an accredited school.—No credit may be obtained without graduation. Within the limits of the above list, graduates of schools on the approved list issued by the State Department of Education are credited with the subjects they have completed in which the schools are accredited. In order to determine these units, they are required to present statements of their work made out by the superintendent or principal on the official blank of the College, to be had of the Registrar. It is of the highest importance that the applicant send this blank, properly filled out, to the Registrar not later than September 1. Valuable time will be lost if he does not do so, and more if he has to send for it after he arrives. Without it he cannot be admitted at all.

The College has no accredited schools outside Texas, but it will usually accept, for work done in a school in another state, credits granted by the state university of that state; or, in the absence of such an institution, by another institution of recognized standing acquainted with the work of the school in question.

(2) Examination.—Any or all scholarship requirements may be met by passing the admission examinations. To obtain credit in any subject, the applicant must make a grade not lower than *D*. In grading papers in all subjects, account will be taken of the applicant's use of English. Excellence in one subject will not make up for deficiency in another.

Every natural science examination paper must be accompanied by a laboratory notebook.

Admission examinations are held twice a year, in September and in January.

The fall and winter series are held only at the College and begin on September 6 and January 21, respectively. Requests for full information in regard to these series should be addressed to the Registrar of the College.

Junior-senior high-school graduates.—Applicants who have passed through and graduated from a junior-senior high-school organization in which the usual type of college entrance subjects were not given in the

junior school may be admitted on twelve acceptable units completed in the senior high school (the last three grades), including the unit requirements listed under "Unit Requirements," plus three unspecified units from the junior high school.

ADMISSION BY INDIVIDUAL APPROVAL

At the discretion of the Registrar, an applicant over 21 years old may be admitted without examination. Such admission does not confer special privileges but, on the contrary, puts the applicant under special obligations. Each applicant proceeds as follows:

1. He must make application on the official blank (to be obtained from the Registrar), giving the information there desired.
2. He must furnish evidence that he has substantially covered the ground of the units required of other candidates, and that he has sufficient ability and seriousness of purpose to do the work desired with profit to himself and to the satisfaction of the College.
3. He must show, by the writing of a composition, that he has an adequate command of English.

Applicants are advised to send their applications and credentials in advance of their coming to El Paso.

Admission by individual approval contemplates applicants who have not recently attended school and therefore could not pass the admission examinations.

Students so admitted may register for courses other than freshman courses only with the approval of the chairman of the department concerned and the dean, given because of evidence of special fitness. This approval can rarely be granted, however, because most individual approval students have less preparation than any other students in the College.

Students admitted by individual approval cannot become candidates for degrees until they have satisfied the admission requirements. As to how to remove admission conditions, see the following section.

HOW TO ABSOLVE ADMISSION CONDITIONS

General.—Admission conditions may be removed (1) by taking, with the approval of the Registrar, the regular admission examination in subjects not studied by the student in the College; (2) by correspondence work (a few courses for this purpose are offered in the University Bureau of Extension Teaching); (3) by counting work done in the College. If the second or third plan is used, the prescribed admission units must be satisfied by work in the corresponding subjects in the college; the elective admission units may be absolved by any College work. For the purpose of satisfying admission conditions, a course of six semester hours counts as the equivalent of one and one-half units. Courses used to absolve admission requirements will not count also toward a degree. If a student does not satisfy his

admission condition within two years after admission to the College, he must present one additional unit (elective) for each year that his condition remains unsatisfied. Conditions may not be removed by taking admission examinations after the student has completed sixty semester hours of college work. They may then be removed only by work done in the College.

Individual approval students.—Students admitted by individual approval to English 1 will, on completing that course be given credit also for three admission units in English. Similarly, students admitted to freshman mathematics will, on completing that course, receive credit also for two admission units in algebra and one in plane geometry. Further, students admitted, without any entrance credit, to the College by individual approval and making during their first long session, or its equivalent, at least thirty semester hours with an average grade of *C* will in addition absolve the admission condition in the six elective units. If this average is not made, the six elective units (see "Scholarship Requirements") must be made up by one or more of the methods given in the preceding paragraph. The remaining prescribed units must be made up in one or more of the ways explained in the preceding paragraph. The penalties and restrictions of that paragraph also apply to individual approval students.

STUDENTS FROM OTHER COLLEGES

A student seeking admission from another college must present: (1) a letter of honorable dismissal; (2) a vaccination certificate; (3) an official transcript of his entire college record, including his admission units. Much trouble and time will be saved by sending this official record to the Registrar not later than September 1. Students are not allowed to register until the proper certificates are presented.

Students in other institutions who desire a degree from the College should not wait until their senior year to transfer. If they do, they may not be able to complete all remaining requirements in one year.

A student who has failed in his work at another institution and is not entitled to continue there will not be admitted to the College. Others who have failed may be refused admission, or may be admitted on "special observation" or "final trial" or on any other condition that may seem desirable.

Inasmuch as students taking all their work in the College must have a *C* average for a degree, only such work completed in another institution as altogether averages the equivalent of our grade of *C* will be accepted here.

An applicant who has attended another collegiate institution is not at liberty to disregard his collegiate record and apply for admission to the College on the basis of his high-school record, but is subject without exception to the regulations given above.

All credits given students from other colleges are conditional. If their work here is of low grade, the amount of credit given to individual students may be reduced.

MINING AND METALLURGY

The unit requirements for admission to Engineering are as follows:

SUBJECT	UNITS
1. English	3
2. Mathematics	
Algebra .....1½	
Plane Geometry .....1	
Solid Geometry .....½	
	} 3
3. Two units from each of any two of the three other groups in Section A (Foreign Language Group, Natural Science Group, Social Science Group) total.....	4
4. Additional from any group or groups in Section A.....	1
5. Additional from Section A, or from Section B, or from Sections A and B together.....	4
	—
Total	15

Under 5 above, as many as two units each may be offered in drawing and manual training.

All other provisions with reference to admission to the College apply also to admission to Mining and Metallurgy, except that neither the English nor the mathematics requirement may be absolved under "Quality Provisions."

SCHOLASTIC REGULATIONS

REGISTRATION

For the Long Session of 1941-1942 the registration days are as follows:

First semester: September 10-11, Wednesday-Thursday.

Second semester: January 23-26, Friday-Monday, registration of new students.

January 30-31, Friday-Saturday, registration of readmission students.

Late registration.—Students are urged to register during the first days set aside for registration. Late registration necessarily handicaps the student because of his missing classes. The difficulty in scheduling classes due to closed sections may give the student an undesirable schedule which might have been avoided if early registration had been made. Several days have been set aside for late registration, chiefly to benefit those students who, for some reason, cannot register at the beginning. It is a distinct advantage to register as early as possible.

Non-credit students.—Permission to attend a course or courses without credit is sometimes granted. A student not registered for credit in the College is required to pay the same fees and deposits as a regular student.

Attendance by a registered undergraduate as a visitor in a course is allowed only with the approval of his Dean and under special restrictions. The payment of regular fees and deposits is required.

EXPLANATION OF COURSES

Definitions.—The unit of measure for credit purposes is the semester hour, which means one hour of recitation (or the equivalent in shop or laboratory work) per week for one semester of eighteen weeks, unless otherwise specified. For each classroom hour two hours of preparation are expected. Three hours of shop or laboratory work are counted equivalent to one classroom hour and the preparation for it.

Most courses meet three hours a week, having a credit value of three hours for one semester, or six hours for both semesters.

Notation.—Courses are designated by numbers which indicate both rank and credit value in semester hours, and by letters which indicate the part of a course referred to or the semester or term in which it is given.

Rank and credit value.—A number between 200 and 299 indicates a value of two semester hours, one between 300 and 399 a value of three semester hours, etc., except that when the value is six semester hours the numbers between 0 and 99 are used, instead of the numbers between 600 and 699. The two digits on the right indicate the rank of the course; if between 0 and 9 the course is of freshman rank; if between 10 and 19, of sophomore.

rank; if between 20 and 59, of junior rank; if between 60 and 79, of senior rank.

A student may not receive credit in one department for two courses whose numbers have the same right-hand digits—for example, Physics 12 and Physics 812.

No courses will be given which carry only one semester hour of credit.

Certain beginning or freshman courses are not numbered, but are marked *A* and have a value of six semester hours.

Courses of junior or senior rank are referred to as *advanced* courses.

Use of letters.—The lower-case letters *f* (first semester), *s* (second semester), following a course number show the semester of the long session in which the course is given. The notation *fs* indicates that the course is given in the first semester and repeated in the second semester. A course not so designated runs throughout the long session and in such a case the lower-case letter *a* means the first half of such a course, the letter *b* the second half. For example, Chemistry 422 is a course running through the entire long session and carrying four semester hours of credit and English 1as is the first half of English 1 (freshman English) given in the second semester and carrying three semester hours of credit, which, however, cannot be counted for graduation until English 1b, the second half of English 1, has been completed.

AMOUNT OF WORK

Engineering students.—Freshmen may not register for more than eighteen semester hours for each semester. Sophomores, juniors, and seniors may not register for hours in excess of those prescribed in the course of study except in accordance with the grade point rule (252 grade points during their preceding semester), and in no case whatever may they register for more than twenty-one semester hours.

Other students.—The normal load for beginning freshmen is fifteen hours. Unusual circumstances sometimes make it necessary for a student's program to include sixteen or seventeen hours. A maximum of eighteen hours may be taken only with the consent of the Dean.

After the first semester or summer session at the College, students may not register for more than fifteen hours per week unless during the preceding semester they have made a score of 252 grade points, or 202 points during the preceding summer semester. Students may not register for more than eighteen hours per week unless the score has been 297 points for the preceding semester, or 234 points in the preceding summer session.

In no case may a student register for more than twenty-one semester hours per week.

ADDING AND DROPPING COURSES

After his registration for the session a student may add a course only with the approval of his Dean. No course may be added, however, after the dates specified in the Calendar.

For weighty cause, a student may drop a course with the consent of his Dean.

On the recommendation of the instructor concerned, approved by his Dean, a student may at any time be required to drop a course because of neglect or for lack of preparation.

A student in attendance during the long session shall not be permitted to drop a course within 30 days of the beginning of the final examinations for that semester.

CLASS ATTENDANCE AND ABSENCES

Absence from class.—Uniform and punctual attendance upon all exercises at which the student is due is strictly required. Absences will be considered as non-performance of work.

When the number of absences exceeds one-eighth of the total number of exercises in any subject during a semester, the student concerned will be reported to his Dean who may exclude him from further participation in all classes, or who may give him special permission to continue.

A student excluded from classes for excessive absences in any subject will immediately lose all absence privileges in all subjects for the remainder of the semester, and will thereafter be subject to immediate and final dropping from the rolls of the College for further absences. Students on Special Observation or Final Trial will be given no absence privileges.

Absences incurred by a student while acting as an authorized representative of the College will receive special consideration from the Administration.

In the interest of the public health, every student is required to report promptly to the Health Officer all absences due to illness of any kind.

A student is held responsible for absences incurred because of late registration.

Absence from quiz.—A student absent from an intra-semester examination or quiz is graded zero on that quiz, unless for urgent reason he is given by the instructor the privilege of taking a postponed examination at a time to be set by the latter.

Tardiness.—Serious or repeated tardiness will be considered as equivalent to absence, and reported as such.

OFFICIAL BULLETIN BOARDS

Official bulletin boards are maintained in the several buildings and departments. These are used principally for posting official notices of changes of regulations, class meetings, special official meetings, etc., as found necessary by the Regents and Faculty. Such notices have the full official force and effect. Students are held responsible for knowledge of and compliance with such notices.

EXAMINATIONS

Semester examinations.—The Faculty has ruled that exemptions from examinations may not be given. To encourage preparation for examinations,

the Faculty has further ruled that during the last seven days of each semester before examinations no written examination or review shall be given; and all essays, theses, synopses, and the like must be handed in before this period begins.

In all examinations, account is taken of the student's use of English and of the form of the paper in general, the grade being lowered because of deficiencies in these regards as well as in the subject-matter proper.

Absence from semester examinations.—A student who is compelled to be absent from a semester examination on account of sickness or other imperative cause should petition his Dean, beforehand if possible, for permission to postpone the examination. In cases of illness the petition must have the approval of the Health Officer. Following permission for postponement from his Dean, the student should also secure from him permission to take the postponed examination either at the next regular examination in the subject, or in any event, not later than twelve months after the examination was postponed, and should file notice thereof with the Registrar not later than seven days before the beginning of the examination period concerned.

A student absent from a semester examination without his Dean's excuse is graded *F* and required to take the semester's work over again if he desires credit for it.

Postponed and removal-of-condition examinations.—Postponed and removal-of-condition examinations are held at regular dates fixed by the Calendar. A student may take one at another time only at a regular examination in a course and then only with the permission of his Dean. In any event, he must file an application for examination with the Registrar on or before the seventh day preceding the first day of the examination period.

A student who takes and fails to pass a removal-of-condition examination will be given a grade of *F* in the course. Absence from one of these examinations, after permission has been granted, will have the same effect as a failure, unless the student presents a satisfactory excuse to his Dean within a week after the date of the examination.

Advanced standing examinations.—Applications for advanced standing examinations must be approved by the chairman of the department, by the student's Dean, and filed with the Registrar at least seven days before the examination period as fixed by the Calendar. Credit has rarely been given for courses by examination, and will be given still more rarely in the future. In fact, advanced standing examinations for other than courses corresponding to admission credits will be allowed only in very exceptional cases, and it may be expected that they will be searching in character, that in length they will extend to four hours for each semester covered, and that the papers will be graded with great strictness.

In order to pass an advanced standing examination a grade of at least *B* must be secured.

GRADES OF SCHOLARSHIP

Grades.—The standing of the student in his work is expressed by grades made up from class work and from examinations. There are six grades: *A* (excellent), *B* (good), *C* (fair), *D* (low pass), *E* (failure, but with privileges of petitioning to continue the course and to take removal-of-condition examination), *F* (bad failure, and, if a semester grade, without further current privileges in the course).

To pass in a course, it is necessary to secure a grade of at least *D* both on class work and on semester examination, considered separately. Grades are given by semester; however, in a course extending through two semesters no credit is given until both semesters of the course have been completed.

Effect of a semester grade of E.—A student who fails to pass in a course but makes a grade of *E* is called "conditioned," and is allowed opportunity to remove the condition by a second examination at the next regular examination period in that subject, at the discretion of his Dean, but in any event he must take the condition examination not later than twelve months after the condition was received. A condition successfully removed becomes *D*.

In a subject continuing beyond one semester, the instructor may, by sending to the Registrar the proper credit notice, raise an *E* of an earlier semester to *D* because of a grade of *C* or better done in a later semester, but no grade may be altered after the registration period of the next succeeding semester.

Higher work after failure.—If a student makes an *F* in a course, he may not take up a higher course in the same subject until the course is taken again. If a student makes an *E* in a course, he may take up a higher course in the same subject only with the written consent of the instructor concerned, approved by his Dean.

Incompleted work.—Grades for work not completed may be obtained by three distinct and separate methods:

1. At any intra-semester grade period, if the student has not completed his work for any particular course, the instructor may give a grade of *Incomplete* in the course.

2. At the end of any semester a student may be given a grade of *PX* if he unavoidably is absent from the semester final examination in a course, and such absence is approved by the respective Dean. This procedure obligates the student to take a *Postponed Examination* in the course as part of the removal-of-*PX* grade.

3. At the end of a semester a grade of *Incomplete* may be given in exceptional circumstances and with the permission of the instructor and the proper Dean. When the grade of *Incomplete* is given at the end of the first semester, the work missed must be completed before grades are reported at the end of the second semester. If the *Incomplete* is given at the end of the

second semester, it must be removed before grades are recorded for the fall semester following.

When the student is given the grade of *Incomplete* or *PX*, grade points for the course will be considered as if the grade were "F" in calculating the standing of the student.

A student on Special Observation whose score cannot be determined because of grades of *Incomplete* or *PX* will be placed on Final Trial; and a student on Final Trial whose score cannot be determined because of grades of *Incomplete* or *PX* will be dropped from the rolls of the College.

When a student is late or dilatory in handing in any required work of any nature, his instructor may give him, depending on the circumstances, a lowered grade, or even zero, on the late performance in question.

A student who has not completed the required volume of work in a course at the end of a semester will receive a grade within the calculation of which will be included various uncompleted pieces of work rated at zero. When such final semester grade results in an *E* the instructor and respective Dean may require the student to complete the missing work as part of his removal-of-condition obligation.

Repetition of course.—If a student repeats a course, his official grade is the last one made.

REPORTS

Intra-semester reports.—On November 12 and March 24 reports are due on all students making a grade of *D* or below from instructors to the Registrar, who will then issue notices to parents or guardians of students doing work below the passing grade *D*. Grades reported at intra-semester periods represent the average grade to date in the given course.

Semester reports.—Reports are sent out to parents and guardians at the end of each semester for all students. Self-supporting students over 21 years of age, if they request it of the Registrar in writing, may have their reports sent to them instead of to their parents.

HONORS

At the end of each semester, the Registrar will publish an honor roll. To be eligible for this honor roll, a student must be registered for not less than 15 semester credit hours, pass all work taken, and attain an average of 18 grade points per semester hour in all work taken for credit during the semester. The grade point system shall be used in determining the average number of points per semester hour attained by the student.

Furthermore, if a student graduates from the College of Mines and Metallurgy and has six times, or more, attained the semester honor rolls, his or her name shall appear in the catalogue as part of a permanent honor roll.

CLASSIFICATION OF STUDENTS

Students are classified as regular and irregular. Under *Regular Students* are grouped those taking twelve or more semester hours of work prescribed for a degree. Under *Irregular Students* are grouped those taking less than twelve semester hours.

They are further classified as first-year, second-year, and upper-division students, dependent on their time of residence at a college or university. A first-year student is one who has resided not more than two semesters; a second-year student is one who has resided two semesters and not more than four semesters; upper-division students are those who have resided more than four semesters. A term of the summer session is equal to one-half semester.

Engineering students.—Until the completion of thirty semester hours of prescribed work in addition to the full admission requirements, engineering students are freshmen; then, until sixty-six semester hours are completed, sophomores; then, until one hundred and four semester hours are completed, juniors; then, seniors until graduation.

Other students.—Until the completion of thirty semester hours in addition to the full admission requirements, a student is classified as a freshman; then, until sixty semester hours are completed, a sophomore; then, until ninety semester hours are completed, a junior; then, a senior until graduation.

STANDARD OF WORK REQUIRED

Definitions.—The grades given are defined under "Grades of Scholarship."

A course with one classroom hour for two semesters when passed implies a credit of two semester hours; a course with three classroom hours, for one semester carries a credit of three semester hours, and so on. But in the preceding cases it is also expected that the student will spend two hours of preparation for each classroom hour. In general, when the sum of the clock hours spent in lecture, recitation, laboratory and preparation is divided by three, the result will be approximately the semester hours of credit for the course.

In scoring, grades will count as follows: *A*, 21 points per semester hour; *B*, 18 points; *C*, 15 points; *D*, 12 points; *E*, 6 points; *F*, 0; Inc. or PX, 0. Zero (0) courses are not counted in scoring.

Required minimum.—To avoid Special Observation, Final Trial, or being dropped from the rolls of the College for scholastic undesirability, the student must meet the following standard of work at the intra-semester and semester report periods.

Students taking less than twelve semester hours must pass in all the work taken and must make a grade point average per semester hour not less than that required of other students of the same length of attendance.

First-year students taking twelve or more semester hours must make a score of either 108 points in twelve semester hours, or 126 points in nine semester hours.

Second-year students taking twelve or more semester hours must make a score of 126 points in twelve semester hours.

Upper-division students taking twelve or more semester hours must make a score of 144 points in twelve semester hours.

In interpreting this section, a student taking twelve or more credit hours with an included course of four or more credit hours shall not be placed

on Special Observation or Final Trial, or be dropped from the rolls for scholastic reasons if he makes, in the courses taken, not less than the following grade point count: 117 points for first-year students, 135 points for second-year students, or 162 points for upper-division students, provided he does not have a grade of *F* in more than one course.

Conferences.—The Deans of the Divisions of Arts and Sciences and Engineering will confer with all students in the College who are doing unsatisfactory work, both at the intra-semester dates and at the end of the semester. The object of these conferences will be to advise the student for his improvement, to offer him opportunity for renewed effort with such assistance as parents and instructors may be able to furnish, and to encourage or to warn him as the case may demand. First-year students also have the opportunity of conferring with Faculty Advisers.

Failures.—The College has prescribed a certain minimum of work which a student must pass at the intra-semester dates and at the end of the semester or be dropped from the College. (See *Required Minimum of Work* rule.) Before a student is dropped from the College for failure in work he will be given two trials or chances, called respectively *Special Observation* and *Final Trial*. This will not apply to a student who fails in all his courses. In such case, if the failure occurs at the end of a semester, the student must withdraw until he satisfies the requirements of *Return After Failure*.

Special observation.—The first failure of a student to pass in the required minimum of work will place such a student under Special Observation, which is a first warning to both student and parent or guardian of unsatisfactory work.

Failure to pass in the required minimum of work at any time after the first day of Special Observation puts the student on Final Trial. Sometimes the first failure is so serious that the parents are advised to withdraw the student at once from the College. Immediate withdrawal after serious failure often enables him to make other arrangements for his education without loss of time. A student on Special Observation whose score cannot be determined because of postponed (Inc. or PX) grades is put on Final Trial.

Final Trial.—A student on Special Observation who withdraws from the College before the end of the semester and who reenters within four semesters is put on Final Trial. A student on Special Observation whose score cannot be determined because of postponed or incomplete grades will be put on Final Trial. A student on Special Observation who fails to pass in the required minimum of work is put on Final Trial. This is a last and final warning to student and parent. Final Trial will last for a consecutive period of enrollment equivalent to two semesters, after which the student will be restored to good scholastic standing. A student on Final Trial who fails in the required minimum of work will be dropped from the College. A student on Final Trial who withdraws from the College may not register again before the beginning of the corresponding semester in the next long

session unless he shall remove his deficiencies in an intervening summer session as prescribed hereafter.

A student on Final Trial whose score cannot be determined because of postponed (Inc. or PX) grades will be dropped from the rolls of the College.

Restoration to good standing.—A student who has been placed on special Observation or Final Trial will be restored to good standing at the end of any semester in the long session in which he makes a C average in at least twelve semester hours. If he be registered for less than twelve but for nine or more semester hours, he must pass all work taken with a grade of C or better and in addition must make at least 171 grade points.

Class attendance.—The College expects, and has a right to expect, that a student on Special Observation or Final Trial will attend classes with unflinching regularity, will be very punctual in reports and other written work, and will make every effort to show marked improvement in his courses. A failing student unwilling to put forth every effort to keep up with his classes should be withdrawn from the College.

In case of illness or any other imperative reason for absence, such a student should file a written explanation of each absence with the Registrar to be entered upon his record card.

Return after failure.—A student who has withdrawn while on Special Observation or Final Trial, or who has been dropped, may register subsequently in good scholastic standing only if he has remained continuously out of school as long as four semesters of the long session.

A student on Final Trial who withdraws during the first semester or who is dropped by reason of failure during or at the end of the first semester may register again not earlier than the next summer session. If he attends the summer session he may register as on Special Observation at the beginning of the next long session provided he makes for the summer session scores of 144 points in twelve semester hours if a first-year student, or 162 points in twelve semester hours if a second-year student, and of 180 points in twelve semester hours in other cases. If he does not attend the summer session, or if he attends the summer session and makes less than the foregoing scores, he may register as on Final Trial at the beginning of the long session.

A student on Final Trial who withdraws during the second semester or who is dropped by reason of failure during or at the end of the second semester may not register earlier than the second semester of the next long session unless he attends the intervening summer session and makes scores of 144 points in twelve semester hours if a first-year student, of 162 points in twelve semester hours if a second-year student, and of 180 points in twelve semester hours in other cases. Should he make such a record he may register as on Final Trial at the beginning of the next long session. Should his record exceed the foregoing by 12 respective points he may register on Special Observation. Otherwise he may register not earlier than the beginning of the succeeding second semester and then only on Final Trial.

A student who is on Final Trial at the end of a second semester may register as on Special Observation at the beginning of the next long session

if he attends the intervening summer session and makes, in the work of the second semester and the summer session combined, a score of 195 points in fifteen semester hours if a first-year student, of 210 points in fifteen semester hours if a second-year student, and of 225 points in fifteen semester hours in other cases.

A student who is on Special Observation at the end of a second semester may register in good scholastic standing at the beginning of the next long session if he attends the intervening summer session and makes, in the work of the second semester and the summer session combined, a score of 144 points in fifteen semester hours if a first-year student, of 162 points in fifteen semester hours if a second-year student and 180 points in fifteen semester hours in other cases.

A student shall not receive credit for work done at another institution during a time when he was ineligible to attend the College of Mines and Metallurgy, nor will the College admit a student from another institution who is ineligible to continue there.

The foregoing requirements and the rules governing Special Observation and Final Trial apply to all students, and the Deans are without discretion except in the case of mature students over 25 years of age.

REQUIREMENTS FOR DEGREES AND CERTIFICATES

STUDY OF CONSTITUTIONS OF UNITED STATES AND TEXAS REQUIRED

The Forty-fifth Legislature enacted a law requiring all students entering tax-supported educational institutions to secure six semester hours of credit in Federal and Texas Constitutions before being awarded *degrees or teachers' certificates*. The completion of Government 10 satisfies the requirements of this law.

ENGINEER OF MINES

The degree of Engineer of Mines may be conferred upon *graduates of the College of Mines and Metallurgy* who attended a college prior to September 1, 1931, and who have received the degree of Bachelor of Science in Mining Engineering and who have completed at least two years of successful professional work in mining or metallurgy, subsequent to receiving the bachelor's degree, upon the presentation and acceptance of a satisfactory thesis.

BACHELOR OF SCIENCE IN MINING ENGINEERING

The completion of one of the following four-year curricula and the satisfaction of other general requirements lead to the degree of bachelor of Science in Mining Engineering. If a student makes an *average grade of less than twelve grade points* when first taking the courses set forth in the first three semesters of any one of these curricula he will be considered as lacking in aptitude for the degree, and he and his parents or guardians will be advised that he cannot be allowed to continue. He may be permitted to register for other majors of study.

Each student anticipating a degree of Bachelor of Science in Mining Engineering in either the Mining, the Metallurgy, or the Mining Geology option must spend at least one summer in practical work related to the degree desired and must furnish satisfactory evidence to the proper authorities of a summer so spent.

UNIFORM CURRICULUM FOR THE FIRST AND SECOND YEARS

First Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 801a	General Chemistry	3	3	4
Drawing 301	Engineering Drawing	0	9	3
English 1a	Rhetoric and Composition	3	0	3
Geology 301	Principles of General Geology	3	3	3
Mathematics 803a	Elementary Mathematical Analysis	4	0	4
P. T. 01	Physical Training (No Credit)	3	0	0
				—
				17
Second Semester				
Chemistry 801b	General Chemistry	3	3	4
Drawing 302	Descriptive Geometry	0	9	3
English 1b	Rhetoric and Composition	3	0	3
Geology 302	Principles of General Geology	3	3	3
Mathematics 803b	Elementary Mathematical Analysis	4	0	4
P. T. 01	Physical Training (No Credit)	3	0	0
				—
				17

Second Year

First Semester				
Chemistry 311	Qualitative Analysis	1	6	3
English 310	Technical Writing	3	0	3
Geology 316	Mineralogy	1	6	3
Government 10a	American Government	3	0	3
Mathematics 13a	Calculus	3	0	3
Physics 812a	Mechanics, Heat	3	3	4
				—
				19
Second Semester				
Chemistry 413	Quantitative Analysis	1	8	4
Engineering 313	Plane Surveying	3	0	3
Geology 217	Mineralogy	0	6	2
Government 10b	American Government	3	0	3
Mathematics 13b	Calculus	3	0	3
Physics 812b	Electricity and Magnetism	3	3	4
				—
				19

Summer School

Engineering 414	Field Surveying:—Summer Work; 8 hours a day for four weeks	192	4
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MINING OPTION

Third Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 323	Quantitative Analysis	1	6	3
Geology 421	Advanced General Geology	3	3	4
Mathematics 325	Calculus	3	0	3
Metallurgy 423	Ore Dressing and Milling	3	3	4
Mining 521	Mining Methods	5	0	5
				19
Second Semester				
Engineering 322	Mine and Route Surveying	2	3	3
Engineering 533	Applied Mechanics and Graphic Statics	3	6	5
Geology 322	General Economic Geology	3	0	3
Metallurgy 321	General Metallurgy	3	0	3
Metallurgy 324	Assaying	1	6	3
Physics 222	Sound and Light	1	3	2
				19
Summer School				
Engineering 224	Mine Surveying:—Field Work; 8 hours a day for two weeks		96	2
Fourth Year				
First Semester				
Economics 312	Principles of Economics	3	0	3
Engineering 433	Strength of Materials	3	3	4
Engineering 354	Hydraulics	3	0	3
Geology 264	Field Geology	1	3	2
Metallurgy 261	Metallurgy of Iron, Copper and Lead	2	0	2
Mining 260	Mine Plant	2	0	2
Mining 267	Management	2	0	2
				18
Second Semester				
Engineering 431	Electrical Circuits and Machines	3	3	4
Engineering 334	Masonry and Reinforced Concrete	3	0	3
Engineering 350	Steam Power Plants	3	0	3
Mining 231	Mine Hygiene	2	0	2
Mining 261	Mine Plant	1	3	2
Mining 262	Mine Plant Design	0	6	2
Mining 269	Management	2	0	2
Mining 074	Senior Trip			0
				18

MINING GEOLOGY OPTION
Third Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 323	Quantitative Analysis	1	6	3
Geology 421	Advanced General Geology	3	3	4
Mathematics 325	Calculus	3	0	3
Metallurgy 423	Ore Dressing and Milling	3	3	4
Mining 521	Mining Methods	5	0	5
				19
Second Semester				
Engineering 322	Mine and Route Surveying	2	3	3
Engineering 533	Applied Mechanics and Graphic Statics	3	6	5
Geology 322	General Economic Geology	3	0	3
Geology 427	Petrology and Petrography	2	6	4
(or)				
Geology 463	Geology of Petroleum, the Fuels and the Non-Metallics	3	3	4
Elective		2	0	2
Physics 222	Sound and Light	1	3	2
				19
Summer School				
Engineering 224	Mine Surveying:—Field Work: 8 hours a day for two weeks		96	2
Fourth Year				
First Semester				
Economics 312	Principles of Economics	3	0	3
Engineering 433	Strength of Materials	3	3	4
Engineering 354	Hydraulics	3	0	3
Geology 418	Invertebrate Paleontology	2	6	4
Geology 264	Field Geology	1	3	2
Mining 267	Management	2	0	2
				18
Second Semester				
Engineering 334	Masonry and Reinforced Concrete	3	0	3
Engineering 350	Steam Power Plants	3	0	3
Geology 427	Petrology and Petrography	2	6	4
or				
Geology 463	Geology and Petroleum, the Fuels and the Non-Metallics	3	3	4
Geology 361	Advanced Economic Geology	2	3	3
Metallurgy 324	Assaying	1	6	3
Mining 269	Management	2	0	2
Geology 074	Senior Trip			0
				18

METALLURGY OPTION

Third Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 323	Quantitative Analysis	1	6	3
Chemistry 325	Physical Chemistry	2	3	3
Mathematics 325	Calculus	3	0	3
Metallurgy 423	Ore Dressing and Milling	3	3	4
Mining 521	Mining Methods	5	0	5
				—
				18
Second Semester				
Chemistry 326	Physical Chemistry	2	3	3
Engineering 533	Applied Mechanics and Graphic Statics	2	6	5
Geology 322	General Economic Geology	3	0	3
Metallurgy 321	General Metallurgy	3	0	3
Metallurgy 324	Assaying	1	6	3
Physics 222	Sound and Light	1	3	2
				—
				19
Fourth Year				
First Semester				
Economics 312	Principles of Economics	3	0	3
Engineering 433	Strength of Materials	3	3	4
Metallurgy 361	Metallurgy of Iron, Copper and Lead	3	0	3
Metallurgy 362	Metallurgy of Leaching Processes	2	3	3
Metallurgy 263	Advanced Ore Dressing	2	0	2
Metallurgy 265	Ore Dressing Laboratory	0	6	2
Mining 267	Management	2	0	2
				—
				19
Second Semester				
Engineering 350	Steam Power Plants	3	0	3
Engineering 431	Electrical Circuits and Machines	3	3	4
Engineering 334	Masonry and Reinforced Concrete	3	0	3
Metallurgy 364	Metallurgical Laboratory	0	9	3
Metallurgy 473	Metallography	3	3	4
Mining 269	Management	2	0	2
Metallurgy 074	Senior Trip			0
				—
				19

BACHELOR OF ARTS

General Provisions.—No degree will be conferred except publicly and at Commencements.

All candidates are expected to attend in person the Commencement at which their degree is to be conferred unless absent for good cause, in which case they will petition the President in writing at least one week in advance, giving the reason for their absence.

No degree will be conferred without a residence of at least two long session semesters, or five summer session terms, or one long session semester and two summer session terms or an equivalent.

At least six semester hours in advanced courses in the major subject must be completed in residence.

At least twenty-four of the last thirty semester hours offered must be taken in the College.

At least six semester hours in advance courses in the major subject must be completed in residence.

Not more than thirty semester hours of credit offered for a degree shall have been secured from other institutions by extension, correspondence, or both.

A student registering either for the first time or in a later year may obtain a degree according to the requirements of the catalogue then in force, subject, however, to the restriction that all the requirements for a degree must be completed within six years of the date of the catalogue chosen.

If any semester of a freshman course, taken to meet the requirements under Course Outlines, is finished after ninety semester hours have been completed, that semester of the course will not count toward the required minimum of 120 semester hours. If any other course of freshman rank is finished after ninety semester hours have been completed, it will count for only two-thirds of its normal value. If a condition in a course of freshman rank is removed during the session of graduation, that course will count for only two-thirds of its normal value. A condition, made by a candidate in the last semester of his session of graduation, may not be removed until the succeeding time for removal of conditions.

Special Provisions.—Upon completion of sixty semester hours of work, including the courses specified for the first and second years in the outline for one of the various majors, the student must petition the Faculty through the Registrar for permission to become a candidate for a degree. This petition will not be accepted unless the average grade of such work completed is C or better and all admission requirements have been satisfied.

Upon completion of ninety semester hours of work as set forth in the outline for the chosen major, the student will again petition the Faculty through the Registrar for permission to continue his candidacy for a degree. This petition will not be accepted unless the average grade of such work completed is C or better and all admission requirements have been satisfied.

The student must make an average of at least fifteen points per semester hour in the courses taken at the College which are required and counted toward the degree, an *A* grade on a semester hour counting as 21 points; a *B* grade as 18 points; a *C* as 15 points; a *D* as 12 points; an *E*, an *F*, or an *Inc.*, as zero. The Faculty reserves the right to demand grades of *C* or better in certain courses when they are important as prerequisites or as parts of majors or minors.

A student majoring in a department which requires a major examination must pass a general four-hour written examination in his major subject on the date fixed in the Calendar next preceding the completion of the work required for the degree. At the discretion of the department concerned, one hour of oral examination may be substituted for one hour of the written examination. The chairman of the department in which the major is taken fixes the place of the examination and supervises the giving of it. In setting this examination, the Faculty of the department will take into account the particular courses elected by the student, but will expect a more mature and comprehensive knowledge than is required in the regular semester examinations.

A student who fails to pass the major examination may take the examination on the next date provided in the Calendar for such examinations, but in no case will a special examination be given.

A study of the Constitutions of the United States and of Texas is required by law.

Concentrations.—Major and minor fields of concentration must be chosen from the following groups in accordance with the limitations indicated:

Group A

Major: Biological Sciences, Chemistry,† Geology, Mathematics,† Physics.†

***Minor:** Biological Science, Chemistry,† Geology, Mathematics,† Physics.†

Group B

Major: Business Administration, Economics, Education (two minors required), English, French, History, Journalism, Music, Spanish.

Minor: Biological Sciences, Business Administration, Chemistry, Economics, Education, English, French Geology, Government, History, Journalism, Music, Mathematics, Physical Education, Psychology, Physics, Public Speaking, Sociology, Spanish.

Course requirements.—In order to secure a Bachelor of Arts degree, the following minimum course requirements must be met:

I. Not less than twenty-four semester hours, at least twelve of which must be advanced courses, in a major subject chosen from one of the major groups listed under "Concentrations."

*A different minor may be chosen only with the permission of the head of the major department and the approval of the Dean.

†Mathematics 803 required for majors in Chemistry, Mathematics, and Physics; and for minors in Mathematics and Physics. Chemistry 801 is required for majors and minors in Chemistry.

2. Not less than eighteen semester hours, at least six of which must be of advanced courses, in another subject chosen as a minor, in accordance with the limitations indicated in the concentration groups.
3. Twelve semester hours in English (English 1 and 12).
4. Completion of Course 12 or 13 in one foreign language, either modern or ancient.
5. Six semester hours in each of ^{two} any/of the natural (laboratory) sciences.*
6. Six semester hours in Mathematics or numbered courses of Latin or German or Greek. Any hours in numbered courses of Latin or German or Greek offered in satisfaction of the Mathematics requirement may not be used to satisfy Requirement 4 or as a part of a major or minor.
7. Six semester hours in American and Texas Government (Government 10).
8. Three semester hours in philosophy or psychology.
9. Six semester hours in social science† in addition to requirements 7 and 8.
10. Not less than a total of thirty semester hours of advanced courses‡ and not more than a total of sixty-six semester hours in the major and minor subjects.
11. Enough other courses to make at least one hundred and twenty semester hours.
12. Physical Training without credit as prescribed in the Freshman year.

Order and choice of courses.—Students are urged to follow the arrangements of courses by years as suggested below with such minor variations as may be necessary because of special departmental requirements as shown under "Course Outlines."

Freshman Year.—English 1; foreign language 1; science, six semester hours; mathematics, six semester hours; elective or major subject, six semester hours; physical training, no credit.

Sophomore Year.—English 12; foreign language 12; another science, six semester hours; major subject, six semester hours; minor subject, six semester hours.

Junior Year.—The student's course program must be approved by the head of his major department and should include: Government 10; philosophy or psychology, three semester hours; major subject (advanced), six semester

*Botany, biology, chemistry, geology, zoology.

†Economics, government, history, philosophy, psychology, sociology.

‡Students taking Chemistry 801, 311, and 413 may count the last three semester hours as advanced; those taking Mathematics 803 and 13 may count the semester hours in excess of the first twelve as advanced.

hours; minor subject, six semester hours; elective (advanced), six semester hours; elective, three semester hours.

Senior Year.—The student's course program must be approved by the dean and should include: major subject (advanced), six semester hours; minor subject (advanced), six semester hours; elective (advanced), six semester hours; elective (not Freshman subjects), twelve semester hours.

Course Outlines.—A student should choose his major subject as early as possible. He must then pursue it in accordance with the outline provided for that subject.

BUSINESS ADMINISTRATION MAJOR

Minor—See Group B under “Concentrations”

Requirements

	HOURS
1. Business Administration 311, 314, 332, 20, and nine additional semester hours of business administration, at least three of which must be advanced.....	24
2. Minor subject, eighteen semester hours, six of which must be advanced	18
3. English 1, and 12 or 12Q.....	12
4. *Foreign language—the completion of a course numbered 12 or 13	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology.....	12
6. Mathematics or numbered courses of Latin* or German* or Greek*	6
7. Government 10	6
8. Philosophy or psychology.....	3
9. Social science†	6
10. Electives, twelve semester hours of which must be advanced	21
11. Physical training—no credit.....	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

ECONOMICS MAJOR

Minor—See Group B under "Concentrations"

Requirements	HOURS
1. Economics 312, 313, 329, and fifteen additional semester hours of economics, at least nine hours of which must be advanced	24
2. Minor subject, eighteen semester hours, six of which must be advanced	18
3. English 1 and 12 or 12Q	12
4. *Foreign Language—the completion of a course numbered 12 or 13	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology	12
6. Mathematics or numbered courses of Latin* or German* or Greek*	6
7. Government 10	6
8. Philosophy or psychology	3
9. Social science† (See No. 1)	0
10. Electives, twelve semester hours of which must be advanced	27
11. Physical training—no credit	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

EDUCATION MAJOR

Minor—See Group B under “Concentrations”

PLAN I

GENERAL REQUIREMENTS

(NOTE.—These are the minimum requirements for the B.A. degree, but do not necessarily lead to a certificate or recommendation for a teaching position.)

Requirements	HOURS
1. Education—twenty-four semester hours, twelve of which must be of advanced courses.....	24
2. Minor—eighteen semester hours of numbered courses, six of which must be advanced.....	18
3. English 1 and 12 or 12Q.....	12
4. *Foreign Language—the completion of a course numbered 12 or 13.....	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology.....	12
6. Mathematics or numbered courses of Latin* or German* or Greek*.....	6
7. Government 10.....	6
8. Philosophy or psychology.....	3
9. Social Science†.....	6
10. ‡Elective, twelve semester hours of which must be advanced....	21
11. Physical training—no credit.....	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

‡Students electing the education major are advised to plan their course programs carefully so as to meet the general requirement of a total of thirty semester hours of advanced courses.

PLAN II

REQUIREMENTS FOR HIGH-SCHOOL TEACHERS

(NOTE.—Those who desire a permanent high-school certificate and expect to be recommended for high-school positions must satisfy the following requirements for the Bachelor of Arts degree.)

Requirements	HOURS
1. Education 301, 316, 317, 359, 355, 27, and three additional semester hours of methods in the academic major.....	24
2a. Academic major—twenty-four semester hours, twelve of which must be of advanced courses.....	24
2b. Academic minor—eighteen semester hours, six of which must be of advanced courses.....	18
3. English 1 and 12 or 12Q.....	12
4. Foreign language—the completion of a course numbered 12 or 13	12
5. Science (laboratory)—six semester hours in each of two of the following sciences: botany, biology, chemistry, physics, geology, zoology (at least six semester hours to be chosen from biology, botany, or zoology).....	12
6. Mathematics	6
7. Government 10	6
8. See No. 1.....	0
9. Social Science—History 315 or 316, and three semester hours of Texas History	6
10. Electives	0
11. Physical training—no credit.....	0
	120

Counseling program.—By the end of the Sophomore year the prospective teacher will be required to take examinations covering the following items for counseling and advisory purposes: personality, special subject aptitudes, speech, and general aptitude in the four major fields.

PLAN III

REQUIREMENTS FOR ELEMENTARY SCHOOL TEACHERS

(NOTE.—Those who desire a six-year elementary school certificate and expect to be recommended for elementary school positions must satisfy the following requirements for the Bachelor of Arts degree.)

Requirements	HOURS
1. Education 301, 314, 318, 359, 28, 355, and 331T.....	24
2. Design 301, Public School Art 321, Music 301, Public School Music 351, three semester hours of Children's Literature, and six semester hours of Physical Education.....	21
3. English I and 12 or 12Q.....	12
4. Foreign language—the completion of a course numbered 12 or 13	12
5. Science (laboratory)—six semester hours of botany, zoology, physics, chemistry, or biology and six semester hours of geology (including Geography 303).....	12
6. Mathematics	6
7. Government 10	6
8. See No. 1.....	0
9. Social Science—History 315–316, Sociology 310, and three semester hours of Texas History.....	12
10. Electives—including enough advanced courses to complete the required total of thirty advanced hours.....	15
11. Physical Training—no credit.....	0
	120

Counseling program.—By the end of the Sophomore year, prospective elementary teachers will be required to take an examination for counseling and advisory purposes covering elementary-school fundamentals, speech, and personality.

ENGLISH MAJOR

Minor—See Group B under "Concentrations"

Requirements

	HOURS
1. English 1, 12, and twelve additional semester hours of advanced courses _____	24
2. Minor—eighteen semester hours, six of which must be advanced _____	18
3. English 1 and 12 (See No. 1) _____	0
4. *Foreign language—the completion of a course numbered 12 or 13 _____	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology _____	12
6. Mathematics or numbered courses of Latin* or German* or Greek* _____	6
7. Government 10 _____	6
8. Philosophy or psychology _____	3
9. Social Science† _____	12
10. Electives, twelve semester hours of which must be advanced....	27
11. Physical training—no credit _____	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

HISTORY MAJOR

Minor—See Group B under "Concentrations"

Requirements

	HOURS
1. History—twenty-four semester hours, twelve of which must be advanced	24
2. Minor—eighteen semester hours, six of which must be advanced	18
3. English 1 and 12 or 12Q.....	12
4. *Foreign language—the completion of a course numbered 12 or 13.....	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology.....	12
6. Mathematics or numbered courses of Latin* or German* or Greek*	6
7. Government 10	6
8. Philosophy or psychology.....	3
9. Social Science† (See No. 1).....	0
10. Electives, twelve semester hours of which must be advanced	27
11. Physical training—no credit.....	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

JOURNALISM MAJOR

Minor—See Group B under "Concentrations"

Requirements

	HOURS
1. Journalism 12 and eighteen additional semester hours, twelve of which must be advanced.....	24
2. Minor—eighteen semester hours, six of which must be advanced	18
3. English 1 and 12 or 12Q.....	12
4. *Foreign language—the completion of a course numbered 12 or 13	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology.....	12
6. Mathematics or numbered courses of Latin* or German* or Greek*	6
7. Government 10	6
8. Philosophy or psychology.....	3
9. Social Science†	12
10. Electives, twelve semester hours of which must be advanced	15
11. Physical training—no credit.....	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

MODERN LANGUAGE MAJOR

Minor—See Group B under "Concentrations"

Requirements

	HOURS
1. Major language—courses 1 and 12 and twelve additional semester hours of advanced courses*	24
2. Minor—eighteen semester hours, six of which must be advanced	18
3. English 1 and 12 or 12Q	12
4. *Foreign language—the completion of a course numbered	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology	12
6. Mathematics or numbered courses of Latin* or German* or Greek*	6
7. Government 10	6
8. Philosophy or psychology	3
9. Social Science†	6
10. Electives, twelve semester hours of which must be advanced	21
11. Physical training—no credit	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

MUSIC MAJORS**Public School Music**

Minor—Applied Music

Requirements

	HOURS
1. Music 1, 10, 30, and Public School Music 51† or 52‡	24
2a. Applied Music (in addition to Freshman non-credit course) eighteen semester hours, six of which must be advanced	18
2b. Education 301, 314† or 316‡, 317‡ or 318†	9
3. English 1 and 12 or 12Q	12
4. *Foreign language—the completion of a course numbered 12 or 13	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology	12
6. Mathematics or numbered courses of Latin* or German* or Greek*	6
7. Government 10	6
8. Philosophy or psychology	3
9. Social Science†	6
10. Electives, advanced courses	12
11. Physical training—no credit	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

‡For elementary teacher's certificate.

§For high-school teacher's certificate.

Music Theory**Minor—Applied Music****Requirements**

	HOURS
1. Music 1, 10, 30, and 20 or 40 or 50.....	24
2. Applied Music (in addition to Freshman non-credit course)— eighteen semester hours, six of which must be advanced....	18
3. English 1 and 12 or 12Q.....	12
4. *Foreign language—the completion of a course numbered 12 or 13.....	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology.....	12
6. Mathematics or numbered courses of Latin* or German* or Greek*.....	6
7. Government 10.....	6
8. Philosophy or psychology.....	3
9. Social Science†.....	6
10. Electives, twelve semester hours of which must be advanced....	21
11. Physical training—no credit.....	0
	120

*See Number 6 under Course Requirements.

†Economics, government, history, philosophy, psychology, sociology or combination.

SCIENCE MAJOR*

Minor†—See Group A under "Concentrations"

Requirements

	HOURS
1. Major science—twenty-four semester hours, twelve of which must be advanced.....	24
2. A second science—eighteen semester hours, six of which must be advanced‡	18
3. English 1 and 12 or 12Q.....	12
4. Foreign language—the completion of a course numbered 12 or 13	12
5. Science—(See No. 1 and No. 2).....	0
6. Mathematics‡	6
7. Government 10	6
8. Philosophy or psychology.....	3
9. Social Sciences§	6
10. Elective, twelve semester hours of which must be advanced....	33
11. Physical training—no credit.....	0
	120

*When registering for this major, the student should be careful to secure proper advice concerning the order and choice of courses.

†A different minor may be chosen only with the consent of the head of the major department and the approval of the dean.

‡Mathematics 803 is required for majors in chemistry, mathematics and physics; and for minors in mathematics and physics.

§Economics, government, history, sociology, philosophy, psychology, or combination.

MASTER OF ARTS

General information.—Graduate study officially begins in the Summer Session in June, 1941. Courses in Education, English, and History will be offered as majors leading to the Master of Arts degree. In addition to the major fields of study minors will be offered in the following fields: Biological Sciences, Chemistry, Business Administration, Economics, Geology, Mathematics, Physics, and Spanish.

Applicants for admission to graduate study must hold the Bachelor of Arts degree or its equivalent. Exceptions to this general requirement will be made only with the approval of the Graduate Council.

Graduate credit for work done in the College of Mines before June, 1941, is subject to the approval of the Graduate Council, each case being handled individually.

Not more than six semester hours of work may be accepted for graduate credit from another institution of equal rank in which the applicant was enrolled at the time the work was taken.

Graduate credit may be secured in courses of Junior-Senior or higher rank provided the student is eligible with respect to course prerequisites and graduate study.

Residence requirements.—One academic year of two semesters; or one semester and two summer sessions; or three summer sessions. Part-time work will be evaluated as part-time residence.

Minimum requirements.—Twenty-four (24) semester hours of course work, a thesis counting six (6) semester hours, and the passing of an oral examination. The thesis must be approved by a committee representing the major and minor fields of study. A grade of *B* is required in any course submitted for graduate credit.

Further information.—More detailed information can be obtained from the chairman of the Graduate Council. Evaluation of credits, transferred or otherwise, must be handled through the office of the Registrar.

PRELIMINARY WORK FOR OTHER DEGREES

Preliminary work is offered for Law and Medicine.

Selection of Courses

Certain rules govern the order and choice of work, particularly for the freshman and sophomore years. These rules vary somewhat with the character of the degree for which the student proposes to become a candidate. The student should advise with his Dean concerning the selection of courses.

Work Preparatory to Law

REQUIREMENTS FOR ADMISSION TO THE UNIVERSITY OF TEXAS SCHOOL OF LAW

Applicants for admission to the School of Law of The University of Texas beginning with September, 1941, must hold a bachelor's degree.

Work Preparatory to Medicine**Leading to Degree of Bachelor of Arts**

Completion of the following courses leads to the degree of Bachelor of Arts at the end of the first year of work in the School of Medicine at Galveston.

Thus both the B.A. and the M.D. degrees may be taken in seven years.

Freshman Year: English 1; French 1 or German 1; six semester hours in mathematics; Chemistry 801; Zoology 301-302.

Sophomore Year: English 12; French 12 or German 12; Chemistry 311 and 413; Physics 801; Zoology 14.

Junior Year: Chemistry 821 and 323; Government 10; three semester hours in economics; Psychology 310; Biology 316 and 317, or Zoology 320 and 321; elective, enough to make a total of thirty semester hours for the year.

WORK PRELIMINARY TO OTHER ENGINEERING DEGREES

Uniform Freshman Year.—First semester: Mathematics 803a, Chemistry 801a, Drawing 301, English 1a, Physics 1a. Second semester: Mathematics 803b, Chemistry 801b, Drawing 302, English 1b, Physics 1b. Additional courses are offered, such as to enable students to complete in general work through the sophomore year in civil, chemical, electrical, and mechanical engineering.

STATE TEACHERS' CERTIFICATES

In view of the fact that accredited public school systems require degrees of beginning teachers, students are not encouraged to apply for certificates until after graduation.

The requirements for the six-year elementary teacher's certificate are sixty hours of credit work including English 1, Government 10, and Education 301, 305, 314, and 318; for the four-year high school certificate, sixty semester hours including English 1, Government 10, and Education 301, 305, 316, and 317.

Students intending to teach in the elementary grades are advised to take Plan III under the Education major.

A student who holds an A.B. degree from the College is entitled to a permanent high-school certificate, provided he has credit for Education 301, 305, 316, 317, 27, and six other semester hours of advanced courses in education. Students intending to teach in the high school are advised to take Plan II under the Education major.

Information concerning other teachers' certificates may be obtained from the Registrar.

COURSES OF INSTRUCTION

For an explanation regarding numbers and letters used in titles of courses and their meanings with respect to prerequisites of residence and credit, credit hours earnable, amount of work required in and out of class, semesters in which offered, etc., please see *Explanation of Courses*.

BIOLOGICAL SCIENCES

PROFESSOR BERKMAN; ASSISTANT PROFESSOR JENNESS

Biology

316f. *Heredity*.—Elementary presentation of fundamental principles of heredity in their application to animals, plants, and mankind. This course may not be used to satisfy the science requirement for the A.B. degree. Prerequisite: Sophomore standing or six semester hours in a laboratory science. Credit value: Three semester hours.

317s. *Evolution*.—Topics considered in this course are: The evidence of evolution; *methods of evolution*; the course and trends evolution has taken, and the influence of the doctrine of evolution on man's life. This course may not be used to satisfy the science requirement for the A.B. degree. Prerequisite: Sophomore standing or six semester hours in a laboratory science. Credit value: Three semester hours.

330s. *Technique in Histology and Cytology*.—A study in the procedure of *fixing, imbedding, sectioning, staining, and mounting* cells and tissues of plants and animals for critical analysis. Prerequisite: Bacteriology 29, or 12 semester hours in zoology, or botany. Two lectures and three laboratory hours, or the equivalent. Laboratory fee, \$2. Credit value: Three semester hours.

29. *General Bacteriology*.—A study of distribution, structure, reproduction, and classification of bacteria, preparation of culture media, principles of sterilization, observation and isolation of pathogenic organisms, immunology, and bacterial investigation of water and milk. Prerequisite: Twelve semester hours in any one of the natural sciences, or a combination of twelve semester hours in natural sciences and junior standing. Two lectures and three laboratory hours, or the equivalent. Laboratory fee, \$4. Credit value: Six semester hours.

Botany

301f. *General Botany*.—Study of a typical plant and the structure and physiology of the plant cell, followed by a survey of the algae and the fungi coupled with references to their position in the environment of man. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

382s. *General Botany*.—A survey of the mosses, ferns, and seed plants, including brief discussions on their importance in the environment of man. The last few lectures include a survey of the Mendelian Law. Prerequisite: Botany 301. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

Zoology

301f. *General Zoology*.—Designed to give an introduction to theoretical biology, followed by a survey of the invertebrates, including references to their importance in the environment of man. Two lectures and four laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

302s. *General Vertebrate Zoology*.—A survey of the structure of vertebrates, introduction to animal histology and genetics. Prerequisite: Zoology 301. Two lecture hours and four laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

14. *Vertebrate Zoology*.—Laboratory study of the structure of dog-fish, necturus, turtle, bird, mammal, and perhaps other typical vertebrates. Prerequisite: Zoology 302. Two lectures and four laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

320s. *Animal Cytology and Histology*.—The study of cell phenomena, such as structure of the cell, maturation, fertilization, sex determination, cell division. Prerequisite: Zoology 14; for juniors and seniors, Zoology 301 and 302 completed with a grade of at least C, and Zoology 14 concurrently. Zoology 14 must be completed before the student can get credit for Zoology 320. Two lectures and four laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

321f. *Vertebrate Embryology*.—A study of the development of typical vertebrates, with emphasis on the development of the chick and a mammal. Prerequisite: Zoology 14; for juniors and seniors, Zoology 301 and 302 completed with a grade of at least C, and Zoology 14 concurrently. Zoology 14 must be completed before credit can be given the student for Zoology 321. Two lectures and four laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

CHEMISTRY

PROFESSORS LAKE, SEAMON; INSTRUCTORS ABERNETHY, BALL; ASSISTANT MATTHEWS

1. *General Chemistry*.—Fundamental principles of chemistry. Designed for those students whose formal education in chemistry terminates with one year's work in the subject or whose degree plans stipulate six hours of general chemistry as the total requirement in that science. May not be used as a prerequisite for any other chemistry course. Two lectures, one demonstration hour, and two laboratory hours per week. Laboratory fee, \$4. Credit value: Six semester hours.

801. *General Chemistry*.—The laws and theories of chemistry; the chemical elements and their most important compounds with reference to their production and use. For students who need a foundation for work in advanced chemistry and related sciences. Three lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Eight semester hours.

305/s. A review of the fundamental principles of elementary chemistry and their application. Required of all students who, after trial and a qualifying examination, are found insufficiently prepared to carry Chemistry 801a and who plan to register for that course the next succeeding semester. May not be used as a prerequisite for any chemistry course other than 801a. Two lecture hours, one demonstration hour, and two laboratory hours per week. Credit value: Three semester hours. May not be counted in addition to Chemistry 801a or 1a.

311/. *Qualitative Analysis*.—Intended to emphasize the principles involved in chemical analysis, to broaden the student's knowledge of inorganic chemistry, to develop deductive reasoning power, and to give practice in manipulation. The student is required to analyze unknown solids and solutions. Prerequisite: Chemistry 801a and 801b with a grade of not less than C in each. One lecture and six laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

413s. *Quantitative Analysis*.—The quantitative analysis of chemical salts, minerals, ores, rocks, and industrial products. Prerequisite: Chemistry 311. The last three semester hours of this course count as advanced. One lecture and eight laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours.

21 and 821. *Organic Chemistry*.—A study of the fundamental types of carbon compounds. Prerequisite: Chemistry 801 with a grade of C and Chemistry 413. Three lectures and three laboratory hours per week for 821. Students registering for 21 will receive the equivalent of two lectures and three laboratory hours. Laboratory fee, \$4. Credit value for 21: Six semester hours; for 821: Eight semester hours.

323/. *Quantitative Analysis*.—A continuation of Chemistry 413. Prerequisite: Chemistry 413. One lecture and six laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

325f. *Physical Chemistry*.—Properties of substances in the gaseous, liquid, and solid state; solutions; thermochemistry. Prerequisite: Chemistry 413, Mathematics 13, and Physics 1 or 812. Two lectures and three laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours.

326s. *Physical Chemistry*.—Homogeneous and heterogeneous equilibria; kinetics of reaction, electrochemistry, and chemical thermodynamics. Prerequisite: Chemistry 325. Two lectures and three laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours.

DESIGN AND INTERIOR DECORATING

ASSISTANT PROFESSOR WISE

301s. *Elementary Design*.—A course in elementary design, stressing fundamental principles of art. Balance, rhythm and harmony in composition. Color theory with the same principles involved. Organization and plan in creative art. Outdoor sketching and study of natural forms, plants, etc., for design. A course planned to develop the artistic ability of the student. Three lectures and three laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours.

302s. *Elementary Design*.—Continued study of fundamental principles of design with emphasis upon composition and application to decorative forms in commercial and industrial design. Consideration will be given to the technique of handling media, pencil, charcoal, water color, etc., in creative design. Three lectures and three laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours.

310j. *Interior Decoration*.—The course will include consideration of the fundamental principles of room decoration; the use of fabrics, furniture and accessories; color theory in decoration, and a study of the relation of interior design to architecture; and early history of period design. Three lecture and three laboratory hours per week. Laboratory fee, \$2. Laboratory hours to be arranged by instructor. Credit value: Three semester hours. Prerequisite: Design 301 and 302.

311s. *Interior Decoration*.—Continuation of survey of period design from Renaissance through English and French periods to Colonial, and study of modern design. Particular attention to fabrics, their history and weaves. Adaptation of color theory studied in Design 301. House plans and blue prints studied. Three lecture hours and three laboratory hours per week. Laboratory fee, \$2. Laboratory hours to be arranged by instructor. Credit value: Three semester hours. Prerequisite: Design 310.

312j. *Advanced Design*.—An advanced course in design with emphasis on its adaptation in different fields of art, according to the tendencies of the individual student. Creative ability of student thus fostered as design in industry, advertising, etc., are explored. Technique in pencil, water color, oil, tempora studied according to individual need of student. Emphasis placed on form and expression in art. Outdoor sketching trips. Three lecture and three laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours. Prerequisite: Design 301 and 302.

313s. *Advanced Design*.—Continuation of study in advanced design. Outdoor sketching. Organization of materials for various uses; landscape painting, still life, murals, posters, etc. Continued stress on technique and expression through form. Study of anatomy and figure drawing. Three lecture and three laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours. Prerequisite: Design 312.

320j. *Art History and Appreciation*.—A survey of the work of the more important artists from the Italian Primitives to modern art. Analysis of motives and techniques of artists with view of better understanding and an appreciation of their work. Art and its part in history and life throughout the centuries. Credit value: Three semester hours. Prerequisite: Junior standing.

321s. *Public School Art*.—A course in materials and methods for those preparing to teach art in the public schools. Actual work in materials involved, crayon, paper cutting etc. Study of methods of developing the creative ability of the child. Credit value: Three semester hours. Prerequisite: Junior standing including Design 301.

ECONOMICS AND BUSINESS ADMINISTRATION

PROFESSOR MORRIS; ASSISTANT PROFESSOR SMITH; INSTRUCTOR HARGRAVES

In majoring or minoring in the Department of Economics and Business Administration, the student may elect any one of four channels of preparation; namely, (a) general economics, (b) general business training, (c) accounting, or (d) secretarial science. Because of the relationship which each departmental course bears to others in the fields of economics and business administration, there is necessarily some overlapping in the courses suggested for these four channels of concentration; but experience has taught that particular courses are fundamental for the concentrations. For example, the secretarial science student would benefit most from such courses as shorthand, typewriting, office practice, business letter writing, etc. Students majoring or minoring (or both) in this department, then, would do well to consider carefully the following suggestions of courses. (a) For persons interested in General Economics: among others, Economics 321, 322, 332, 325, and 358; and Business Administration 311-314. (b) For students interested in General Business Training: among others, Business Administration 10, 20, 357, 331, 337, and 23; and Economics 312-313. (c) For students concentrating in Accounting: among others, Business Administration 326, 327K, 329, 330, 331, 20, and 23; and Economics 322 and 349. (d) For students interested in Secretarial Science: among others, Business Administration 10, 20, 21, 334, 311, 314, and 23; and Economics 312, 313, and 322.

Note to majors and minors in this department.—In order that the courses may be coordinated and planned in advance, every student intending to major or minor in Economics or Business Administration is urged to counsel with the head of this department before registration in the sophomore year. Advice at this stage may prevent subsequent difficulties in the student's program.

Economics

312js. *Principles of Economics*.—A general survey of the principles and facts involved in production and exchange of goods in a capitalistic society. Factors of production; the American monetary system; banking organization;

markets; elucidation of value and price. Prerequisite: Sophomore standing. Credit value: Three semester hours.

313s. Principles of Economics.—A continuation of Economics 312. The principles of economic distribution in a capitalistic society. Theories underlying the determination of rent, wages, interest and profits. Public utilities; protective tariffs; the business cycle; public revenue and taxation; public credit. Prerequisite: Economics 312. Credit value: Three semester hours.

321f. Public Finance and Taxation.—A general treatment of financial administration by agencies of the Government of the United States. Principles of taxation; the sales tax; the property tax; income taxes; inheritance taxes. Analysis of government expenditures; public credit. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in 1940-1941, to be omitted in 1941-1942.)

322f. Money and Banking.—Studies of the principles of money and banking; the existing money and banking systems of the United States and selected foreign countries; important theories underlying credit. History of the precious metals; bimetalism; banking development; relation of money and credit to prices; foreign exchange. Prerequisite: Economics 313. Credit value: Three semester hours. May not be counted for credit in addition to Business Administration 454. (Omitted in 1940-1941; to be offered in 1941-1942.)

325s. Business Cycles.—A study of value and its relation to the oscillations of business. Isolation and interpretation of facts relating to the trade cycle. Analysis and evaluation of American and foreign theories of depressions. Emphasis upon current problems and proposed and attempted remedies of a changing price level. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

329f. Economic Statistics.—Training in the quantitative methods of dealing with mass data. The use of graphic and tabular methods of presentation of facts. Measures of central tendency; index numbers; measures of dispersion and skewness; time series analysis; correlation. Prerequisite: Economics 313 and six semester hours of mathematics. Three lecture hours and three laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 432 or 332.)

332f. Corporation Finance.—The promotion of corporations in the process of formation; capital sources; capital structures; internal financial management; receiverships; reorganizations; relation of corporation finance to banking; social consequences of over-promotion. Prerequisite: Economics 313. Credit value: Three semester hours. (Omitted in 1940-1941; to be given in 1941-1942.)

333s. Advanced Statistics.—A review of the measures of central tendency with short-cuts; dispersion measurements technique; the theory of the normal curve and the expansion of the binomial; the theory of standard deviation and its relation to curve fitting; simple, multiple, linear, curvilinear, and

partial correlation. Prerequisite: Economics 329. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.) May not be counted for credit in addition to Business Administration 333.

341s. *Advanced Banking Theory and Practice.*—A study of banking in its relation to the economic world; promotion and incorporation; banking organization and powers; the directors; stockholders; clearing and collection system; credit analysis; banking departments; the Federal Reserve System; open market operations; specialized houses for financing short-term credit. Prerequisite: Economics 313. Credit value: Three semester hours. May not be counted for credit in addition to Business Administration 341. (Omitted in 1940-1941; to be offered in 1941-1942.)

343f. *Comparative Economic Systems.*—A consideration of the economic foundations of the capitalistic and other systems. An objective study of the economic construction of Fascism, Nazism, Socialism, Communism, and Capitalism. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

349s. *Labor Problems.*—Problems of the State and Federal Government in relation to labor in selected fields; child labor; minimum wages; hours of labor; social insurance; retirement programs. The American Federation of Labor; the Congress for Industrial Organization; strikes; lockouts; current issues. The Wagner Act. Prerequisite: Economics 313. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

350s. *Introduction to Foreign Trade.*—Principles of international movements of economic goods; the protective tariff and free trade controversy; the control of raw materials; techniques in shipments of physical commodities; financing transactions. Prerequisite: Economics 313. Credit value: Three semester hours. May not be counted for credit in addition to Business Administration 350. (Omitted in 1940-1941; to be offered in 1941-1942.)

352. *Twentieth Century Economics.*—The struggle associated with modern organizations of labor; twentieth century finance; the price level and economic stability; the reciprocal trade agreement question and international economics; problems of government control. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in the Summer Session 1940.)

358. *International Economic Relations.*—Mercantilism as a background; English commercial development; American colonial development as related to internationalism; tariff history; problems of free trade; international movements of money; international commercial entanglements; inter-governmental debt payments; reparations; American technique in dealing with foreign nations. International economic relations and the Second World War. Prerequisite: Economics 313 and three semester hours of advanced economics. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

Business Administration

10. *Shorthand and Typewriting*.—Mastery of the elementary principles of Gregg shorthand; transcription; and typewriting. Six semester hours credit is allowed when the standard of speed and accuracy is attained in both shorthand and typewriting. No credit otherwise. Prerequisite: *Sophomore standing*. Three shorthand lecture periods and six hours of typewriting practice per week. Laboratory fee, \$4.

311f. *Theory and Practice of Accounting*.—Principles of double-entry book-keeping and theories of general financial accounting. The analysis and recording of business transactions; adjusting and closing entries; financial statements; sole proprietorship accounting. Use of worksheets. Prerequisite: *Sophomore standing*. Two lecture hours and four laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours.

314s. *Theory and Practice of Accounting*.—Business Administration 311 continued into a consideration of partnership accounting; corporation accounting; reserves and reserve funds; manufacturing accounts; asset valuation; practice set materials on both partnership and corporation technique. Prerequisite: *Business Administration 311*. Two lecture hours and four laboratory hours per week. Laboratory fee, \$2. Credit value: Three semester hours.

20. *Business Letters and Report Writing*.—A course in the writing of clear, concise, and forceful business letters. Practical business situations are given as bases of letter assignments. Practice is given in the writing of sales letters, credit letters; adjustments; claim; order; rejection; collection; and application letters. Part of the course is given over to the theory and practice of business report writing. Prerequisite: *English 12 or 12q, Business Administration 314, and the ability to type accurately*. Credit value: Six semester hours. (Formerly was Business Administration 420.)

21. *Advanced Stenography*.—Training in advanced secretarial practice. Development of speed and accuracy in shorthand and typewriting. Character study and practice dictation of medical, legal, and engineering phraseology. Technique in letter layouts. Practice in receiving messages and transcribing from the Dictaphone. Three lectures and six laboratory hours per week. Laboratory fee, \$4. Prerequisite: *Business Administration 10 and 314*. Credit value: Six semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

23. *Business Law*.—Textbook and case method; cases on the law of contracts, agency, bankruptcy, bailments, sales, mortgages, negotiable instruments. Partnership and corporation cases. Prerequisite: *Business Administration 314 or Economics 313*. Credit value: Six semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

326f. *Intermediate Accounting, First Course*.—Classification and codification of accounts, forms, and contents of financial statements; theory involved in corporation accounting; actuarial accounting; accounting for consignments and installment sales; evaluation of investments; comparative statements; analysis

of working capital; statement of application of funds. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

327Ks. *Intermediate Accounting, Second Course.*—Theory involved in partnership accounting; venture accounts; accounting for receivership; parent and subsidiary accounting; consolidated balance sheets; foreign exchange accounting; estates and trusts; budgets; public accounts; bank accounting; and stock brokerage accounting. Prerequisite: Business Administration 326. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

329f. *Cost Accounting.*—Accounting for materials, labor, and manufacturing expense under specific cost system and under the continuous process cost system. Standard costs; accounting for variances; study of production orders and standing orders. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

330s. *Auditing.*—Auditing procedure, reports, and working papers used in financial investigations; balance sheet and detailed audits. Verification of assets, liabilities, and nominal accounts. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

331f. *Business and Government.*—Government in a regulatory capacity and in a cooperative capacity; theories of constitutional protection; anti-trust laws; the control of unfair trade practices; regulation of security issues and security exchanges; railway regulation; the government as a credit granting institution. Settlement of labor disputes; social security. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

332f. *Business Statistics.*—Training in the quantitative methods of analysis used in dealing with mass data. The use of graphics and tabular presentations; organizing and describing data; the frequency distribution; measures of central tendency; dispersion and skewness; time series analysis; correlation. Prerequisite: Business Administration 314 and six semester hour of mathematics. Credit value: Three semester hours. Three lecture hours and three laboratory hours per week. Laboratory fee, \$2. May not be counted for credit in addition to Economics 329. (Formerly was Business Administration 432.)

333s. *Advanced Statistics.*—A review of the measures of central tendency with shortcuts; dispersion measurement technique; the theory of the normal curve and the expansion of the binomial; the theory of standard deviation interpretation and its relation to the fitting of curves; simple, multiple, linear, curvilinear, and partial correlation. Prerequisite: Business Administration 332 or 432. Credit value: Three semester hours. May not be counted for credit in addition to Economics 333. (Given in 1940-1941; to be omitted in 1941-1942.)

334f. Office Organization and Practice.—The location, equipment, organization, and general practice in office routine. Practice in the use of the mimeograph machine, dictaphone, bookkeeping machines, and other types of modern office equipment. Demonstrational work in the use of and operation of a telephone switchboard. Filing practice. Designed for students intending to go into office work. Laboratory fee, \$2. Prerequisite: Business Administration 10 and 314. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

337s. Marketing.—The place of marketing in our domestic business system. Functions of marketing; the place of the middleman in the system; brief consideration of the wholesaler and the retailer. (Formerly Business Administration 437.) Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

341s. Advanced Banking Theory and Practice.—A study of banking in its relation to the economic world; promotion and incorporation; banking organization and powers; the directors; stockholders; clearing and collection system; credit analysis; banking departments; the Federal Reserve System; open market operations; specialized finance houses. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.) May not be counted for credit in addition to Economics 341.

345. Business Analysis and Forecasting.—Importance of forecasts in business management; possibilities and limitations in scientific predictions of commodity prices, sales volume, business profits, industrial production, industrial growth and decay, and security prices; a discussion of professional forecasting services; bases for business forecasts; causes of business fluctuations; short-term and long-term forecasts; practical forecasting problems. Prerequisite: Economics 313 or Business Administration 314. Credit value: Three semester hours. (Given in the Summer Session of 1940.)

348s. Latin-American Resources and Trade.—A study of the economic resources of the Latin-American nations; geographic resources; relations of topography to business enterprises; trade relations of the United States with the Latin-American nations. Productive conditions past and present in Mexico, Central America, Caribbean Lands, and South America. The probable future of trade relations between the United States and these Southern Hemisphere republics. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

350s. Introduction to Foreign Trade.—Principles of international movements of economic goods; the protective tariff and free trade controversy; the control of raw materials; techniques in shipments of physical commodities; financing transactions. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.) May not be counted for credit in addition to Economics 350.

357f. Investments.—Investment principles, investment banking, security flotation, and investment analysis, descriptions of various types of securities,

including rails, industrials, utilities, governments, and others; technique of stock-market trading; investment mathematics. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

358*f*. *Life Insurance*.—A study of the principles underlying group risk absorption; rate making; "loading"; types of risk carriers; term insurance; the endowment; annuities; disability and accidental death benefits. Organization and administration of insurance carriers. Government regulation and taxation of insurance companies. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

EDUCATION

PROFESSOR PUCKETT; ASSOCIATE PROFESSOR ACEE; ASSISTANT PROFESSOR McCUSKEY; INSTRUCTOR REYNOLDS

This program is intended to provide opportunity for the prospective teacher to obtain (a) orientation in the general field of education, (b) an over-view of the fundamental principles and philosophy of the elementary or secondary schools, and (c) specific training in the technique of instruction in the field or subject which is selected. Students who are planning to teach in the secondary schools are advised to take Plan II under the Education major. Students who are planning to teach in the elementary schools are advised to take Plan III under the Education major.

General

301*fs*. *Introduction to Educational Psychology*.—A study of some of the topics in educational psychology which relate most directly to an understanding of the learning process and the conduct of children. Credit value: Three semester hours.

305*fs*. *An Introduction to Education*.—An introductory course in the field of education. Surveys the rise, chief concepts, and outstanding problems of modern education. An orientation course in education for beginning students. Credit value: Three semester hours. (Given in 1940-1941; to be omitted thereafter.)

319*f*. *Public Health Education*.—The study of the functions, organization, and administration of public health agencies. Lectures, demonstrations, and field trips. Prerequisite: Sophomore standing or permission of instructor. Credit value: Three semester hours. (Given in Summer Session, 1940.)

332*f*. *Problems in Modern Education*.—A unit course dealing intensively with needed educational readjustments and with the possible applications of current research and experimentation. The units to be studied will be determined by the needs of the class. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours. (Given in Summer Session, 1940; omitted in 1940-1941; to be offered in 1941-1942.)

335f. *Directing Study*.—Examination of the literature on directing study. Formulation of units of work and discussion of methods for stimulating and guiding pupils at work. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours.

340f. *The Administration and Supervision of Extracurricular Activities in the Modern School*.—This course deals with the purposes and principles of extracurricular activities in the school, with special emphasis on types of activities, organizations and administration of the program, and principles of supervision. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

341s. *Principles in Guidance*.—Consideration will be given to the general meaning, importance, and function of guidance together with a survey of techniques and the evaluation of outcomes. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours.

344s. *Recent Trends in American Education*.—The period from the Civil War to the present time will be considered. Movements which have been important in the development of American education will receive major attention. The work of the NEA, various agencies of the federal government, of institutions, of leaders, will be reviewed and analyzed. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours.

345Ts. *Mental Health Education*.—Study of the principles and techniques of positive mental hygiene in its application to the developing child. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours. (Given in Summer Session, 1940.)

350Ts. *Psychology of Individual Differences*.—Basic psychological factors in individual differences, with special emphasis upon such topics as grouping, special abilities and disabilities, and the psychology of gifted and subnormal children. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours.

355s. *Mental and Educational Measurement*.—Introduction to measurement in education. Typical methods of measuring intelligence, character, and achievement. Elementary statistical terms and processes. Preparation for use of mental and educational tests. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

359s. *Philosophy of Education*.—Educational principles governing aims, curricula, methods, and organization; relation of individual to society, the social frontier, moral and religious education, antinomic principles of education; functions of family, church, school, and state in the education of children; the historical development of modern democratic concepts of education. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours.

361s. *Seminar in Education*.—Prerequisite: Six semester hours of advanced courses in Education. Credit value: Three semester hours.

398-98.—*Thesis Course for the Master's Degree*.—Prerequisite: Twelve semester hours of advanced courses in Education and graduate standing. Credit value: For 398, three semester hours; for 98, six semester hours.

Elementary

314f. *Child Psychology*.—A study of the changes which take place in the life of the child as related to the processes of elementary education. Prerequisite: Education 301 and Sophomore standing. Credit value: Three semester hours.

318s. *Introduction to Elementary Education*.—Consideration will be given to the educational principles underlying present trends and practices in the elementary school. Special attention will be given to guiding learning through activities of children. Prerequisite: Education 301 and Sophomore standing. Credit value: Three semester hours.

320s. *Children's Literature*.—A knowledge of children's literature is one primary aim of the course; the other is the administration of the recreational reading program and its relation to the content subjects. Special reading may be done at the level in which the student is most interested. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours.

325Kf. *Conflicting Issues in Modern Elementary Education*.—A seminar dealing with significant issues in current elementary theory, and practice. Historical and philosophical implications will be developed by means of readings, class discussions, and term reports. Prerequisite: Education 314 and 318. Credit value: Three semester hours.

28. *Observation and Practice Teaching*.—This course will begin with classes, readings, and directed observation, and will culminate in responsible planning and teaching. A minimum of five hours weekly in the elementary classroom will be required each semester, more time being assigned if necessary. Schedules must be planned to include two consecutive hours between 8 and 3. Prerequisite: Education 314 and 318. Credit value: Six semester hours.

331Tf. *Methods and Materials of Instruction in the Elementary School*.—This will be an intensive study of methods for the elementary schools, with emphasis centered upon reading, social studies, arithmetic, and science. It will include observations, as well as a survey of the literature in each field. Two lectures and three laboratory hours per week. Prerequisite: Education 314 and 318. Credit value: Three semester hours. (Given in Summer Session, 1940; omitted in 1940-1941; to be offered in 1941-1942.)

348f. *Teaching Arithmetic and Science in the Primary Grades*.—First half: Curriculum content in arithmetic with modern methods of teaching the subject in the first three grades. Second half: Building a background for teaching science in the primary grades, looking forward toward its inclusion in the

curriculum. Prerequisite: Education 314 and 318. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

349s. *Teaching of the Social Studies in the Elementary Grades.*—The course will consider programs of instruction and procedures, as well as more detailed techniques in the teaching of specific units in the social studies. Consideration will be given to the function of social studies in an integrated program. Prerequisite: Education 314 and 318. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

353f. *Techniques of Teaching Reading in the Primary Grades.*—A study will be made of the basic principles underlying desirable reading experiences which contribute to the success of the child in beginning reading and subsequent growth in ability to read with speed and comprehension. The place of drills, phonics, tests and the selection of materials will be emphasized. Prerequisite: Education 314 and 318. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

360s. *Work Shop in Social Studies in the Elementary School.*—Lectures, discussions, intensive laboratory work in curriculum production with emphasis upon the selection and organization of content and materials; and related teaching techniques. Prerequisite: Six semester hours of advanced courses in Education. Credit value: Three semester hours. Thursdays, 4 to 6 o'clock. Four hours of laboratory to be arranged by instructor. (Given in 1940-1941; to be omitted in 1941-1942.)

High School

316f. *Psychology of Adolescence.*—A study of the nature and development of the individual through the adolescent period as related to the processes of secondary education. Emphasis is placed on the nature of individual differences and especially on the development of proper habits and the correct integration of behavior patterns into a socially desirable personality. Prerequisite: Education 301 and Sophomore standing. Credit value: Three semester hours.

317s. *An Introduction to High-School Teaching.*—Basic principles of high-school teaching and high-school management will be considered. Prerequisite: Education 301 and Sophomore standing. Credit value: Three semester hours.

322f. *Organization and Teaching of Mathematics and Science in the Secondary School.*—Prerequisite: Six semester hours of Science; six semester hours of Mathematics; and Education 316 and 317. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

323f. *Teachers' Course in Modern Languages.*—Methods of teaching modern languages in secondary schools. Prerequisite: Course 12 in a language; and Education 316 and 317. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

326s. *Teachers' Course in English.*—Methods of teaching English in secondary schools. Prerequisite: English 12; and Education 316 and 317. Credit

value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

27. *Student-Teaching in High School*.—A study of the principles of teaching, observation of class work, construction of lesson plans, and teaching under supervision. Ordinarily, one hour daily for five days a week will be required each semester, but students are expected to have two consecutive hours, between 9 and 3 o'clock throughout the week, in order to facilitate the making of teaching assignments. Required of all candidates for a permanent high-school certificate. Prerequisite: Education 316 and 317. Credit value: Six semester hours.

329f. *Teachers' Course in the Social Studies*.—Methods of teaching the social studies in the secondary schools. Prerequisite: Twelve semester hours in History; and Education 316 and 317. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

342f. *Evolution of the Secondary School*.—The historical development of the secondary school in America will be traced in this course, with some emphasis on European background. The Latin Grammar school, the Academy, and the High School will be studied in the order named. Attention will be given to economic and religious development which may have been factors in the secondary school development; also, a brief survey of the contributions of educational leaders will be made. Prerequisite: Education 316 and 318. Credit value: Three semester hours.

ENGINEERING, DRAWING AND AVIATION

PROFESSOR KIDD; ASSOCIATE PROFESSOR THOMAS; ASSISTANT PROFESSOR DECKER;
INSTRUCTORS STEEN, BARNES

Engineering

410s. *Elements of Electrical Engineering*.—Direct current electric and magnetic circuits; the direct current generator; measuring instruments; electrostatics; energy relations; transients; and conduction through gases. Prerequisite: Physics 12a, and registration in Mathematics 13b. Three lectures and three laboratory hours a week. Laboratory fee, \$4. Credit value: Four semester hours.

312f. *Mechanism*.—A study of the laws which govern the motion of machine parts and the forces transmitted by the parts. Graphic analyses are made of various mechanisms, the motions produced, the velocities and accelerations of the parts; a study of links, cams, and gears. Prerequisite: Mathematics 803, and Drawing 302. Two lectures and three laboratory hours a week. Laboratory fee, \$2. Credit value: Three semester hours. (Given in 1940 and 1941, but not thereafter).

412f. *Elements of Mechanism*.—A study of the laws which govern the motion of machine parts; graphic analyses are made of various mechanisms, the motions produced, and the velocities and accelerations of the parts; a

study of linkages, sliding and rolling contact, gears, and gear teeth, wheels in trains, cams, belts, ropes and chains, differential motion, and pulley blocks. Prerequisite: Mathematics 803, Drawing 302, and Physics 1. Two lectures and six laboratory hours a week. Laboratory fee, \$4. Credit value: Four semester hours.

313s. *Plane Surveying*.—The theory of plane surveying, including the care and adjustment of instruments; land surveying; traverses; leveling; determination of meridian; topographic surveying; mapping; the different systems of note-keeping; the usual computations used in plane surveying; and an elementary discussion of precision. Prerequisite: Mathematics 803, and Drawing 302. Three lectures a week. Credit value: Three semester hours.

414. *Field Surveying*.—Summer work; practical field course covering the topics outlined in Engineering 313. Accurate and rapid work will be insisted upon. Prerequisite: Engineering 313. Eight hours daily for four weeks. (Section No. 1 from June 16 to July 12, inclusive; Section No. 2 from July 14 to August 9, inclusive. *Students must begin work on the day the field work opens*. Deposit: \$7. Laboratory fee, \$4. Credit value: Four semester hours.

315f. *Technical Mechanics*.—Concurrent, parallel, and nonconcurrent forces; friction, reactions; graphical and analytical determination of stresses in framed structures, centers of gravity, moments of inertia of areas. Prerequisite: Physics 1, and Mathematics 13a in advance or concurrently. Credit value: Three semester hours. (Given in 1940 and 1941, but not thereafter.)

415. *Applied Mechanics*.—Graphical and analytical study of coplanar and noncoplanar, concurrent, parallel and nonconcurrent forces; friction; center of gravity; moments of inertia; radius of gyration; kinetics of rigid bodies; work, energy, and power; impulse, and momentum. Prerequisite: Physics 1, and Mathematics 13a in advance or concurrently. Three lectures and three laboratory hours a week. Laboratory fee, \$4. Credit value: Four semester hours. (Given in 1941 and 1942.)

322s. *Mine and Route Surveying*.—Mapping of underground connections; surface surveying in connection with mineral claims; and all ordinary operations and calculations that the mine surveyor is called upon to perform. Theory and practical application of simple, reverse, and compound curves; rights-of-way; cross sections; and estimates. Prerequisite: Engineering 414, and Mining 321. Two lectures and three laboratory hours a week. Laboratory fee, \$2. Credit value: Three semester hours. (To be offered in 1941 and 1942; previously given as Mining 322.)

224. *Mine Surveying: Field Work*.—A practical field course in mine surveying. A complete survey and map of one of the mines in the vicinity of the college are required. Students are required to pay all expenses for their transportation and board while on this trip. Prerequisite: Engineering 322. Eight hours daily for two weeks, immediately following the close of the spring semester. Laboratory fee, \$2. Credit value: Two semester hours. (To be offered during the summer of 1942; was previously given as Mining 224.)

431s. *Electrical Circuits and Machines*.—Theory of direct and alternating current circuits and machinery; comparison of direct with alternating current for various uses in mining, metallurgical, and electro-chemical work; machine characteristics; motor starting and controlling devices; distribution systems; protective devices; motor applications; electrical hoisting systems; and power factor correction. Prerequisite: Physics 812, and Mathematics 13. Three lectures and three laboratory hours a week. Laboratory fee, \$4. Credit value: Four semester hours.

832. *Applied Mechanics and Structures*.—Center of gravity, moment of inertia, radius of gyration; bending moments; shear, torsion; resilience; flexure of beams; theory of long columns; strength of materials. The funicular polygon; moment diagram; shear diagram; determination of stresses in various types of roof and bridge trusses; complete designs in steel and timber; comparisons as to weight and costs. Prerequisite: Drawing 302, Mathematics 13, and Physics 12 or 812. Three lectures and three laboratory hours. Credit value: Eight semester hours. (Given in 1940 and 1941, but not thereafter.)

533s. *Applied Mechanics and Graphic Statics*.—Coplanar, concurrent, parallel, and nonconcurrent forces; concurrent, parallel, and nonparallel forces in space; friction; centroids and centers of gravity; moments of inertia, and radius of gyration; kinematics of a particle; kinetics of rigid bodies; rotation of rigid bodies; any plane motion of rigid bodies; work, energy, and power. Exercises in the laboratory will include problems in kinematics, Bow's notation, the funicular polygon; and the determination of stresses in the various types of roof and bridge trusses. Prerequisite: Drawing 302, Mathematics 13 and Physics 12 or 812. Three lectures and six laboratory hours a week. Laboratory fee, \$4. Credit value: Five semester hours. (To be offered in 1941 and 1942.)

434f. *Strength of Materials*.—Stresses and strains, in tension, and in shear; riveted and welded joints; torsion of shafts; shear and moment in beams; stresses in beams; deflection of beams; fixed and continuous beams; beams of two materials; beams of constant strength; resilience; combined stresses; Euler's, Rankine's and the straight-line column formulae; columns in general; deflection of beams by area moment method; and curved beams and hooks. Laboratory tests will be made for tensile and compressive stresses in wood, iron, steel, and cement; bending and torsional stresses will be determined on specimens where practical. Prerequisite: Engineering 533. Three lectures and three laboratory hours a week. Laboratory fee, \$4. Credit value: Four semester hours. (To be offered in 1941 and 1942.)

335s. *Masonry and Reinforced Concrete*.—Lectures on natural stone, building stone, brick, mortars, and cements. Lectures, recitations, and problems pertaining to reinforced concrete construction, including strength of concrete in compression; reinforcing steel in tension; percentage of steel required; bond required in reinforcing bars; diagonal tension; designing of columns,

beams, and slabs; and discussions relating to eccentric loading. Prerequisite: Engineering 434. Three lectures a week. Credit value: Three semester hours. (To be offered in 1941 and 1942.)

350s. *Steam Power Plants*.—The fundamental equations of gases and their applications to the steam engine; the heating values of different fuels; the construction and operation of steam boilers; boiler feed pumps; different types of steam engine as regards speed, valves, steam consumption, comparative cost, and relative economy; adjustments of valves, and determination of horse power by the use of the indicator; steam turbines. Prerequisite: Mathematics 13, and Physics 12 or 812. Three lectures a week. Credit value: Three semester hours.

354f. *Hydraulics*.—Brief course of hydraulics; fluids in motion; flow of liquids through pipes, orifices, and over weirs; fluid friction and loss of head; Bernoulli's theorem; flow of water in canals and rivers; Kutter's formula; and graphical methods. Prerequisite: Physics 12 or 812, and Mathematics 13. Three lectures a week. Credit value: Three semester hours.

Drawing

301f. *Engineering Drawing*.—For all engineering students. Freehand lettering, geometrical construction, orthographic projection, auxiliary views, sectional views, dimensioning, working drawings, and pictorial methods. Two one-half hour discussions and eight hours of supervised drawing a week. Laboratory fee, \$2. Credit value: Three semester hours.

301s. *Engineering Drawing*.—A repetition of 301f.

302s. *Descriptive Geometry*.—Principal, auxiliary, and oblique views; straight and curved line problems; planes; intersection and development of surfaces; single-curved, warped, and double-curved surfaces; mining problems; perspective drawings. Prerequisite: Drawing 301. Two one-half hour discussions and eight hours of supervised drawing a week. Laboratory fee, \$2. Credit value: Three semester hours.

Aviation

311. *Civil Aeronautics*.—This course is to conform in all respects to the outline as given by the Civil Aeronautics Administration for the Private (Preliminary), Civilian Pilot Training Program. Half of the course will consist of lectures, quizzes, and problems in Air Navigation, while the other half will be devoted to a study of Meteorology. Prerequisite: Sophomore standing, or permission of the Coördinator of Civilian Pilot Training. A total of 48 lectures. Credit value: Three semester hours, elective credit.

621. *Civil Aeronautics*.—This course is to conform in all respects to the outline as given by the Civil Aeronautics Administration for the Secondary (Restricted Commercial), Civilian Pilot Training Program. Lectures, problems, demonstrations, and quizzes will be given in the following subjects:

Aerodynamics; Aircraft; Aircraft Power Plants; and Air Navigation. Prerequisite: Aeronautics 311, a valid Private Pilot Certificate, and permission of the Coördinator of the Civilian Pilot Training. A total of 108 lectures. Credit value: Six semester hours, elective credit.

ENGLISH AND PUBLIC SPEAKING

PROFESSOR SONNICHSEN; ASSOCIATE PROFESSOR ZIMMERMAN; ASSISTANT PROFESSORS LANGSTON, MOSES, EGG; INSTRUCTORS BALL, BOUNDS, JAMES, PONSFORD; PART-TIME INSTRUCTORS HOWELL, KING, NEALON

English

For the degree of Bachelor of Arts twelve semester hours in English are required: namely 1 and 12 or 12Q; English 1a is prerequisite to all other courses in English; English 12 or 12Q, to all other courses in English literature.

Students expecting to do advanced work in English are advised to take courses in French or German, in history, and in philosophy.

1. *Rhetoric and English Composition*.—Study of the principles of good writing; outlining; analysis and discussion of typical prose selections; weekly themes; collateral reading. Prescribed for freshmen. Credit value: Six semester hours.

1a. *Rhetoric and English Composition*.—Repetition of the first semester of English 1.

310fs. *Technical Writing*.—A course designed as a preparation for technical writing. The principal object is to train the student in outlining and writing upon technical subjects for private reports and for publications. Reports upon assigned topics are required. Prerequisite: English 1. Credit value: Three semester hours.

12. *Outline History of English Literature*.—Survey of English literature from the beginning to the present time. Study of masterpieces in prose and poetry, selections from Old English being read in translation. Frequent essays each semester. Prerequisite: English 1. English 12 or 12Q is prerequisite to all other courses in English literature. Credit value: Six semester hours.

12a. *Outline History of English Literature*.—Repetition of the first semester of English 12. Recommended for English majors.

12Q. *English and American Literature*.—A course designed to replace English 12 for students not expecting to specialize in English. Study of significant specimens of prose and poetry with the object of helping the student to orient himself in the world of today through a study of its literature. A good deal of supplementary reading, frequent conferences with the instructor, and several written reports will be required. The work will include the study of significant specimens of prose and poetry from the sixteenth, seventeenth, eighteenth, and nineteenth centuries with emphasis on the social values of the material and its importance in leading up to the literature of the present day.

Prerequisite: English 1. Credit value: Six semester hours. Not recommended for English majors.

320f. *Shakespeare: The Earlier Plays.*—Detailed study of a few of the plays composed before 1601, with a rapid reading of others belonging to the same period. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in Long Session, 1941-1942; given in Summer Session, 1940.)

321s. *Shakespeare: The Later Plays.*—Detailed study of some of the great tragedies, followed by a rapid reading of other plays written after 1600. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in Summer Session, 1940; to be offered in Long Session, 1941-1942.)

322f. *Victorian Poetry.* Consideration of the poetic works of Browning primarily, and study of such noteworthy minor poets as Arnold, Clough, James Thompson, and others. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in Long Session, 1941-1942.)

323s. *Victorian Poetry.*—Consideration of the poetic works of Tennyson primarily, and study of such noteworthy minor poets as Swinburne, Morris, D. G. Rossetti, Christina Rossetti, and others. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in Long Session, 1941-1942.)

325f. *Creative Writing.*—Prerequisite: English 12 or 12Q with a grade of at least B. Credit value: Three semester hours. May be taken a second time for additional credit. (Given in Long Session, 1940-1941; to be omitted in 1941-1942.)

327f. *An Outline History of the English Novel.*—Brief history of the novel from the romances of the sixteenth century through the eighteenth and the first quarter of the nineteenth century, with study of typical works of Richardson, Fielding, Smollett, Burney, Jane Austen, and Scott. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in Long Session, 1941-1942; omitted in 1940-1941.)

328s. *An Outline History of the English Novel.*—A continuation of English 327 with study of typical works of Dickens, Thackeray, George Eliot, Hardy, and Meredith. Prerequisite: English 327. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in Long Session, 1941-1942.)

329f. *English Romantic Poetry, the Earlier Phase.*—Rapid survey of the revival of Romanticism in the Eighteenth Century, followed by a more detailed consideration of the works of Burns, Scott, Coleridge, and Wordsworth. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in the Summer Session, 1940.)

330s. *English Romantic Poetry, the Later Phase.*—Consideration of the work of Byron, Shelley, Keats, and some of their contemporaries. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in the Summer Session, 1940.)

331f. *The Drama in England since 1660.*—A study of the representative plays of the Restoration Age, of the eighteenth and nineteenth centuries, and

of such modern English playwrights as Jones, Pinero, Barker, St. John Hankin, Shaw, Coward, etc. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in Long Session, 1940-1941; to be omitted in 1941-1942.)

332s. *The Development of the American Drama*.—A study of the drama of the Colonial and the Revolutionary Periods. Study of the development of the drama to modern times including such modern playwrights as the Mackayes, Thomas, Sheldon, Kaufman and Connelly, Crothers, Hughes, Davis, Anderson, and O'Neill. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in the Long Session, 1940-1941; to be omitted in 1941-1942.)

334f. *Contemporary Poetry*.—Prerequisite: English 12 or 12Q. Credit value: Three semester hours.

335s. *Contemporary Prose*.—Prerequisite: English 12 or 12Q. Credit value: Three semester hours.

336f. *American Literature*.—A study of the chief American poets and prose writers of the Revolutionary period and the early nineteenth century. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in the Long Session, 1940-1941; to be omitted in 1941-1942.)

337s. *American Literature*.—A study of the most important American poets and prose writers from the Civil War to the present. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in the Long Session, 1940-1941; to be omitted in 1941-1942.)

339f. *Eighteenth Century Prose*.—After surveying rapidly the prose of some earlier writers, the class will study that of Defoe, Swift, Steele, Addison, Johnson, Boswell, Goldsmith, and Burke. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in the Long Session, 1940-1941; to be omitted in 1941-1942.)

340s. *The Poetry of the English Classical Period*.—Detailed study of poems of Dryden and Pope, together with the literary theory and later influence of these writers, the most important contemporary poets furnishing material for parallel reading. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in the Long Session, 1940-1941; to be omitted in 1941-1942.)

341s. *The Short Story*.—The literature and technique of the short story; the rise and nature of its form; an intensive study of its structure, together with an examination of short story types and masterpieces from various countries. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in Long Session, 1941-1942.)

342f. *Life and Literature of the Southwest*.—Study of verse, fiction, travels, and memoirs to acquaint students with the social inheritance, and its reflection in literature, of Texas and its neighboring territory. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be offered in Long Session, 1941-1942.)

353f. *Prose of the Renaissance and Reformation*.—A study of the beginnings of modern English literature in its relation to the political, social, and cultural ideals of the Renaissance. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in the Long Session, 1941-1942.)

354s. *Poetry of the Renaissance and Reformation*.—A study of the beginnings of modern English literature in its relation to the political, social, and cultural ideals of the Renaissance. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in Long Session, 1941-1942.)

355f. *The American Novel*.—A careful study of representative American novels and novelists from 1850 to the present. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in the Long Session, 1941-1942.)

358f. *The English Language*.—A course designed to give an understanding of the growth, structure, and relationships of the English language with special emphasis on the development of modern English. Attention will be given to the theory of language and its function in human life and progress; the great language groups; developments from the Anglo-Saxon period to modern times. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in Long Session, 1940-1941; to be omitted in 1941-1942.)

359s. *A Continuation of English 358*.—English in recent times. Dialects; usage; influence of scientific developments, war, radio, etc.; foreign elements; word building; other topics leading to an understanding and appreciation of the students' native tongue. Prerequisite: English 358. Credit value: Three semester hours. (Given in Long Session 1940-1941; to be omitted in 1941-1942.)

398-98. *Thesis Course for Master's Degree*.—Prerequisite: Twelve semester hours of advanced courses in history; graduate standing. Confer with the chairman of the department immediately after registration. Credit value: For 398, three semester hours; for 98, six semester hours.

Public Speaking

301fs. *Speech Correction*.—Training in the fundamentals of oral expression, including use of voice, pronunciation, enunciation, good usage, and correction of personal speech defects. Practice in the various forms of public speech will be required. Credit value: Three semester hours.

305fs. *Principles of Speech*.—A study of the theory of expression, exercises in improving stage presence; practice in speaking with special reference to distinct, direct, and convincing delivery. Speech material and composition emphasized. Prerequisite: Public Speaking 301. Credit value: Three semester hours.

312f. *Play Production*.—Elementary principles of play production, including acting, staging, lighting, and make-up; practice in producing radio

and stage plays. A study of the emotional basis of acting; the body as an expressive agent. Lectures, reports, and assigned readings in the literature of the drama and the theatre. A practical course to prepare students to produce plays in schools and communities. Prerequisite: Sophomore standing or six semester hours of Public Speaking. Credit value: Three semester hours.

313s. Play Production.—A continuation of Public Speaking 312, with emphasis on casting, rehearsing, and directing. Prerequisite: Public Speaking 312. Credit value: Three semester hours.

320s. Oral Interpretation.—This course is designed to develop an adequate mental and emotional response to the meaning of literature. The necessary attention to the sound and meaning of words should lead to improvement in voice, pronunciation, and general effectiveness in speech. Emphasis is placed on objective speaking. Choir speaking as well as individual recital work will be included. Prerequisite: Junior standing including six semester hours of Public Speaking. Credit value: Three semester hours.

321f. Radio Speech.—A course in the theory and practice of radio writing and speaking with special attention to radio drama. Prerequisite: Six semester hours in Public Speaking and Junior standing. Credit value: Three semester hours.

GEOLOGY

PROFESSOR QUINN; ASSOCIATE PROFESSOR NELSON; INSTRUCTOR STRAIN

301f. Physical Geology.—A critical study of the principles of physiography and dynamic and structural geology. One additional lecture hour each week will be required of students registering in mining engineering options and science majors. Two hours lecture and three hours of laboratory demonstration or field work. Laboratory fee, \$2. Credit value: Three semester hours.

302s. Historical Geology.—Critical study of the principles of stratigraphy, paleogeography and organic developments. One additional lecture hour each week will be required of students registering in mining engineering options and science majors. Prerequisite: Geology 301. Two hours lecture and three hours of laboratory demonstration or field work. Laboratory fee, \$2. Credit value: Three semester hours.

316f. Mineralogy.—Crystallography and blowpipe analysis; a study of the crystallography, chemical and physical properties of minerals and mineral determination by blowpipe methods. Classification of minerals. Prerequisite: Chemistry 1 (Chemistry 801 for engineering students). One lecture and six hours of laboratory work. Laboratory fee, \$2. Credit value: Three semester hours.

317s and 217s. Mineralogy.—Determinative mineralogy; a continuation of 316f. Largely devoted to the identification of minerals by physical characteristics. Prerequisite: Geology 316. One lecture and six hours of laboratory work per week for 317. 217s is open only to engineering students who will

receive six hours of laboratory work. Laboratory fee, \$2. Credit value: Two semester hours, for 217; three semester hours for 317.

418f. Invertebrate Paleontology.—A systematic study of the structure and classification of the important invertebrates together with their development and geological significance. Prerequisite: Geology 301 and 302. Two lectures and six laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours.

419s. Paleontological Stratigraphy.—A comprehensive study of the stratigraphy of North America with special emphasis on that of West Texas and the Southwest. Prerequisite: Geology 418. Two lectures and six laboratory hours. Laboratory fee, \$4. The last two hours of this course count as advanced. Credit value: Four semester hours.

421f. Advanced General Geology.—Certain topics of general geology such as stratigraphy, petrology, and structural geology are expanded in an advanced and quantitative manner. Prerequisite: Geology 316 and 217 for engineering students; 316 and 317 for others; and Geology 302. Three lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Four semester hours.

322s. General Economic Geology.—A general consideration of economic occurrences of mineral deposits and rocks with considerable attention given to those of Texas and the Southwest. Prerequisite: Geology 217 or 317. Credit value: Three semester hours.

427s. Petrology and Petrography.—The determination, origin, and subsequent history of minerals and rocks as revealed in mineral grains and thin sections by the petrographic microscope. Prerequisite: Geology 421 in advance or concurrently. Two lectures and six laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours. (Omitted in 1940–1941; to be offered in Long Session, 1941–1942.)

361s. Advanced Economic Geology.—Discussions and original papers on new developments in the field of ore deposits. Methods of geological examination; preparation of geological reports and manuscripts; bibliographical research; applications of the principles of ore deposition to the search for ore; advanced consideration of the mineral deposits of Texas. Prerequisite: Geology 427 in advanced or concurrently and 322. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours. (Omitted in 1940–1941; to be offered in Long Session 1941–1942.)

463s. Geology of Petroleum, the Fuels and the Non-Metallics.—Study of the origin, migration and accumulation of petroleum and natural gas; the origin and occurrence of fuels with emphasis on coals; and the study of the important economic occurrences of the non-metallic mineral deposits, stressing those occurring in Texas and the Southwest. Prerequisite: Geology 421. Three lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours. (Given in Long Session in 1940–1941; to be omitted in 1941–1942.)

264f. *Field Geology*.—The course will include a field study of a limited area near the College, and the application of quantitative standards to the mapping and geological field studies. An acceptable typed thesis will be required of the successful completion of this course. Prerequisite: Six semester hours of advanced courses in geology. One lecture and one afternoon in field studies. Laboratory fee, \$2. Credit value: Two semester hours.

074s. *Geology Field Trip*.—A survey trip of about two weeks covering districts of geologic interest. Required of seniors majoring in geology. No credit, but required for graduation.

Geography

303s. *Elements of Geography*.—A study of the major geographic realms emphasizing the relation of man to the various natural elements of his environment. Prerequisite: Geology 301. Two hours lecture and three hours of laboratory demonstration or field work. This course together with Geology 301 may be used to satisfy six semester hours of the science requirement for the Bachelor of Arts Degree, but may not be used as a prerequisite for any other course in Geology. Laboratory fee, \$2. Credit value: Three semester hours.

HISTORY, GOVERNMENT, AND SOCIOLOGY

PROFESSOR WALLER; ASSISTANT PROFESSORS PORTER, QUINN, GREGORY,
STRICKLAND

History

4. *History of England*.—Survey of the social, economic, political and intellectual development of Britain and the British Empire. First semester, to 1660; second semester, 1660 to the present. Credit value: Six semester hours.

9. *History of Europe, 1500-1914*.—Brief survey of conditions at the end of the Middle Ages; rise of nationalities and absolutism; colonial expansion; social and economic progress; the Old Regime and the intellectual awakening; the French Revolution and the Napoleonic Era; restoration and reaction; industrial revolution; growth of nationalism and democracy; unification of Germany and Italy; the Balkan States and the Near Eastern problems; economic imperialism; political Socialism and State Socialism; Triple Alliance and Entente Cordiale; background of the World War. Credit value: Six semester hours.

312j. *The Ancient World*.—A survey of the ancient civilizations—Babylonian, Chaldean, Assyrian, Persian, and Egyptian; more intensive study of the Greek history with its art and culture and its spread over the Mediterranean world; Roman history with its system of law, its early beginnings and expansion over Europe, rise and decline of the Roman Empire. Prerequisite: Sophomore standing or six semester hours in history. Credit value: Three semester hours.

313s. *Medieval Europe*.—Renaissance and Reformation; cultural development of the Middle Ages; social, artistic, and economic phases of the Renaissance; development of feudalism and rise of city-states; causes and results of the Reformation; period of discovery. Prerequisite: Sophomore standing or six semester hours in history. Credit value: Three semester hours.

315f. *History of the United States*.—Survey history of the United States from the discovery of America to 1850. Prerequisite: Six semester hours in history or Sophomore standing. Credit value: Three semester hours.

316s. *History of the United States*.—Survey history of the United States from the Compromise of 1850 to the present. Prerequisite: Six semester hours in history or Sophomore standing. Credit value: Three semester hours.

317s. *A General Survey of the History of Texas*.—Prerequisite: Six hours of history or Sophomore standing. Credit value: Three semester hours.

323f. *Europe, 1870-1900*.—A survey of the different countries of Europe and their internal developments to the close of the century. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (To be offered in 1941-1942.)

324s. *Europe after 1900*.—Europe in the twentieth century. The last years of peace, the World War, the peace treaties. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (To be offered in 1941-1942.)

325f. *History of the United States, 1607-1787*.—Settlement and development of the Colonies; representative principles of government; westward expansion of the Colonies with the resulting economic and political problems; Mercantilism and the British Imperial policy; colonial participation in the English and French conflicts in America; the American Revolution; state-making and constitutional development during and after the Revolution. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

326s. *History of the United States, 1787-1829*.—Confederation and Constitution; formulation of foreign policy, culminating in classic expression in the Monroe Doctrine; Jeffersonian Democracy and Hamiltonian Federalism; expansion and development of Jacksonian Democracy; rise of nationalism and conflict over states' rights. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

335f. *History of the United States, 1829-1850*.—Jacksonian Democracy; expansion of the United States into the Southwest and Far West; development of the controversy over state rights; slavery and cotton capitalism. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

336s. *History of the United States, 1850-1865*.—Slavery controversy; manifest destiny; party history, breakdown of the Whigs, rise of the Re-

publican Party, new leaders; Civil War, its causes, economic and social factors, military operations, results. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

347j. *Latin America: The Colonial Period.*—This course gives a survey of the history and institutional development of Spanish and Portuguese America in the Colonial period. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours.

348s. *Latin America: The National Period.*—This course deals with the empires and republics of Latin America after the Wars for Independence. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours.

353j. *A Survey of Political and Social Britain from 1815 to 1895.*—Tory England, the beginnings of reform, leaders and events in the making of modern Britain. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

354s. *Britain and the Empire from 1895 to the Present.*—The Boer War, the Empire and foreign relations, the Liberal party and internal reform, the World War, the Treaty, Britain since 1919. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Given in Summer, 1940; to be omitted in 1941-1942.)

355j. *History of the United States since the Civil War, 1865-1900.*—Reconstruction, industrial development and regulation, sectionalism, grangers, greenbackers, populism, silver crusade, passing of the frontier, civil service reform, rise of imperialism. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Given in Summer, 1940; to be offered in 1941-1942.)

356s. *Contemporary History of the United States, 1900 to the Present.*—Rise of the United States as a world power, growth of trusts, imperialism and world trade, progressivism, Roosevelt and Wilson, World War and reconstruction, Republican prosperity, depression and world unrest. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Given in Summer, 1940; to be offered in 1941-1942.)

398-98. *Thesis Course for the Master's Degree.*—Prerequisite: Twelve semester hours of advanced courses in history; graduate standing. Confer with the departmental head immediately after registration. Credit value: For 398, three semester hours; for 98, six semester hours.

Government

310js and 10. *American Government.*—The government of the United States—national, state, and local—with special emphasis upon the Constitution of the United States and of Texas. Fulfills the legislative requirement of a course on the Constitutions of the United States and of Texas.

Prerequisite: Sophomore standing. Credit value: For 310, three semester hours; for 10, six semester hours. (Government 310 satisfies the requirement of three semester hours of Texas constitution.)

330f. International Politics.—The principles and political problems involved in foreign policies and international relations of the states of the world with particular emphasis on nationalism and imperialism. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Omitted in 1940–1941; to be offered in 1941–1942.)

331s. International Organization and Administration.—The development of the machinery and procedure of international government for the peaceful settlement of international disputes. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Omitted in 1940–1941; to be given in 1941–1942.)

323f. The Governments of England and the British Commonwealth of Nations.—The rise of English political institutions; a critical analysis of the English and British systems of government with special emphasis on their practical workings; the larger problems of the British Empire and Commonwealth of Nations. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in Summer Session, 1940.)

324s. The Governments of Continental Europe.—The governments and politics of France, Italy, Switzerland, Germany, and Russia, with some attention given to lesser European countries; recent revolutionary and constitutional changes are emphasized. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in Summer Session, 1940.)

343f. The Foreign Policies of the United States.—The historical development and present organization of the Department of State and of the Foreign Service; the nature of the foreign relations power and the conduct and control of American foreign relations. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in 1940–1941; to be omitted in 1941–1942.)

344s. The Conduct of American Foreign Affairs.—The origin and development of fundamental principles of American diplomacy concerning neutrality, recognition, naturalization and expatriation, and promotion of trade and commerce with special attention devoted to post-war problems. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in 1940–1941; to be omitted in 1941–1942.)

Sociology

310fs. Introduction to the Study of Society.—The local social milieu and social institutions; the process and products of interaction; mechanism of interaction, competition, conflict, accommodation, assimilation; society and the person; social control; social change; social movements. Prerequisite: Sophomore standing. Credit value: Three semester hours.

311fs. Social Pathology.—Physical and mental defectiveness considered from the sociological viewpoint; defects in social organization; poverty and

dependency; pathology of personality. Social controls applied to social problems. Prerequisite: Sophomore standing. Credit value: Three semester hours.

320f. *Fields of Social Work*.—A survey of the various fields of social work now operating, both Federal and private in sponsorship, with particular attention to those organized on regional and national bases; and an examination of the methods used in the various fields considered. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours.

321s. *Public Welfare*.—An examination of the subject of public welfare, including its historical and philosophical development up to the present time, a survey of recent trends as embodied in the Social Security Board program, and a brief study in selected case work methods. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours.

345f. *The Community*.—Methods of studying the community; social anatomy; a comparative study of communities; analysis of the underlying forces and social successes which make for natural groups and institutions to meet industrial, religious, educational, governmental, and leisure-time needs; disorganization and reorganization in modern communities. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

347f. *Population Problems and Immigration*.—Population movements and their social control; problems of population, distribution, and assimilation. Social questions attending the complex composition of the American people; an examination of the ethnic origin and racial characteristics of "old" and "new" immigrants, taking up the economic, political, and social aspects of their migration to America. Consideration of Americanization programs and immigration laws. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

348s. *Criminology*.—Causes, characteristics, and relief of crime, with consideration of mental, physical, economic, and social factors in crime. Attention to the juvenile offender and the social agencies for his adjustment. A sociological analysis and evaluation of penal methods. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

349s. *The Family*.—A study of the development of the family as a social institution. Emphasis is placed upon the American family and the problems which confront it today. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (To be offered in 1941-1942.)

JOURNALISM

INSTRUCTORS BOUNDS, WILLIAMS

12. *News Gathering and Reporting*.—Instruction and practice in interviewing and writing; discussion of news sources, news values, and various types of news stories; study of the organization of newspaper staffs and news

gathering associations. Prerequisite: Sophomore standing including English 1. Credit value: Six semester hours.

313j. *History and Principles of Journalism.*—Includes a study of the growth of the modern American newspaper, with emphasis on great figures in American journalism and a study of the principles of the newspaper and magazine of today. Prerequisite: Sophomore standing including English 1. Credit value: Three semester hours.

315s. *Basic Advertising.*—Study of the mechanics of the writing of advertisements, layouts, copy, illustrations, etc. Use of color, cartoons, line drawings vs. engravings. Study of the force of words in writing of copy. Prerequisite: Sophomore standing. Credit value: Three semester hours.

316f. *Comparative Journalism.*—Study of foreign and American publications. Prerequisite: English 1 and Sophomore standing. Credit value: Three semester hours. (To be offered in Long Session, 1941-1942.)

319s. *Radio News Processing.*—The preparation of local and wire service news for radio news broadcasting and interpretation. Prerequisite: English 1 and Sophomore standing. Credit value: Three semester hours (Given in the Long Session, 1940-1941.)

322f. *The Special Article.*—Methods of gathering material for newspapers and magazine feature stories through interviews, research, and observation; study of feature story form and style; discussion of markets for literary material; practice in writing feature stories. Prerequisite: Journalism 12 or English 12. Credit value: Three semester hours.

324s. *News Editing.*—Study of newspaper style books; instruction in headline writing; study of newspaper makeup; practice in reading newspaper copy for errors in fact, English, and style; also practice in writing headlines and rewriting news stories. Prerequisite: Journalism 12 or Journalism 313. Credit value: Three semester hours. (To be offered in the Long Session, 1941-1942.)

325f. *Small Newspaper Production and Management.*—Advanced study of newspaper technique and of the problems of newspaper management. Detailed study of makeup, advertising problems, news policies, and business management, leading to a summer internship on Texas newspapers. Prerequisite: Journalism 12. Credit value: Three semester hours. (Given in the Long Session, 1940-1941.)

326s. *Advertising, Copywriting and Special Layouts.*—Study of technique of copy writing and layout, direct mail advertising, circulars and department store layouts. Study of marketing and media. Prerequisite: Journalism 12 and Journalism 315. Credit value: Three semester hours (Given in the Long Session, 1940-1941.)

327s. *Promotion and Public Relations.*—Detailed study of propaganda methods and technique, exploitation, and marketing via news channels. Radio publicity methods. Special emphasis on public relations, direction in industrial, commercial and retailing fields. Prerequisite: Journalism 12 and Journalism 315. Credit value: Three semester hours.

329f. Principles of Typography.—Study of type, printing technique and methods, and history of printing, with emphasis on practical problems in typography that confront the newspaper editor and advertising manager. Lectures and laboratory practice. Prerequisite: Journalism 12. Credit value: Three semester hours. (To be offered in the Long Session, 1941-1942.)

340s. Editorial Writing and Direction.—Development and importance of the editorial; subject matter, policies, purposes, structure, and style; the editorial page, features, and makeup; editorial training, responsibility, and opportunity. Lectures, class discussions, written work, and written and oral criticism of individual work. Prerequisite: Journalism 12. Credit value: Three semester hours.

341s. Pictorial Journalism.—The development of modern day methods of photography, and its uses in the newspaper and magazine fields today. A study of picture editing, news cameras, covering picture assignments, photo-engraving, elements of picture layouts. Prerequisite: Journalism 12. (To be offered in the Long Session, 1941-1942.)

MATHEMATICS AND PHYSICS

PROFESSOR KNAPP; ASSOCIATE PROFESSOR DURKEE; ASSISTANT PROFESSOR SCHWID; INSTRUCTORS BARNES, CAMP, LEECH, LILES, RESLEY

Mathematics

Except as indicated in item six under degree requirements, six semester hours of Mathematics are required for the degree of Bachelor of Arts. 304 and either 309 or 307 may be used to satisfy this requirement. Students who wish a more complete course in Mathematics and students who plan to major or minor in Mathematics or in Physics, should take 803 in place of the courses mentioned above. Students who plan to major or minor in other sciences should see the descriptions of their majors and minors for Mathematics requirements. Students planning to major or minor in Mathematics or in Physics, should take Mathematics 208 in one of the semesters of the freshman year unless solid geometry is offered for entrance.

803. Elementary Mathematical Analysis.—A course designed to give the student a good foundation for the study of calculus, the natural sciences, and engineering. The first two weeks are devoted to a review of algebra. Those students not possessing a good working knowledge of algebra at the end of this period are transferred to Mathematics 305. Four recitations. Credit value: Eight semester hours.

304fs. Mathematical Analysis.—An introductory course designed for academic students unifying the basic ideas of algebra, trigonometry, and analytical geometry by means of the function concept. Credit value: Three semester hours.

305fs. Algebra.—A review of secondary-school and intermediate algebra for engineering students whose background in this subject is deficient. Credit

MINING AND METALLURGY

PROFESSORS GRAHAM, SEAMON; ASSOCIATE PROFESSOR THOMAS;
ASSISTANT PROFESSOR JENNESS

Mining

310s. *Mining Methods*.—Prospecting, exploration, development, exploitation, explosives, breaking ground, drifting, shaft sinking, stoping, timbering, drainage, and ventilation of coal and metal mines. Prerequisite: Chemistry 311, Geology 1a, Drawing 302, and Physics 812a. Three lectures. Credit value: Three semester hours. (Given in Long Session 1939-1940; omitted in Long Session, 1940-1941.)

321f. *Mining Methods*.—Continuation of Mining 310. Prerequisite: Mining 310. Three lectures. Credit value: Three semester hours. (Given in Long Session 1940-1941; omitted in Long Session, 1941-1942.)

521f. *Mining Methods*.—A comprehensive study of mining methods, including prospecting, development, exploitation, earth and rock excavation, explosives, tunneling, shaft sinking, timbering, boring, and underground transport, and hoisting. Prerequisite: Chemistry 311, Geology 316, Drawing 302, and Physics 812. Five lectures. Credit value: Five semester hours. (To be offered in Long Session 1941-1942, replacing Mining 310s and Mining 321f.)

322s. *Mine and Route Surveying*.—Shaft plumbing, underground surveying, mapping of underground connections, surface surveying in connection with mineral claims, and all ordinary operations and calculations that the mine surveyor is called upon to perform. Theory and practical application of simple, reverse and compound curves; rights-of-way; cross-sections; and estimates. Prerequisite: Engineering 414 and Mining 321. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours. (Given in Long Session, 1940-1941; to be offered in Long Session, 1941-1942 as Engineering 322.)

223s. *Coal Mining*.—The extraction, cleaning, and marketing of coal, and the manufacture of coke and collection of all the by-products are considered. Prerequisite: Mining 310. Two lectures. Credit value: Two semester hours.

224. *Mine Surveying*.—Practical field course in mine surveying. A complete survey and map of one of the mines in the vicinity of the College are required. Students are required to pay all expenses for their transportation and board. Prerequisite: Mining 322. Eight hours daily for two weeks immediately following the close of the Spring semester. Laboratory fee, \$2. Credit value: Two semester hours. (Given in Long Session, 1940-1941; to be offered in Long Session as Engineering 224.)

231s. *Mining Hygiene*.—Lectures and recitations. Prevention of communicable diseases, personal hygiene, public health, food, air, water, soil, ventilation, and heating, sewage disposal, garbage disposal, disinfection, camp sanitation, mine sanitation, prevention of industrial diseases. The course is supplemented by field work in sanitary surveys, and drawing of

apparatus. The course also includes work in first aid and rescue work. Prerequisite: Junior standing. Two lectures. Credit value: Two semester hours.

260j. *Mine Plant*.—A detailed study of underground transport, hoisting plant, skips and cages, compressed air plant, rock drills, mechanical ventilation, and drainage. Emphasis is placed on calculation of problems in connection with choice of equipment. Prerequisite: Senior standing. Two lectures. Credit value: Two semester hours.

261s. *Mine Plant*.—A continuation of the work given in Mining 260. The laboratory is devoted to a practical study of rock drills and drilling methods, and ventilation. Prerequisite: Mining 260. One lecture and three laboratory hours. Laboratory fee, \$2. Credit value: Two semester hours.

262s. *Mine Plant Design*.—The student is required, from a sampled mine or drilling exploration, to determine the value of the property, select a mining system, choose suitable equipment, and write a detailed report. Prerequisite: Mining 260, and Mining 267 or Mining 367. Six laboratory hours. Laboratory fee, \$2. Credit value: Two semester hours.

367j. *Management*.—Mine examination, sampling, reporting, welfare, organization, financing, and other interesting management problems are considered in a lecture course given only to students who will complete the requirements for the Bachelor of Science degree by the end of the following fall semester. Three lectures. Credit value: Three semester hours.

267j. *Management*.—Same as Mining 367j with the exception that only two lecture hours will be given. Credit value: Two semester hours. (To be omitted in Long Session, 1941-1942; to be offered in 1942-1943.)

269s. *Management*.—A continuation of the work given in Mining 367. Prerequisite: Mining 367. Two lectures. Credit value: Two semester hours. (In 1942-1943, prerequisite will become Mining 267.)

074s. *Mining Trip*.—At the end of the Senior year, graduating Seniors spend the last two weeks of the second semester on a trip of inspection which will include visits to the mining and metallurgical departments of companies within the scope of the planned itinerary. In 1940 the class visited properties in New Mexico, Colorado, and Arizona, but the route selected will be governed by conditions existing at the time of the trip. Although this trip is not a credit course, it will be required for graduation. Prerequisite: Completion of the requirements for the Bachelor of Science degree by the end of the following fall semester. No credit, but required for graduation.

Metallurgy

321s. *General Metallurgy*.—Introductory course covering a description of the various processes for treating all the ordinary metals, with a calculation of slags and furnace charges. Prerequisite: Chemistry 413, Physics 812, and Geology 316 and 217. Three lectures. Credit value: Three semester hours. (Given in Long Session, 1940-1941; to be offered in Spring Term, 1941-1942 as Metallurgy 321s.)

423f. *Ore Dressing and Milling.*—A student of the principles governing the processes employed in the liberation and separation of the minerals, including crushing and grinding, screening, classification, amalgamation, gravity concentration, magnetic separation, and flotation. In the laboratory the student becomes familiar with milling machinery and methods of separation. Prerequisite: Metallurgy 321. Three lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours. (Given in Long Session 1940-1941; to be offered in the fall term, 1941-1942 as Metallurgy 423f with the following prerequisites: Chemistry 311, Geology 217, Drawing 302, and Physics 812.)

324s. *Assaying.*—The determination of gold, silver, and lead by fire methods in minerals, ores, and products of mills and smelters. Prerequisite: Chemistry 323. One lecture and six laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours. (Given in Long Session, 1940-1941 as Chemistry 324; to be offered in Long Session, 1941-1942.)

325f. *Non-metallics.*—A survey course of the non-metallic and ceramic industries, not including coal, oil or sulphur. Emphasis is placed upon the present economic utilization of, and possible future demands for, those minerals which are classed as non-metallic. Prerequisite: Metallurgy 423 must have been completed, or if not, must be taken concurrently. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours. (Omitted in Long Session, 1940-1941; to be offered in Long Session, 1941-1942.)

252f. *Principles of Copper Smelting.*—In this course little attempt is made to study the mechanical features of copper smelting. The place of roasting, smelting, and refining in the pyrometallurgical reduction of a copper ore is given the primary attention, coupled with the calculation of furnace charges and slags. Offered subject to demand. Two lectures. Credit value: Two semester hours. (To be offered in Long Session, 1941-1942.)

253s. *Electric Furnaces.*—A foundation course in electric smelting and the commercial applications of the electric furnace. Offered subject to demand. Two lectures. Credit value: Two semester hours. (To be offered in Long Session, 1941-1942.)

361f. *Iron, Copper, and Lead.*—A study of the metallurgy of the three common metals. One-third of the course will be devoted to calculations pertaining to the above subjects. Prerequisite: Metallurgy 321. Three lectures. Credit value: Three semester hours.

261f. *Iron, Copper, and Lead.*—This course is intended for those students who select the mining option and is the same as Metallurgy 361 except that the calculations are omitted. Prerequisite: Metallurgy 321. Two lectures. Credit value: Two semester hours.

362f. *Metallurgy of Leaching Processes.*—Study of the chemical and physical properties of the metals and such of their compounds as are of importance in connection with the leaching processes; the cyanide process, and leaching methods employed in the metallurgy of copper, lead and zinc.

Prerequisite: Metallurgy 321. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

263j. *Advanced Ore Dressing*.—A study of the engineering features of ore dressing, including computations and design of bins, milling machinery, and mill circuits. Prerequisite: Metallurgy 423. Two lectures. Credit value: Two semester hours.

364s. *Metallurgical Laboratory*.—In this course the student receives an individual problem, or problems, which he handles as research work. At times this work will consist of problems submitted to the College from various fields of metallurgy. Prerequisite: Metallurgy 361 and Metallurgy 362. Six laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

264s. *Metallurgical Laboratory*.—This course handles part of the work covered by Metallurgy 364 and is intended for those students who wish to do some research work but cannot devote the time necessary for full credit toward graduation. Prerequisite: Metallurgy 361. Six laboratory hours. Laboratory fee, \$2. Credit value: Two semester hours.

265j. *Ore Dressing and Milling*.—Ore testing and mill design. Prerequisite: Metallurgy 263 in advance or concurrently. Six laboratory hours. Laboratory fee, \$2. Credit value: Two semester hours.

473s. *Metallography*.—An elementary course in the metallography of various metals and products and the heat treatment of iron and steel. Prerequisite: Metallurgy 261. Three lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours.

074s. *Metallurgical Trip*.—At the present time this trip will be taken with Mining 074. When it is to the best interests of the metallurgical students to deviate from the route of the Mining 074 trip, such changes will be made, but in the main the two trips will be taken together. Prerequisite: Completion of the requirements for the Bachelor of Science degree by the end of the following Fall semester. No credit, but required for graduation.

MODERN LANGUAGES

PROFESSOR BACHMANN; ASSISTANT PROFESSORS AVERETT, ELDRIDGE,
OLMSTEAD; INSTRUCTOR FINEAU

The admission requirement of two units is represented by Course A, which will not count toward a degree for students presenting two admission units in a modern language. Those with two units will enter Course 1a in the same language. For those presenting three units neither Course A nor Course 1a will count. Such students will enter Course 1b. Students entering with less than two years of high-school language are required to begin with Language Aa.

French, German, Spanish

A. Fundamentals of Grammar and Pronunciation.—Elementary grammar; reading of easy texts; dictation; oral drill; conversation. Credit value: Six semester hours.

1. Grammar, Reading and Composition.—Grammar review, written exercises, dictation, reading of intermediate texts. Outside readings with weekly conferences and reports. Prerequisite: Course A or two admission units in the language. Credit value: Six semester hours.

12. Intermediate Readings in the Modern Period.—Selected readings from the nineteenth and twentieth centuries. Some grammar review, reports, conferences and outside readings. Prerequisite: Course 1. Credit value: Six semester hours.

French

336f. Modern Drama: Early Period.—From Molière to Musset, including representative plays by outstanding classical and romantic dramatists, such as Corneille, Racine, Dumas, Hugo and de Vigny. Prerequisite: French 12. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

338s. Introduction to French Romanticism.—Reading of representative novels and plays by Hugo, de Vigny, Dumas, Père and Musset, etc. Prerequisite: French 12. Credit value: Three semester hours. (Offered in 1940-1941; to be omitted in 1941-1942.)

340s. Modern Drama: Later Period.—Representative plays from Dumas Fils to Claudel, including the outstanding works of Augier, Becque, Brieux, Rostand, Bernstein, Lenormand. Prerequisite: French 12. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

357f. Advanced Composition and Grammar Review.—A course recommended for prospective teachers. An intensive review of grammatical principles and idioms. Exercises in translation and free composition. Prerequisite: French 12. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

Spanish

301s. Conversational Spanish.—A practical course designed for non-Spanish students who wish to acquire a fluent ability to express themselves in the language. Open to all students. Not counted toward fulfillment of requirements for the modern language majors. Credit value: Three semester hours.

13. Social and Business Usage.—Translation, composition, and conversational practice in the language of business and everyday life. Reading of texts, building up of practical vocabulary, and grammatical drill in essential constructions. This course is not intended for Spanish majors but is recommended for students who will not continue into courses in the literature,

and may be substituted by such students for Spanish 12. Prerequisite: Spanish 1. Credit value: Six semester hours.

328s. *Golden Age Drama*.—A study of the leading dramatists, such as: Lope de Vega, Tirso de Molina, Calderón de la Barca, Ruiz de Alarcón, Moreto, and others. Readings of selected masterpieces; outside readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Omitted in 1940-1941, to be offered in 1941-1942.)

329s. *Classical Epoch Prose*.—A study of the movements in the prose writings of the sixteenth and seventeenth centuries, such as: novelesque, chivalresque, picaresque, satirical, pastoral, mystic, etc. Readings of masterpieces; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

333s. *Masterpieces of Spanish Literature*.—A study of the generally considered outstanding works of various literary types, with emphasis on the modern. Assigned readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Given in Summer Session of 1940.)

334f. *Early Epics and Ballads*.—A study of the field of ballads and epics. Special emphasis on the epic heroes in the ancient ballads. Readings of special selections; outside readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

335f. *Modern Novel: Early Period*.—A study of the trends in the development of the novel from the latter part of the eighteenth to the latter part of the nineteenth century. Readings from such authors as: Padre Isla, Fernán Caballero, Pedro Antonio de Alarcón, Juan Valera, José María de Pereda, Pérez Galdós, Pardo Bazán, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

336r. *Modern Drama: Early Period*.—A study of the trends in the development of the drama from the latter part of the eighteenth to the latter part of the nineteenth century. Readings from such dramatists as: Leandro Fernandez de Moratín, Martínez de la Rosa, Bretón de los Herreros, López de Ayala, Tamayo y Baus, etc., outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

337s. *Modern Novel: Later Period*.—A study of the trends in the development of the novel from the latter part of the nineteenth century to the present. Selected readings from such authors as: Palacio Valdés, Blasco, Ibañez, Pío Baroja, Ricardo León, Pérez de Ayala, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

339f. *The Cuento and Short Story in Spain*.—A study of various types of shorter fictional forms in Spain and Spanish America, from the time of

Juan Manuel to the present. Emphasis on the modern period. Outside readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Given in Summer Session of 1940.)

340s. *Modern Drama: Later Period.*—A study of the trends in the development of the drama from the latter part of the nineteenth century to the present. Readings of representative works from such dramatists as: Echegaray, Pérez, Galdós, Jacinto Benavente, Los Quinteros, Martínez Sierra, Eduardo Marquina, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

357f. *Advanced Composition and Grammar Review.*—A course recommended especially for teachers and language majors. An intensive review of grammatical principles, idiomatic usage and style. Exercises in translation and composition. Prerequisite: Spanish 12 or 13. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

MUSIC

ASSISTANT PROFESSOR JOHNSON; INSTRUCTOR ROE

Theory

301f-1. *Sight Singing and Ear Training.*—This course includes the fundamentals of music such as scale building and writing; music notation, solfeggio; the singing of melodies at sight; two, three, and four-part singing; and the writing of melodies after hearing them played. Credit value: 301, three semester hours; I, six semester hours. (Given in Long Session 1940-1941.)

10. *First Course in Harmony.*—This course includes the study of scales, intervals, elementary chord formation, primary and secondary triads, dominant and secondary sevenths, melody writing, harmonization of melodies, study of cadential combinations including many of the important chord forms throughout the major and minor keys. Prerequisite: Music I, or Sophomore standing and consent of instructor. Credit value: Six semester hours. (Given in Long Session 1940-1941.)

20. *Advanced Harmony.*—This course includes the study of ninth, eleventh, and thirteenth chords; altered chords derived from the interchange of mode, and the Neapolitan sixth; and augmented harmonies, transition, modulation, and further work in keyboard harmony. Prerequisite: Music 10. Credit value: Six semester hours. (Given in Long Session 1940-1941.)

30. *History and Appreciation of Music.*—The development of music from the earliest writers to the modern composers is included in this course in conjunction with a study of the major operatic and symphonic works. Prerequisite: Music 10. Credit value: Six semester hours. (Given in Long Session, 1940-1941.)

40. *Counterpoint*.—This course is a study of the melodic tones; melody formation; two, three, and four-part counterpoint in all species; invertible counterpoint; canonic imitation; and *original writing* in the contrapuntal forms. Prerequisite: Music 10. Credit value: Six semester hours. (To be omitted in 1940-1941.)

50. *Theory and Practice of Conducting*.—A course meant primarily for individuals interested in the direction of either instrumental or choral organizations. It consists of detailed study and analysis of instrumental and vocal scores besides a practical application of laws governing the baton. Prerequisite: Twelve semester hours of music or Music 10. Credit value: Six semester hours. (To be offered in Long Session 1941-1942.)

PUBLIC SCHOOL MUSIC

351f-51. *Music in the Elementary Grades*.—This course, offered in the training of teachers and supervisors of Public School Music, includes the study of rote-singing and teaching methods, lesson preparation and presentation, and teaching technique. The course is supplemented by other departments of the school. Prerequisite: Education 314 and 318; and Music 301 or consent of the instructor. Credit value: 351, three semester hours; 51, six semester hours. (To be offered in Long Session in 1941-1942.)

352f-52. *Music in the High School*.—Instrumental and vocal teaching technique in the high school along with suggestions in motivating interest and in organizing bands and orchestras. Individual participation and special observations will provide the practical experience necessary. Prerequisite: Education 316 and 317, and Music 301 or consent of instructor. Credit value: 352, three semester hours; 52, six semester hours. (To be offered in Long Session 1941-1942.)

APPLIED MUSIC

Band

01. *Ensemble*.—Marching practice and maneuvers; exercise materials for large and small groups throughout both semesters. This course may be substituted for Physical Training 01 and 02. Five hours per week throughout the year. Non credit.

311f. *Ensemble*.—Marching practice and maneuvers; more advanced study materials for small and large groups. Six hours per week throughout the semester. Prerequisite: Band 1. Credit value: Three semester hours.

315s. *Ensemble*.—A course offered in the second semester for second year students on embouchure and breath control in technical studies. Six hours per week throughout the semester. Prerequisite: Band 01. Credit value: Three semester hours.

321s. *Instrument Technique*.—Specialized study of various instruments of the band with emphasis upon solo material. Six hours per week throughout

the semester. Prerequisite: Band 311 and 315. Credit value: Three semester hours. Offered in alternate years.

325f. Marching Technique.—Student participation in and study of formation charts for marching and maneuver charts and plans for musical stunts on the field required of students. Also a more concentrated study of the individual instruments of the band. Six hours per week throughout the semester. Prerequisite: Band 311 and 315. Credit value: Three semester hours. Offered in alternate years.

331f. Instrumental Methods.—Study of instrumentation, concert materials, ensembles, management, and rehearsal procedure from the standpoint of the director. Six hours per week throughout the semester. Prerequisite: Band 311 and 315. Credit value: Three semester hours. Offered in alternate years.

335s. Program Organization and Management.—All students will participate in recital programs presented by the Department and assist in the planning and preparation of the programs. These programs will cover material acceptable for advanced college students. Six hours per week throughout the semester. Prerequisite: Band 311 and 315. (For 1940-1941, Band 311 only.) Credit value: Three semester hours. Offered in alternate years.

Chorus

02. Chorus Music.—Song materials of a type suitable for study purposes with emphasis placed upon notation, phrasing, breathing, diction. Five hours per week throughout the year. Non credit.

312f. Chorus Music.—More advanced song materials with increased emphasis on correct singing. Six hours per week throughout the semester. Prerequisite: Chorus 2. Credit value: Three semester hours.

314s. Song Materials and Repertory.—Much stress placed on the importance of individually correct singing. Six hours per week throughout the semester. Prerequisite: Chorus 02. Credit value: Three semester hours.

322f. Choral Ensemble Music.—Participation in small ensemble groups stressing vocal technique for the individual. Six hours per week throughout the semester. Prerequisite: Chorus 312 and 314. Credit value: Three semester hours. Offered in alternate years.

324s. Vocal Technique.—Individual and small ensemble work with emphasis placed on development of proper stage and concert poise and mannerisms. Six hours per week throughout the semester. Prerequisite: Chorus 312 and 314. (For 1940-1941, Chorus 312 only.) Credit value: Three semester hours. Offered in alternate years.

332f. Choral Methods Music.—Methods in the presentation of various problems in choral direction, organization and management, serving as an advisory group to the officers of the Varsity Singers. Six hours per week

throughout the semester. Prerequisite: Chorus 312 and 314. Credit value: Three semester hours. Offered in alternate years.

334s. *Choral Problems and Technique; Methods of Organization.*—Concertizing problems and methods. Students act as advisory group to the officers of the Varsity Singers. Six hours per week throughout the semester. Prerequisite: Chorus 312 and 314. Credit value: Three semester hours. Offered in alternate years.

Orchestra

03. *Orchestra.*—Ensemble materials of general use suitable for first year college orchestra. Five hours per week throughout the year. Non credit.

313f. *Orchestra.*—Small ensemble work along with special individual assignments to supplement full orchestra. Six hours per week throughout the semester. Prerequisite: Orchestra 03. Credit value: Three semester hours.

316s. *Orchestra.*—Ensemble drill and special individual attention in outside assignments continued along with full orchestra. Six hours per week throughout semester. Prerequisite: Orchestra 03. Credit value: Three semester hours.

323f. *Orchestra.*—Chamber music group-studies for all instruments and solo literature for all instruments. Six hours per week throughout the semester. Prerequisite: Orchestra 313 and 316. Credit value: Three semester hours. Offered in alternate years.

326s. *Orchestra.*—Chamber music group-studies for all instruments along with special solo studies, all of which will make up the departmental recital programs. Students will participate in these programs and will assist in the selection and training of each ensemble. Six semester hours per week throughout the semester. Prerequisite: Orchestra 313 and 316. (For 1940-1941, Orchestra 313 only.) Credit value: Three semester hours. Offered in alternate years.

333f. *Orchestra.*—The direction, organization, and management of school and civic orchestras. Study of instrumentation and baton technique. Six hours per week throughout the semester. Prerequisite: Orchestra 313 and 316. Credit value: Three semester hours. Offered in alternate years.

336s. *Orchestra.*—Offered for advanced students with recital programs in mind. This course is intended primarily to train the advanced students to plan and organize programs and assist with their preparation. Six hours per week throughout the semester. Prerequisite: Orchestra 313 and 316. Credit value: Three semester hours. Offered in alternate years.

PHILOSOPHY AND PSYCHOLOGY

PROFESSOR ROTH

Philosophy

312f. *Logic*.—Introduction to essentials of correct thinking: deductive and inductive reasoning; fallacies and argumentation. Recommended for students majoring in science or preparing for the study of law. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

314f. *Problems of Philosophy*.—An introduction to the main general problems of philosophy such as those of matter, mind, life, truth and value; the field of philosophy with its relation to the special sciences and to scientific method is stressed. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

315s. *Ethics*.—Introductory survey of the evolution of moral codes and ideals; reflective morality; conduct and character; conflicts of interests; personal and social ethics. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

316s. *Philosophies of Life*.—Study of the various classical philosophies of life from the point of view of their moral, religious, and aesthetic values. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

317s. *The Philosophy of Civilization*.—A comprehensive study of man's social, economic and ethical development as viewed in the light of the contributions of the modern sciences. His place in the world today, and his potential future destiny will be evaluated. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

Psychology

310fs. *Introductory Psychology*.—A survey of the field of general psychology. Prerequisite: Sophomore standing. Credit value: Three semester hours.

311s. *Fields of Psychology*.—Survey of genetic, animal, abnormal, social and applied psychology; mental measurements and experimental methods. Prerequisite: Psychology 310. Credit value: Three semester hours. (Omitted in 1940-1941; to be offered in 1941-1942.)

316s. *Business Psychology*.—A study of the psychological factors and principles involved in modern business, industry, marketing, advertising and salesmanship. Prerequisite: Psychology 310. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

320f. *The Psychology of Personality*.—A study of the fundamental traits of personality, their origin, development and control; maladjustments and disorders of the personality and their treatment. Prerequisite: Psychology 310, and three additional semester hours of either philosophy or psychology. Credit value: Three semester hours. Formerly Psychology 319. (Given in 1940-1941; to be omitted in 1941-1942.)

344s. *Mental Hygiene*.—Prerequisite: Six semester hours in psychology, or in philosophy, or in both. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1941-1942.)

351f. *Social Psychology*.—Social phenomena; psychological technique for the study of complexes, attitudes and social behavior; social control. Prerequisite: Six semester hours in psychology. (To be offered in 1941-1942.)

352s. *Abnormal Psychology*.—Suggestibility and hypnotism; dreams; nervous and mental disorders; mental effect of drugs; normal and abnormal motivation; the concept of insanity; spiritistic phenomena. Lectures and demonstrations. Prerequisite: Six semester hours in psychology. (To be offered in 1941-1942.)

PHYSICAL EDUCATION

PROFESSOR KNOX; ASSOCIATE PROFESSOR SAXON;
INSTRUCTORS KANE, PHILLIPS

312s. *Tumbling and Gymnastics*.—Theory and practice in tumbling, apparatus, calisthenics, pyramids and stunts. Arranging the school program. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Open to men only.)

313f. *Technique of Minor Sports*.—Theory and practice, methods and materials for teaching; tag football, soccer, speedball, volleyball, playground baseball. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Open to men only.)

316s. *Technique of Major Sports*.—Coaching methods in football and basketball. Training, conditioning, practice schedules, and sport fundamentals. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Open to men only.)

319s. *Principles of Health and Physical Education*.—Social, biological, and educational basis for health and physical education. Aims, objectives, content and standards. Selection and adaptation of activities to different ages and conditions. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Open to men and women.)

320f. *Fundamentals of Health*.—The scientific basis for health instruction, basic health information for college students and health teachers; stress will be placed upon practical health problems and adequate health knowledge.

Prerequisite: Six semester hours of science and junior standing. Credit value: Three semester hours. (Open to men and women.)

321f. *Physical Education for Elementary Schools*.—Philosophy of play, content, progression and organization of the play program for elementary and junior high schools. Prerequisite: Junior standing. Credit value: Three semester hours. (Open to men and women.)

322. *Modern Trends in Physical Education*.—The activity program, inter-scholastic and intramural athletics; the physical education plant; student leaders; management of finances; testing in P. E. Prerequisite: Junior standing. Credit value: Three semester hours. (Open to men and women.)

360j. *Methods and Materials in Health Education*.—The field of Health Education, problems in administering the program, teaching aids for the health teacher, the teacher's part in health protection of children. Prerequisite: P. E. 320 or its equivalent and junior standing. Credit value: Three semester hours. (Open to men and women.)

DEGREES CONFERRED IN JUNE, 1940

Engineer of Mines

EUGENE MCRÆ THOMAS

Bachelor of Science in Mining Engineering

Julius Myles Carrera	Jose Melendez
Oscar Hernandez Chavez	Robert Turner Mitcham
Jose Oscar Cobos	Juan J. Prieto
Ben Fino	Sam H. Reed, Jr.
Ezequiel E. Garcia	Nicanor G. Saldana
Robert Livingston Hall	Patrick Gerald Sullivan
Bernard J. Kerley, Jr.	Federico E. Villareal
Charles D. King	Rodolfo L. Villareal
James Vincent King	Howard B. Wiley
James Matthew Maurice	Jose B. Zozaya F.

Bachelor of Arts

Winnifred Mae Andresen	Lenora Womack Jenness
Lionel H. Andrews	Margaret Asmann Kahl
Lu Venia Evertte Arnold	Daniel J. Kerley
George Attel	John Ervin Krebs
John Thomas Beaty	Lillian A. Lind
Mildred Orndorff Bennett	Felice Alexandria Link
Gordon L. Black	Geraldine Mayfield
Winston Lee Black	Harry J. Miskimins
Robert Leroy Bowling	George Ray Pell
Carmen Burciaga Z.	Richard Jack Phillips
William John Byers	Morris H. Raney
Julia Carlton	Joyce Leslie Reed
Paul H. Carlton	Katherine Kennard Riley
Alfred J. Carpenter	Eugene P. Rister
Mary Ellen Casner	Robert R. Ritter
Christine Chapman	Sam Rosenberg
Margaret Evelyn Crabtree	Marie Soltner Rouse
Ward Evans	Ray Philips Saffold, Jr.
Helen Florence Galbraith	Joseph Simon
Isis Molina Galindo	Mae Oliver Soucek
Evelyn Elizabeth Gibson	James M. Stacy
Raymond M. Graves	Eryline Stoker
Thomasine Anne Gray	Vatilyan Clifford Strain
James R. Harper	Thelma Mae Sundquist
Kenneth Heineman	David Wilson Tappan
Barbara Hemley	Juanice Tillman
Mildred Udell Hodges	Wanga Bryars Tinnin
Bobbie Lee Hunnicutt	Venita Vinson
Sue Elizabeth Jackson	R. A. Whitlock, Jr.
Naomi Dowd Jameson	Catherine Jane Wilson

DEGREES CONFERRED IN AUGUST, 1940

Bachelor of Science in Mining Engineering

DANIEL M. DEL SOBRAL

Bachelor of Arts

Elizabeth M. Adams	Arnie Miller Johnsen
Cecilio Arredondo, Jr.	Tom Miller Kirksey
Louise Capron Bagge	Nancy Kitson
Sara Huxford Ball	J. D. Lambeth
Marie Brieden Biediger	Amelia Louzara
Louise Yates Black	A. W. McCormick, Jr.
Lucie Lee Gregg Black	Kermit Curtis O'Neal
Wycliffe Joseph Bryan, Jr.	Katherine Snapp Putnam
Howard Earl Byers	Emilie L. Rheinheimer
Edna Thompson Chancey	Dorothy Rigdon
Robert Dean Clark	Mildred Roden
Elna Mae Coppedge	Marjorie E. Sherrill
Salvador del Valle	Ray E. Stiles
Vincent Desmond	Cecil A. Thomas
Pina Mae Earp	Lela Dodson Tjiler
Virginia Teddy Feedback	Nell Gibson Valdez
Lovella Spikes Fisher	Harold Weiller
Dorothy Hamlyn	Athalie Nell Williams
James Arthur Hart	Wilma Anne Wilmoth
Mary La Barre Hignett	Martha Bagge Wilson

COLLEGE OF MINES AND METALLURGY

REGISTER OF STUDENTS

Long Session, 1939-1940

Abbott, Thomas	El Paso	Babcock, Clarence V.	Ft. Davis
Abrego, Alfredo	El Paso	Bachicha, Paul	El Paso
Acason, Gloria	El Paso	Bagge, Mrs. Louise	El Paso
Adams, Mrs. Adele	El Paso	Bailey, Melvin D.	San Angelo
Adams, Mrs. Elizabeth	El Paso	Bainbridge, Marian	El Paso
Adams, W. B., Jr.	El Paso	Baird, Ober Lee	El Paso
Adkins, Charlotte	El Paso	Baird, Ruth	El Paso
Adkins, Mary Elizabeth	El Paso	Baker, David Knight	Pharr
Adkins, Thomas	El Paso	Baldwin, Eloine	El Paso
Agee, Charles	Wichita Falls	Ball, Mrs. Sally	El Paso
Akeroyd, Edward	El Paso	Ball, Thomas	El Paso
Alden, Catalina	El Paso	Ballentine, Lilybell	Ysleta
Alderete, Francisco	El Paso	Barber, Treman	Cherokee, Okla.
Alderete, Joseph	El Paso	Barboglio, Pete	El Paso
Alexander, Mrs. Emmie	El Paso	Barger, Mrs. Eleanor	El Paso
Alexander, Katherine	El Paso	Barker, Alan	El Paso
Alford, Elva Jane	El Paso	Barlowe, Ann	El Paso
Allen, Faye W.	El Paso	Barrett, Frank	El Paso
Allen, Rachel	El Paso	Barrett, Fred	Dawson, Okla.
Alley, La Verne	El Paso	Barron, Jack	El Paso
Alton, Noel	El Paso	Barrueta, Alfonso	El Paso
Amstater, Shirley	El Paso	Barry, John S.	El Paso
Anderson, James E.	Montague	Barton, John	El Paso
Andre, Lois	El Paso	Barwise, Marjorie	El Paso
Andre, Ruth	El Paso	Beahler, Maybelle	El Paso
Andresen, Winnifred	El Paso	Beasley, Lester	Omaha, Texas
Andrews, Lionel H.	Canton	Beaty, John	Washington, D.C.
Andrews, Richard	El Paso	Beckett, Betty	El Paso
Antene, Charles T.	El Paso	Beckham, Vance W.	Wickett
Antone, E. Haywood	Clarksville	Beckham, Vivian N.	Wickett
Apodoca, Jessie	Ysleta	Bell, Edward	El Paso
Arana, Manuel O.,	Chihuahua, Mexico	Bellman, Benjamin	Safford, Ariz.
Arant, James B.	El Paso	Beltz, Geraldine	El Paso
Arevalo, Aurelia	El Paso	Bemis, George	El Paso
Arguelles, Fernando	El Paso	Bemis, Robert E.	El Paso
Armagnac, Martin	El Paso	Benish, Joe	El Paso
Armstrong, Jane M.	El Paso	Benjamin, Elsie	El Paso
Arnold, Floyd	Roscoe	Bennett, Mrs. Mildred	El Paso
Arnold, Katherine	Marathon	Bevan, Donald	El Paso
Arnold, Lafe	El Paso	Bickel, Robert E.	El Paso
Arnold, Lloyd	Roscoe	Billingsley, Miriam	El Paso
Arnold, LuVenia	El Paso	Biron, Betty Jane	El Paso
Arredondo, Cecilio	El Paso	Black, Donald	El Paso
Arredondo, Concha	El Paso	Black, Gordon	El Paso
Arroyo, Robert	El Paso	Black, Joseph	El Paso
Attel, George	El Paso	Black, Mrs. Louise	El Paso
Avila, Salvador	Santa Rita, N.M.	Black, Mrs. Lucie Lee	El Paso
Ayoub, George	El Paso	Black, Wallace	El Paso
Ayub, Romeo	El Paso	Black, William	El Paso
Azar, Selema	El Paso	Black, Winston	El Paso

Blackwell, Jack	El Paso	Burleson, Neal	El Paso
Blalock, Clovis	El Paso	Burrus, Constance	Ysleta
Blanchard, Mrs. Kate	El Paso	Burrus, Margaret	Ysleta
Blaugrund, Morton	El Paso	Bustamante, Joaquin	El Paso
Bledsoe, Robert	El Paso	Butchofsky, Dick	Ysleta
Blount, Wanda Jo	El Paso	Byers, Howard	El Paso
Boland, Beth	El Paso	Byers, J. William	El Paso
Bolling, Jack	El Paso	Byers, Mary E.	El Paso
Bollman, James	El Paso	Byler, Lois	El Paso
Bombach, Carlos	El Paso		
Bonaguai, Loraine	El Paso	Calamia, Joe	El Paso
Borrego, William	El Paso	Calderhead, William	El Paso
Borunda, Joe	El Paso	Callan, Russell, Jr.	El Paso
Boudreau, Theodore	El Paso	Callon, Jack	Odessa
Bourland, Eugene	El Paso	Cameron, Bruce	El Paso
Bowden, Elizabeth	Fabens	Camp, Glen E.	El Paso
Bowling, Robert	El Paso	Campa, Ismael	Morenci, Ariz.
Boyd, Dan	El Paso	Campbell, Doris	El Paso
Boyd, Hershel	Crane	Campbell, William	El Paso
Boykin, Charlotte	Washington, D.C.	Canton, Anne T.	El Paso
Bradbury, Anne M.	El Paso	Cantrill, Jack	El Paso
Bradshaw, Margie	El Paso	Cantu, Luis	Juarez, Mexico
Bradshaw, Mary Frances	El Paso	Caplinger, Mrs. Alice	El Paso
Branch, William	El Paso	Carbajal, O. Henry	Fabens
Breckenridge, Lemuel	El Paso	Carlson, Madlyn	El Paso
Brennan, Ann	El Paso	Carlson, Robert	El Paso
Bridges, Katherine	El Paso	Carlton, Julia	El Paso
Bridges, Kenneth	El Paso	Carlton, Paul	El Paso
Bridgers, Carolyn	El Paso	Carpenter, Alfred	El Paso
Britt, Harry	Amarillo	Carpio, Federico	Juarez, Mexico
Britton, A. Marrene	El Paso	Carr, William	Alamogordo, N.M.
Britton, Jack	El Paso	Carrasco, David	El Paso
Brock, Winnifred	El Paso	Carrasco, Eliseo	El Paso
Brooks, Abner R.	El Paso	Carrera, Julius	El Paso
Brooks, Doyle	El Paso	Carrera, Phillip	El Paso
Brower, Arline		Carson, Hugh	Hope, Ark.
	Antofogoste, Chile, S.A.	Carvajal, Earl R.	El Paso
Brown, Clyde Glen		Casebier, John A.	Ft. Stockton
	Santa Barbara, Mexico	Casey, Doyle	El Paso
Brown, Earl, Jr.	El Paso	Casey, Edwin	El Paso
Brown, Edgar		Casillas, Richard	El Paso
	San Luis, Potosi, Mexico	Casner, Mary E.	El Paso
Brown, Lyle	El Paso	Cason, Carroll C.	El Paso
Brown, Peggy	El Paso	Casteel, Martha	El Paso
Brown, Ray	Chihuahua, Mexico	Caster, Margaret	El Paso
Brown, Ruth Dorothy	El Paso	Cauble, Frank	El Paso
Browne, Robert	El Paso	Caver, Bill	Kilgore
Broyles, Robert	El Paso	Chalmers, H. B., Jr.	
Bry, Charles	San Antonio		Babylon, L.I., N.Y.
Bryan, Betty Lou	El Paso	Chamness, Lucille	El Paso
Bryan, Joe	El Paso	Chancey, Mrs. Edna	El Paso
Bryant, David	Stephenville	Chapin, Jean	El Paso
Bryant, Robert	El Paso	Chapman, Christine	El Paso
Buchholz, Oscar	El Paso	Chapman, Lydia	El Paso
Bulos, Jesse	El Paso	Chapman, Ophelia	El Paso
Burciaga, Carmen	El Paso	Chappell, Dorothy	El Paso
Burgard, Pete	El Paso	Chavez, Lucy	El Paso
Burgie, Mrs. Amie	El Paso	Chavez, Oscar	El Paso

Chesak, Evelyn	El Paso	Daniel, John N.	El Paso
Chew, C. L.	El Paso	Daross, James	El Paso
Chilton, Bert	Odessa	Davenport, James	El Paso
Chriesman, Dewitt	Ft. Stockton	Davis, Anne	El Paso
Christman, Theodore	El Paso	Davis, Arthur B.	El Paso
Clark, Frances Jane	El Paso	Davis, James F.	El Paso
Clark, Harold D.	El Paso	Davis, R. L.	El Paso
Clark, Robert	El Paso	Davis, Thelma Lee	Sierra Blanca
Clausewitz, Erlwood	San Antonio	Davis, Troy	Lubbock
Cleaveland, Earl T.	El Paso	Davisson, Don	El Paso
Clements, Tom	El Paso	Dean, Charles	Plainview
Clifford, Hugh J.	El Paso	Dean, Mrs. Fern	San Antonio
Clifton, Mrs. Minnie	El Paso	Dean, James M.	El Paso
Cobos, Oscar	El Paso	Deane, Peyton	El Paso
Cobos, Victor	El Paso	Decker, Ellwood	El Paso
Cockrell, Milton	El Paso	Decker, Virginia	El Paso
Cole, James Fred	El Paso	Dehlinger, Doris	El Paso
Cole, William M.	El Paso	De la Torre, Miguel	Mexico
Cole, Woodrow	Ft. Worth	De Leon, Alfredo	El Paso
Coleman, Leslie	Grandview, Mo.	Delgado, Pablo	El Paso
Collins, William	El Paso	Del Sobral, Daniel	El Paso
Compton, Robert	Houston	Del Valle, Salvador	El Paso
Connally, Agnes	El Paso	Denton, George	Clint
Connell, Mrs. Erma	El Paso	Desmond, Vincent	Brooklyn, N.Y.
Cook, Glen	Ysleta	Des Saulles, Dorothy	La Tuna
Copenhaver, Mary	El Paso	Des Saulles, Margarette	La Tuna
Cordero, Francisco	El Paso	Devlin, Michael	El Paso
Cordova, Gabriel	El Paso	De Witt, Albert	El Paso
Corona, Aurora	El Paso	De Witt, Pat	El Paso
Cottingim, Dee	El Paso	Diaz, Oscar H.	Juarez, Mexico
Cottingim, Quillen	El Paso	Dickerson, Mrs. Lucile	El Paso
Cotton, George	Palestine	Dickinson, Mrs. Helen	El Paso
Cotton, Russell	Palestine	Dockray, Grace	El Paso
Counts, Jack E.	El Paso	Dodge, Helene	El Paso
Cowden, Robert	El Paso	Dolman, Mrs. Mary L.	El Paso
Cox, Esther	El Paso	Don, Rita	El Paso
Cozby, Joe	El Paso	Dorris, Estelle	El Paso
Crabtree, Margaret	El Paso	Dorris, Loris	Jacksonville
Crain, H. B.	El Paso	Douglass, Earl	El Paso
Craven, Charles	El Paso	Douglass, Samuel	El Paso
Cravens, Marjorie	El Paso	Downey, Jane	El Paso
Crawford, Jack	Washington, D.C.	Drees, Betty B.	El Paso
Crimen, Jenny Bob	El Paso	Drehner, Dorothy	El Paso
Crosby, Mrs. Ruby	El Paso	Drugan, Mary K.	Ysleta
Cross, Jack	Odessa	Duffy, Lawrence	Bishop, Calif.
Crossett, Bob	La Union, N.M.	Dulany, Marion	Ft. Hancock
Crouse, Mrs. Hugh	El Paso	Duncan, Jane	Ysleta
Crowe, Edward	Pecos	Duncan, Wayne	El Paso
Crump, Robert	El Paso	Duthie, Larry	El Paso
Cuen, Mario	El Paso	Duty, Eddie Mae	El Paso
Curtan, E. R.	El Paso	Duty, Lucile	El Paso
Curtiss, Margaret	El Paso		
Curtiss, Patty	El Paso		
Cuthbertson, Louis	El Paso		
		Earp, Mrs. Pina Mae	El Paso
Daito, May	Ysleta	Easley, Myrtis	El Paso
Daito, Yone	Ysleta	Echaniz, Eugene	El Paso
Dakan, Myrtle	El Paso	Eden, George	El Paso
		Edens, Roger Russell	El Paso
		Egerton, William	El Paso

Ehrenstein, Enid	El Paso	Fuentes, Charles	El Paso
Elfers, Nancy	El Paso	Fugate, George	El Paso
Elkin, Margaret	El Paso	Fuller, Maysel	El Paso
Elliot, Carrie F.	El Paso		
Ellis, Jack	El Paso	Gaal, George	El Paso
Ely, Mrs. Maud	El Paso	Gaddy, James	El Paso
Emerson, David	El Paso	Galbraith, Helen	El Paso
Emerson, Richard	El Paso	Galindo, Mrs. Isis	El Paso
Escajeda, Luz	El Paso	Gallagher, Ann	El Paso
Escudero, Enrique		Gallagher, Charles	El Paso
	Mexico City, Mexico	Gallagher, Rial	El Paso
Espinosa, Juan	El Paso	Gallion, Dean	Weslaco
Evans, Mrs. Emily	El Paso	Gallup, Edward	Clint
Evans, Ward	Tulsa, Okla.	Garcia, Armando	El Paso
Ezquerria, Baldomero	El Paso	Garcia, Ezequiel	El Paso
		Garcia, Jose	El Paso
Feedback, Josephine	El Paso	Garcia-Nunez, Margarita	El Paso
Feeback, Virginia	El Paso	Gardea, Harvey	El Paso
Fellabaum, George	El Paso	Gardea, Joe	El Paso
Ferguson, Dave	El Paso	Gardiner, Mrs. G.	El Paso
Fernandez, Elena	El Paso	Garner, Ruth	El Paso
Fernandez, Ernesto	El Paso	Gary, Wilma	El Paso
Fernandez, Martin	El Paso	Garza-Pena, Lucia	El Paso
Fernandez, William	El Paso	Gatlin, Eula	El Paso
Ferris, Mrs. Edna	El Paso	Gavaldon, Jesus	El Paso
Ferris, Mary Lee	El Paso	Gehring, Alice	El Paso
Feuille, Edith	El Paso	Gentry, Mrs. Mary Nell	El Paso
Fields, Mrs. Edna	El Paso	George, Fred William	Houston
Figueroa, William	El Paso	Georges, Robert	El Paso
Files, Mrs. June	El Paso	Gerwels, Richard	Tacoma, Wash.
Filson, Robert	Midland	Gibson, Evelyn	El Paso
Finch, Haynes	El Paso	Gibson, Jane	El Paso
Fincher, Mrs. Rosalie	El Paso	Gill, Jack	El Paso
Fino, Ben	El Paso	Gilliland, Craig	El Paso
Fisher, Mrs. Lovella	El Paso	Gish, Charles L.	El Paso
Fisher, Robert B.	Capitan, N.M.	Given, Audrey	El Paso
Fitzgerald, Dewey	Ft. Bliss	Given, Mildred	El Paso
Flauiken, Jonell	Lamesa	Glass, Doris	El Paso
Fleagr, Roy	El Paso	Godoy, Manuel	El Paso
Fleming, Nils	El Paso	Goldberg, Abe	El Paso
Flores, Louis	Fabens	Goldberg, Mrs. Ada	El Paso
Floyd, Lee	El Paso	Goldfarb, William	El Paso
Floyd, Marsena	El Paso	Gonzalez, Andy	El Paso
Foester, Annette	El Paso	Gonzalez, Frank Ariz.	El Paso
Fogle, Billie Marie	El Paso	Gonzalez, Frank S.	El Paso
Foot, Janet	El Paso	Gonzalez, William	El Paso
Forbes, Frank	El Paso	Goodman, Mrs. I. B.	El Paso
Force, Charlotte	El Paso	Goodman, Leonard	El Paso
Force, James A., Jr.	El Paso	Goolsby, Myrtle	El Paso
Foreman, William	El Paso	Gordon, Stanley	El Paso
Fornero, Chester C.	El Paso	Gorman, John	El Paso
Fox, Richard	El Paso	Gottwald, Robert	El Paso
Franco, Jesus	El Paso	Gowdy, Ray	Amarillo
Franey, Catherine J.	El Paso	Grant, Ernestine	El Paso
Franks, Edward	El Paso	Grant, Joyce	El Paso
Frausto, Zwinglio W.	El Paso	Grattan, Lynch	El Paso
Fresquez, Jose	Ysleta	Graves, Raymond	Brady
Fryer, Austin	El Paso	Gray, Thomasine	El Paso

Grayson, Margaret	El Paso	Harvey, Paul	El Paso
Greear, George	El Paso	Hausman, Harvey	El Paso
Green, Archie	Crane	Hawkins, Jenna	Canutillo
Green, Elizabeth	Odessa	Hayes, Neil	El Paso
Green, Johnnie	Odessa	Hays, Alice	El Paso
Green, Margie	El Paso	Hays, Eugene	El Paso
Greening, Virginia	Plainview	Hays, Joe	Dallas
Gregory, Harold J.	Carland	Healy, Jack	El Paso
Grider, Jane	El Paso	Heffernan, Betty J.	El Paso
Griffin, Peggy Lou	El Paso	Heidland, Alice	El Paso
Grooms, Virginia	El Paso	Heineman, Kenneth	El Paso
Gruber, Doris	El Paso	Heinzel, Jack	Hagerman, N.M.
Gruber, Juanita	El Paso	Heisig, Barbara	El Paso
Guernsey, Dick	El Paso	Heisig, Shirley	El Paso
Guernsey, John	El Paso	Heller, Isaac	El Paso
Guerra, Gloria	Sierra Blanca	Hellweg, Ralph	El Paso
Guerrero, Alice	El Paso	Hemley, Allen	El Paso
Guffey, John	El Paso	Hemley, Barbara	El Paso
Guthrie, James	El Paso	Hendon, Juanita	El Paso
Gutierrez, Enrique	Juarez, Mexico	Hendon, Mrs. Louise	El Paso
Gutierrez, Rafael B.	El Paso	Hendrick, Lorraine	El Paso
Gutierrez, Santiago	Laredo	Hendricks, Charlee	El Paso
		Henry, Cecile	El Paso
Haas, Werner	Monterrey, Mexico	Herman, Julius Wm.	El Paso
Haddad, Alice	El Paso	Hermann, Arthur	El Paso
Hagquist, Bert	Casper, Wyo.	Hernandez, Fred	El Paso
Hague, James	El Paso	Herr, Richard	El Paso
Hahn, Dorothy	El Paso	Herrera, Albert	El Paso
Haigler, Claude	El Paso	Herring, Amelia	Clint
Halbrook, Eldon	Odessa	Herron, Irene	El Paso
Hall, Darrell	El Paso	Hershey, Donovan	El Paso
Hall, Frances	El Paso	Hesler, John	El Paso
Hall, Robert	El Paso	Hester, Henry	El Paso
Hall, Roxine	Ysleta	Hicks, John A., Jr.	El Paso
Hamlyn, Dorothy	El Paso	Higdon, Therese	El Paso
Hamlyn, Richard	El Paso	Hilburn, Nancy	El Paso
Hammond, Lena	El Paso	Hill, Aileen	Ft. Bliss
Hammonds, Clyde	El Paso	Hill, Philip H.	La Tuna
Hamrah, Joe	El Paso	Himmel, Mary Alice	El Paso
Hancock, Eddie Jo	Marathon	Hine, Mrs. Irene K.	El Paso
Hanna, Mary Jane	El Paso	Hines, Elizabeth Ann	El Paso
Hanson, Nellie	El Paso	Hinton, Jim	El Paso
Harden, Walter	El Paso	Hinton, John	El Paso
Hardy, Cleo	El Paso	Hoard, Ruth	El Paso
Hare, Donald	El Paso	Hobbs, Doris Lee	El Paso
Hare, Susannah	El Paso	Hodges, Dorothy	El Paso
Harper, Mrs. Estelle	El Paso	Hodges, Mildred	El Paso
Harper, James R.	El Paso	Hodges, Ralph	El Paso
Harrell, Christine	El Paso	Hoffer, Elizabeth Ann	El Paso
Harrington, Constance	El Paso	Holcombe, Robert	Balsas, Mexico
Harrington, Mrs. G.	El Paso	Holloway, Carroll	El Paso
Harris, Mrs. Esther	El Paso	Holmes, Thomas	El Paso
Harris, Mozelle	El Paso	Hoover, Bartley	Lefors
Harrison, Henry	El Paso	Hope, Thomas	St. Paul, Minn.
Harrison, Mrs. J.	El Paso	Hornedo, Consuelo	El Paso
Harshbarger, John	El Paso	Houser, Mrs. Winifred	El Paso
Hart, James A.	El Paso	Howard, Arthur	Palestine
Hartford, Mary Ann	El Paso	Howard, Beryl	El Paso

Howard, Preston	.....	Palestine	Keltner, Edwarda	.....	El Paso
Howell, Alfred	.....	El Paso	Kemp, Betty Joe	.....	El Paso
Howle, Loyle	.....	El Paso	Kempler, Walter	.....	El Paso
Hubbard, Edwin	.....	El Paso	Kennedy, Betty	.....	El Paso
Huber, Harold	.....	Nashville, Tenn.	Kennedy, Jane	.....	El Paso
Hudson, Bill	.....	El Paso	Kennedy, Ruth	.....	El Paso
Hudson, Jack	.....	El Paso	Kerley, Bernard	.....	Ysleta
Hudson, Lois	.....	El Paso	Kerley, Daniel J.	.....	Ysleta
Hughes, Barney	.....	El Paso	Kerr, Mary Edythe	.....	Ysleta
Hughes, Sue	.....	El Paso	Key, Oren	.....	El Paso
Hughes, Winifred	.....	El Paso	King, Charles	.....	El Paso
Hungerford, William	.....	El Paso	King, George	.....	Dallas
Hunnicut, Bobbie	.....	El Paso	King, James V.	.....	El Paso
Hunt, Jack	.....	El Paso	King, Jimmy W.	.....	El Paso
Hunter, Lester	.....	El Paso	King, Robert	.....	El Paso
Huntress, Shirley	.....	El Paso	Kirksey, Tom	.....	El Paso
Hutchins, Helen	.....	El Paso	Kissel, Marianne	.....	El Paso
Hutchins, Lucia P.	.....	El Paso	Kitson, Nancy	.....	El Paso
Hyland, Mrs. Eunice	.....	El Paso	Klabock, Beatrice	.....	El Paso
Ibarra, Rafael B.	.....	El Paso	Klink, Kathyleen	.....	El Paso
Ives, Herbert D.	.....	El Paso	Klink, Peggy	.....	El Paso
Jackson, Mary D.	.....	El Paso	Kluger, Jerry	.....	El Paso
Jackson, Sue	.....	El Paso	Knight, Kit	.....	Tenaha
James, Cecilia	.....	El Paso	Knight, Marguerite	.....	El Paso
Jameson, Dowd	.....	El Paso	Knipps, August	.....	El Paso
Jameson, William	.....	El Paso	Kobold, Beatrice	.....	El Paso
Jaycox, Jeanette	.....	El Paso	Koons, Edward	.....	El Paso
Jenness, Harry	.....	El Paso	Koortz, Bertha	.....	El Paso
Jenness, Richard	.....	El Paso	Kornfeld, Leonard	.....	El Paso
Jensen, Harry	.....	Ft. Bliss	Kozloske, Martha	.....	El Paso
Job, George Elaine	.....	El Paso	Kranzthor, Terry	.....	El Paso
Johnson, Arnie (Guy)	.....	Volin, S.D.	Krebs, John	.....	Odessa
Johnson, Alma	.....	El Paso	Kremith, Betty	.....	El Paso
Johnson, Haskell Lee	.....	El Paso	Kriechbaum, James R.	.....	El Paso
Johnson, Mary Virginia	.....	El Paso	Lambert, Cyrus	.....	El Paso
Johnston, Joe	.....	Granbury	Lambeth, J. D.	.....	El Paso
Johnstone, William	.....	El Paso	Lampert, Fred	.....	El Paso
Jones, Betty Louise	.....	El Paso	Lance, Donald	.....	El Paso
Jones, Edna Marie	.....	El Paso	Lane, George	.....	El Paso
Jones, Elsie B.	.....	El Paso	Lane, Ray	.....	El Paso
Jones, Frances	.....	El Paso	Lange, June	.....	El Paso
Jones, Grayce	.....	El Paso	Lanier, Betty	.....	El Paso
Jones, Mrs. Louise	.....	El Paso	La Rock, Byron	.....	El Paso
Jones, Mrs. O. E.	.....	El Paso	Lassetter, Jean	.....	El Paso
Jones, Waldo	.....	Duncan, Ariz.	Lassetter, Robert	.....	El Paso
Jones, Wm. Richard	.....	El Paso	Lassitter, Newton	.....	El Paso
Jonz, Joyce	.....	El Paso	Lathrop, Marjorie	.....	Hortonville, Wis.
Joseph, George	.....	El Paso	Lawless, Raymond	.....	El Paso
Jourdan, Everitt	.....	El Paso	Lawrence, Audrey	.....	El Paso
Julien, Donald	.....	El Paso	Leeser, David	.....	Chihuahua, Mexico
Kahl, Mrs. Margaret	.....	El Paso	Lefkowitz, Mildred	.....	El Paso
Kahn, Louis	.....	El Paso	Leib, Sylvia	.....	El Paso
Kannady, Jack	.....	Temple	Leon, Heracleo	.....	El Paso
Keillogg, Carl	.....	El Paso	Lerner, Ruth	.....	El Paso
Kelly, Mary A.	.....	El Paso	Levenson, Sydney	.....	El Paso
			Lickel, William	.....	El Paso
			Licon, Francisco	.....	El Paso

Lide, Henry	El Paso	McMillan, Jackie	Ft. Bliss
Liffmann, Rolf	El Paso	McNail, Elizabeth	El Paso
Limon, Roberto	El Paso	McNeil, Jane	El Paso
Lind, Jack R.	El Paso	McRae, Marjorie	El Paso
Lind, Mrs. Lillian	El Paso	McTier, Frank	El Paso
Lindlof, Mary Louise	El Paso	MacFarlane, Sheila	El Paso
Link, Felice	El Paso	Machado, Manuel	El Paso
Livingston, Morgan	El Paso	Macias, Elias	El Paso
Lizarraga, Romeo	El Paso	Macias, Faustino	El Paso
Lizarraga, Servando	El Paso	Maddox, Maude	El Paso
Lochhausen, Woodruff	El Paso	Maluf, Ned	El Paso
Long, Betty Barbara	El Paso	Mandell, Ida Rose	El Paso
Long, Hudson	Dallas	Mangan, Frank	El Paso
Longnecker, Dorothy	El Paso	Manker, Charles	El Paso
Longnecker, Joe B.	El Paso	Manker, Hazel Ann	El Paso
Longuemare, Marguerite	Ysleta	Mansfield, Jane	El Paso
Look, George	El Paso	Mapel, Dexter	El Paso
Lopez, Joe	El Paso	Maraman, William	El Paso
Lord, Mrs. Clara	El Paso	Maros, Mike	Fabens
Louzara, Amelia	Detroit, Mich.	Marston, Margaret	El Paso
Love, Tom	El Paso	Martin, Harry Wm.	El Paso
Lovelace, Mrs. Daisy	El Paso	Martin, James Robert	El Paso
Lovelace, Mrs. Ethyl	El Paso	Martin, Mary Alice	El Paso
Lovret, John	El Paso	Martin, Mildred	San Simon, Ariz.
Lowe, LeRoy	El Paso	Martin, Peggy	El Paso
Lumpkin, Edgar	El Paso	Martin, Robert	El Paso
Lux, Tempe	El Paso	Martin, Tommy	El Paso
Lynch, Donald	Ray, Ariz.	Martinez, Ambrosio	El Paso
Lynch, Frank	El Paso	Martinez, Luis	El Paso
Lynch, Jehanne	El Paso	Martinez, Mary	El Paso
Lynch, Sue Jean	El Paso	Martinez, Ramon	El Paso
Lyon, Robert	El Paso	Martinez, Rosita	El Paso
Lyons, Peggy	El Paso	Martinez, Victor	El Paso
		Mason, Ben	El Paso
McAdoo, Fay R.	El Paso	Mason, Helen	Huntsville, Ala.
McAdoo, Ona Mae	El Paso	Massey, Robert	Grapevine
McAllister, Warren	Tuxedo	Masten, Frank	El Paso
McAlmon, Peter	El Paso	Mateus, Robert	El Paso
McCabe, Donald	El Paso	Maurice, James	Odessa
McCall, Martha Mae	El Paso	Maxon, Mrs. Orell	El Paso
McCallick, Hugh	El Paso	Maxwell, Norris	El Paso
McCann, Leo	Midland	Maya, Manuel	El Paso
McCarty, Jack	El Paso	Mayfield, Mrs. Ethel	El Paso
McCleskey, James	El Paso	Mayfield, Geraldine	El Paso
McConnell, Gladys	El Paso	Mayfield, William	El Paso
McCord, Frank	El Paso	Medina, Jose	El Paso
McCormac, Marion	El Paso	Meece, James H.	El Paso
McCormack, Ellen	El Paso	Melendez, Jose	El Paso
McCormick, A. W.	El Paso	Melton, John	El Paso
McCutchan, Nell	El Paso	Mena, Gloria	El Paso
McDonald, Betty	El Paso	Mendoza, Cesar	El Paso
McDonnell, Ada	El Paso	Mendoza, Joaquin,	
McGregor, Ruth	El Paso		Chihuahua, Mexico
McKenzie, Pauline	Marfa	Merbeth, Richard	El Paso
McKinney, Doris	El Paso	Merkin, Byron	El Paso
McKinney, James	El Paso	Merriman, LeGrand	Pecos
McKinney, Wilmoth	El Paso	Metcalf, Juanita	El Paso
McMahon, Mrs. Faye	El Paso	Meyer, Marjorie	El Paso

Meyer, Wilma	El Paso	Naylor, Mary Frances	El Paso
Meyers, Leannell	Lamesa	Nealon, Mrs. Elizabeth	El Paso
Middleton, Marjorie	El Paso	Neece, Richard	Dallas
Miller, A. R.	Fabens	Neel, James Fitch	El Paso
Miller, Mrs. E. E.	El Paso	Neeley, Benton B.	El Paso
Miller, Frances	El Paso	Neeson, James T.	El Paso
Miller, Harry	Huntsville	Newman, Bob	El Paso
Miller, H. C.	El Paso	Nichols, Peyton	Amarillo
Miller, Mrs. Jeanne	El Paso	Nold, Mrs. Lucille	El Paso
Miller, J. Richard	Dallas	Norcop, Lenna Marie	El Paso
Miller, William Edgar	El Paso	Nordin, Windsor	El Paso
Miller, Wm. Eldridge	El Paso	Nordwald, Ruth	El Paso
Mills, Julian	El Paso	Norman, Val	El Paso
Miskimins, Harry	El Paso	North, Mary Lou	El Paso
Miskimins, Ruth	El Paso	Norwood, Margaret	El Paso
Mitcham, Robert	El Paso		
Mitchell, Mrs. Fern	El Paso	Oden, Altanell	El Paso
Mitchell, Mary Ann	El Paso	O'Donnell, Hugh	El Paso
Mitcheltree, Isabelle	El Paso	Oechsner, Kathleen	El Paso
Mithoff, Richard	El Paso	Ogbourne, Betty Lou	Abilene
Mock, Mrs. Willagene	El Paso	Ohlemeyer, Keith	El Paso
Moffett, Jed	El Paso	Olds, Mrs. Blondye	El Paso
Monroe, Ruth	El Paso	O'Leary, Albert	El Paso
Montague, Marie	Dallas	Oliver, Edward	El Paso
Mooney, Patricia Ann	Ysleta	Oliver, Joseph	El Paso
Moore, Bernice	El Paso	Olmsted, Verna	Des Moines, Iowa
Moore, Bert C.	Doniphan, Mo.	Olson, John	El Paso
Moore, D. C.	Van Horn	O'Marron, Martha	El Paso
Moore, Harry	El Paso	O'Neal, Kermit	El Paso
Moore, Jean	El Paso	Onick, Louis	El Paso
Moore, John P.	El Paso	Oppenheim, Clarence	
Moore, Lillian	El Paso		Juarez, Mexico
Moore, Marian	El Paso	Oppenheim, Lillian	El Paso
Moore, Richard Lee	El Paso	Ornelas, Catalina	El Paso
Moore, Robert Paul	El Paso	Ornelas, Manuel	El Paso
Mora, Salvador	El Paso	Orr, John Rawls	El Paso
Morales, Victor	El Paso	Orr, Mrs. Louise	El Paso
Moran, Mary Sophia	El Paso	Ortiz, Ignacio	El Paso
Morris, Bert	El Paso	Owen, John L.	Odessa
Morris, Dorothy Faye	El Paso		
Morris, Nixon	El Paso	Page, Annie	El Paso
Morton, Amelia	El Paso	Pajari, Raymond	Brooklyn, N.Y.
Moussier, Maria Luisa	El Paso	Palafox, Olivia	El Paso
Mueller, Albert	El Paso	Palm, G. B.	El Paso
Mueller, Emil J.	El Paso	Palm, Irene	El Paso
Mueller, Joseph F.	El Paso	Paredes, Felipe	El Paso
Mulcahy, Catherine	El Paso	Parmelee, Mary Alyce	El Paso
Munoz, F. Nicholas	El Paso	Patton, June	El Paso
Murphey, Robert	El Paso	Paul, Edd	El Paso
Mustain, Paul	El Paso	Paul, Robert	El Paso
Myers, Jean	Fabens	Paxton, Mavis	El Paso
		Payne, Mrs. Clifford	El Paso
Nance, Bennie	El Paso	Payne, Marilyn	El Paso
Nance, Billie Louise	El Paso	Pell, George	El Paso
Napoles, Cecilia	El Paso	Pena, Mario	Laredo
Nations, Hildon	El Paso	Pendley, Claude	Dallas
Navarro, Victor	El Paso	Penick, Robert	Houston
Naylor, James	El Paso	Pennington, Barry	Georgetown

Perches, Albert	El Paso	Resley, Mrs. Louise	El Paso
Perez, Carlos	Juarez, Mexico	Reynolds, George	El Paso
Perez, Maria Teresa	El Paso	Rheinheimer, Emilie	El Paso
Perez, Soledad	El Paso	Riba, Robert	El Paso
Peterson, Dorothea	El Paso	Rice, Frances	El Paso
Peterson, Walter	El Paso	Rice, Robert	El Paso
Phillips, Jack	El Paso	Richards, John	El Paso
Pillow, Mrs. Lucille	El Paso	Richmond, Frank	Ft. Bliss
Pitts, Howard	El Paso	Rigdon, Dorothy Mae	El Paso
Pitts, Richard	El Paso	Rike, William	El Paso
Podliska, Elmer J.	El Paso	Riley, Katharine K.	Ft. Bliss
Polster, Arnim	El Paso	Rindom, Virgil	El Paso
Ponsford, Olga	El Paso	Rinehart, Tiffany	El Paso
Poppell, James Wm.	El Paso	Rister, Eugene	El Paso
Porras, Mario	El Paso	Ritter, Robert	El Paso
Potash, William	El Paso	Rivera, Facundo	Smelter
Potton, Willie Belle	Santa Rita, N.M.	Rivers, James F.	El Paso
Prade, Frank	El Paso	Roberts, Clodine	El Paso
Prati, Joe	El Paso	Roberts, Florine	El Paso
Price, Dick	El Paso	Roberts, Walton C.	El Paso
Price, John Edward	El Paso	Robinson, Gene	El Paso
Price, Joseph	El Paso	Robinson, John V.	El Paso
Price, Owen	Chicago, Ill.	Robinson, Madden	El Paso
Price, Robert Edmond	El Paso	Robinson, Richard	El Paso
Prieto, Juan	El Paso	Roden, Mildred	El Paso
Provencio, Antonio	El Paso	Rodgers, Nell	Barstow
Provencio, John J.	El Paso	Rodgers, Pollard	Barstow
Puente, Victor	El Paso	Rodriguez, Bertha	El Paso
Pumphrey, Genevieve	El Paso	Rodriguez, Mildred	El Paso
Purcell, Jack	El Paso	Rogers, Fred	El Paso
Purkey, Donivee	El Paso	Roman, Jose	El Paso
Putnam, Mrs. Kathryn	El Paso	Romo, Estela	El Paso
		Romo, Lillian	El Paso
Quick, Beverly	El Paso	Rosenberg, Ruth	El Paso
Quick, Miriam	Houston	Rosenberg, Samuel	El Paso
Quirarte, Humberto	Juarez, Mexico	Rosenwasser, Joe	El Paso
Quitana, Lawrence	El Paso	Ross, Charlie L.	El Paso
		Rouse, Mrs. Marie S.	El Paso
Rabell, Arthur	Mexico, D.F.	Rowdabaugh, Marshall	Warsaw, Ind.
Ragsdale, Mrs. Olive	El Paso	Rowe, Sue	Ft. Bliss
Ramos, Armando	Parral, Mexico	Rudolph, Elizabeth J.	El Paso
Ramsey, Douglas	El Paso	Ryals, Andrew	Waco
Ramsey, Gregory	El Paso		
Ramsey, Henry L.	El Paso	Sadowsky, Julius	Van Horn
Rancich, George	Fabens	Saffold, Marian	El Paso
Randal, William E.	El Paso	Saffold, William	El Paso
Randall, Bill	El Paso	Salcedo, Gilbert	El Paso
Randel, Maggie	El Paso	Saldana, Nicanor	El Paso
Randel, Marianne	El Paso	Salem, Jack	El Paso
Raney, Morris	Temple	Sanchez, Luis	El Paso
Reagan, Bruce	El Paso	Sanchez, Mrs. Lupe	El Paso
Redd, Raymond	El Paso	Sanchez, Rafael	El Paso
Reed, H. L.	El Paso	Sandoval, Irene	El Paso
Reed, Joyce	El Paso	Sauer, Ernest	El Paso
Reed, Sam	El Paso	Scarborough, Catherine	El Paso
Reedman, Lawrence	El Paso	Schreck, Robert	El Paso
Reid, Mary Lillian	El Paso	Schroeder, Martha	Wilmington, Calif.
Reid, Robert L.	El Paso	Schumaker, Robert	El Paso

Scott, Mrs. Lillian	El Paso	Stirman, Marion	El Paso
Sears, Robert	El Paso	Stoker, Mrs. Eryline	El Paso
Seawell, Elizabeth	El Paso	Stone, Jack	El Paso
Segulia, Mary	Tornillo	Stormont, Mary C.	El Paso
Serrano, Armando	El Paso	Stotts, Thomas	El Paso
Shaffer, James	El Paso	Stowe, Jimmie Lou	El Paso
Shamaley, John	El Paso	Stowe, Robert	El Paso
Shamaley, Lee	El Paso	Strain, Mrs. Ednamae	El Paso
Shapleigh, Eliot	El Paso	Stringer, William	El Paso
Shapleigh, Robert	El Paso	Stubblefield, Jackie	Canutillo
Shaw, Lois Virginia	El Paso	Stull, Charles	El Paso
Sheid, Wallace	El Paso	Sturgeon, Neal	El Paso
Sherrill, Marjorie	Waco	Sullivan, Patrick	El Paso
Sherwood, Clarice	El Paso	Sundquist, Eloise	El Paso
Shoopman, Billie	Odessa	Sundquist, Gus	El Paso
Shoppach, Charles	El Paso	Sundquist, Thelma	El Paso
Shumate, Frank	El Paso	Swain, Alvah	El Paso
Sibley, Marjorie	Toyah	Swan, William Cole	El Paso
Sigrist, Gloria	El Paso	Sweeney, Joe	El Paso
Silva, Hector	El Paso	Szulyovics, Dr. Ernest	El Paso
Silva, Jose	El Paso		
Silva, Roy	El Paso	Talley, Ruth	El Paso
Silver, Henrietta	El Paso	Tanner, Margery	El Paso
Simmons, Anita Jo	Haskell	Tannich, Oscar	El Paso
Simon, Joe	El Paso	Tappan, David	El Paso
Sims, Claude	El Paso	Taylor, C. Allen	Gainesville
Skains, Agnes	Normangee	Teague, Mrs. Mildred	El Paso
Slauter, Lee	El Paso	Telford, Mrs. Elizabeth	El Paso
Sleet, Harwell	El Paso	Telford, Jack	Ardmore, Okla.
Smith, Betty	El Paso	Terrazas, Alfredo	El Paso
Smith, Mary Frances	El Paso	Terrazas, Maria S.	El Paso
Smith, Wiley A.	High Rolls, N.M.	Terrazas, Nick	El Paso
Smoot, Earl	El Paso	Thacker, Fred	El Paso
Snell, Peggy	El Paso	Thomas, Cecil	Thorp Springs
Snelson, Marshall	Monahans	Thomas, James D.	El Paso
Snider, Robert	El Paso	Thomas, Romulus	El Paso
Solomon, Jack	El Paso	Thompson, Betty	Ysleta
Sorensen, Harry P.	El Paso	Thompson, Dorothy	El Paso
Soucek, Effie	El Paso	Thompson, Mrs. Jessie	El Paso
Soucek, Mae	El Paso	Thorne, John	El Paso
Spar, Morton	Miami, Fla.	Thurston, Marjorie	El Paso
Sparks, Betty Anne	El Paso	Tiller, Mrs. Lela	El Paso
Sparks, Edith Nellie	Ysleta	Tillery, Carol	El Paso
Sparks, Ruth M.	El Paso	Tillman, Juanice	El Paso
Stablein, Betty	El Paso	Tinnin, Mrs. Wanga	El Paso
Stacy, Jim	El Paso	Tomlin, Betty Jeanne	El Paso
Stacy, Mary Gray	El Paso	Tooley, Joe	El Paso
Stanton, Elbert	Gladewater	Toone, Herbert	Esperanza
Stanton, Lawrence	El Paso	Toone, James	Esperanza
Stark, Betty	El Paso	Torres, Gustavo	El Paso
Starr, Leona	Marathon	Tovar, Guillermo	El Paso
Stembridge, Vernie	El Paso	Treat, Dean	El Paso
Stenis, Thomas	El Paso	Trevino, Adelina	El Paso
Sterling, Claragene	El Paso	Trevino, Salvador	Mexico City, Mexico
Stevenson, Boynton	El Paso	Trimble, Elizabeth	El Paso
Stewart, Olive	El Paso	Triolo, Jerome	El Paso
Stewart, Robert	El Paso	Tucker, Nash	Odessa
Stiles, Ray	El Paso	Twining, John	La Tuna

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Twiss, Frances	El Paso	Whitlock, Robert	El Paso
Tyler, Dave	El Paso	Wilbourn, Martha	El Paso
Unsell, Virginia	El Paso	Wiley, Howard	El Paso
Upperman, Joyce	El Paso	Williams, Arthur	El Paso
Valdez, Mrs. Nell G.	El Paso	Williams, Athalie N.	El Paso
Valencia, Elva	El Paso	Williams, Charles	Tonkawa, Okla.
Valentino, Alfred	El Paso	Williams, Dorothy	El Paso
Van Doren, Donald	El Paso	Williams, Edd	Vernon
Vans Evers, LaFrance	El Paso	Williams, Certrude	Ysleta
Vans Evers, Calvert	El Paso	Williams, La Monte	El Paso
Van Trease, Mrs. R.	El Paso	Williams, Lefaroy	El Paso
Vasquez, Eduardo	El Paso	Williams, Mrs. Rena	El Paso
Vasquez, Mike	El Paso	Williams, Robert	El Paso
Vega, Anita	El Paso	Williamson, Byron	Canutillo
Vermillion, John	El Paso	Williamson, Elmer	El Paso
Vesey, Gladys	El Paso	Williamson, Nolan	El Paso
Vickers, Carrie Lee	El Paso	Willie, Winifred	El Paso
Vigil, Victor	El Paso	Willingham, Drew	El Paso
Villareal, Federico Monterrey, Mexico		Willis, Joe Sam	El Paso
Villareal, Rodolfo Monterrey, Mexico		Willis, Marshall	El Paso
Vinson, Benita	El Paso	Wilmarth, Mrs. J. C.	El Paso
Vomocil, Frank	El Paso	Wilmoth, Wilma	El Paso
Vomocil, Mrs. Sallie	El Paso	Wilson, Eugene	Ft. Towson, Okla.
Waggoner, David	El Paso	Wilson, Gordon	Ft. Towson, Okla.
Walker, Clarence M.	El Paso	Wilson, Jane	El Paso
Walker, Lytle	El Paso	Wilson, Louise	El Paso
Walker, Maurine	Kerens	Wilson, Mrs. Martha	El Paso
Walker, Rosemary	El Paso	Wilson, Mary	El Paso
Walker, Thomas	El Paso	Wilson, Ned	El Paso
Waller, Robert	El Paso	Winans, Francis N.	El Paso
Ward, Eleanor J.	El Paso	Winterrowd, Mrs. K.	El Paso
Ward, Oscar	El Paso	Wintroub, S. Z.	El Paso
Wardy, Jim	El Paso	Woelber, William	El Paso
Warren, Hosea	Hico	Womack, Laetitia	El Paso
Warren, Mrs. Laura	El Paso	Womack, Lenora	El Paso
Watzke, Donald	El Paso	Wood, Harry David	El Paso
Weaver, Louise E.	El Paso	Wood, Mamie	El Dorado, Ark.
Webb, Lily	El Paso	Woodley, Dorothy	El Paso
Webel, Herman	El Paso	Woodrow, Joanna	El Paso
Webel, Lewis	El Paso	Woods, Margaret	El Paso
Wehner, William	El Paso	Worle, Fred	El Paso
Weiller, Harold	El Paso	Wright, John L.	El Paso
Wentz, Frank	El Paso	Wright, Margaret	Terrell
Werley, Richard	El Paso	Wright, Mrs. Marguerite	El Paso
West, Dony S.	Ft. Bliss	Wright, Stanley	Monahans
West, Dorothy	El Paso	Wylie, John	Roswell, N.M.
West, Elizabeth	Ft. Bliss	Yapor, Mike	El Paso
West, Joseph V.	El Paso	Yeager, Gilbert	El Paso
West, Margaret	El Paso	Young, Carl	El Paso
Wheat, William	Van Horn	Young, Mrs. Elmore	Canutillo
Whitaker, Mary	El Paso	Zlabovsky, Vera	El Paso
White, Betty	El Paso	Zozaya, Jose	El Paso
		Zuniga, Antonio	Smelter

REGISTER OF STUDENTS

Summer Session, 1940

Abrego, Alfredo	El Paso	Blanchard, Mrs. Kate	El Paso
Abreu, Ovidio M.	Guanare, Venezuela	Blocker, Bill Johnston	El Paso
Acason, Gloria	El Paso	Bogardus, Mrs. Louise	El Paso
Adams, Calvin G.	El Paso	Boland, Beth	El Paso
Adams, Mrs. Eliz.	El Paso	Bolling, Jack	El Paso
Adams, W. B.	El Paso	Bollman, James	El Paso
Adkins, Charlotte	El Paso	Bonaguidi, Al	El Paso
Akeroyd, Edward	El Paso	Bonaguidi, Loraine	El Paso
Alderete, Joe	El Paso	Borschow, Julian	El Paso
Allen, Mrs. Dela	El Paso	Boykin, Charlotte	Washington, D.C.
Alvillar, Rueben	El Paso	Branch, William	El Paso
Anderson, Mrs. Emma Anthony,	N.M.	Brelsford, Gates	Tornillo
Antene, Charles	El Paso	Brick, Bernice	El Paso
Apodaca, Jessie Mae	Ysleta	Britton, Jack	El Paso
Arguelles, Eduardo	El Paso	Broadhead, Louise	El Paso
Arguelles, Fernando	El Paso	Brown, Bryan	El Paso
Arnold, Joseph Charles	El Paso	Browne, Robert	El Paso
Arnold, Lloyd	Roscoe	Broyles, Robert	El Paso
Arredondo, Cecilio	El Paso	Bryan, W. Joe	El Paso
Arroyo, Robert	El Paso	Bryant, David	Stephenville
Attel, George	El Paso	Buck, Mrs. Susan	El Paso
Ayoub, George	El Paso	Buhler, Mrs. Mildred	El Paso
Ayub, Romeo	El Paso	Burgard, Pete	El Paso
Babcock, Clarence	Fl. Davis	Burleson, Neal	El Paso
Bagge, Mrs. Louise	El Paso	Burrus, Constance	Ysleta
Ball, Phyllis	El Paso	Burton, Martha	El Paso
Ball, Mrs. Sara	El Paso	Bustamente, Joaquin	El Paso
Barboglio, Pete	El Paso	Butcher, Thomas	El Paso
Barrett, Fred	Tulsa, Okla.	Butchofsky, Mrs. Mary E.	Ysleta
Barron, Jack	El Paso	Byers, B. T.	El Paso
Barstow, William S.	El Paso	Byers, Howard	El Paso
Barton, Constance	El Paso	Byler, Lois	El Paso
Barton, Mrs. Mae	El Paso	Calamia, Joe	El Paso
Barwise, Marjorie	El Paso	Calderthead, Bill	El Paso
Bassett, Barbara	El Paso	Calisch, Charles	El Paso
Beahler, Lee	El Paso	Campbell, Doris	El Paso
Belding, Mardee	El Paso	Candelaria, Mrs. Margaret	El Paso
Bell, Nelda	El Paso	Caplinger, Mrs. Alice	El Paso
Bemis, George	El Paso	Carlsen, Flora Mae	El Paso
Bennett, Efa Lou	El Paso	Carpenter, John	El Paso
Bernudez, Jaime	Juarez, Mexico	Carreon, Refugio	El Paso
Berryhill, Richard	El Paso	Carrera, Philip	El Paso
Biediger, Mrs. Marie	El Paso	Casteel, Martha	El Paso
Black, Harold Reed	El Paso	Caster, Margaret	El Paso
Black, Joseph F.	El Paso	Chancey, Mrs. Edna	El Paso
Black, Kate	El Paso	Chesak, W. J.	El Paso
Black, Mrs. Louise	El Paso	Clark, Frances Jane	El Paso
Black, Mrs. Lucie Lee	El Paso	Clark, Mrs. Myra	El Paso
Black, Winston	El Paso	Clarke, Rollin F.	El Paso
Blackmon, Minnie	El Paso	Clatfelter, A. C.	Sanderson
Blackwell, Jack	El Paso	Coblentz, Mrs. Luther	El Paso

Register of Students

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Cockrell, C. A., Jr.	El Paso	Emery, Waldo	El Paso
Compton, Robert	Houston	Eyler, Kathleen	El Paso
Conley, Fannie Lee	El Paso	Ezquerria, Baldomero	El Paso
Connolly, Agnes	El Paso		
Cooper, Mrs. Myrtle	Ysleta	Fairbank, Charles	El Paso
Copenhaver, Mary	El Paso	Feeback, Virginia	El Paso
Coppedge, Elna M.	El Paso	Fernandez, Elena	El Paso
Cordell, Mrs. Mona	Canutillo	Fernandez, Ernesto	Mercedes
Cordero, Francisco	El Paso	Fernandez, Martin	El Paso
Cornelison, Mary	Ysleta	Fernandez, William	El Paso
Corona, Aurora	El Paso	Fisher, Mrs. Lovella	El Paso
Cottingham, Quillen	El Paso	Fitzgerald, Dewey	Ft. Bliss
Counts, Jack	El Paso	Floyd, Lee Paul	El Paso
Cox, Esther	El Paso	Foester, Annette	El Paso
Cox, Grace	El Paso	Fogle, Billie Marie	El Paso
Cox, Lucy	El Paso	Foote, Janet	El Paso
Crawford, Charlotte	El Paso	Foote, Mrs. Sara B.	El Paso
Crimen, Jenny Bob	El Paso	Foret, Mrs. Belle	El Paso
Crutcher, Mrs. Charlotte	El Paso	Fornero, Chester	El Paso
Cruze, Mrs. Edythe	Ysleta	Foster, Mrs. Inez	El Paso
Curtan, Eugene R.	El Paso	Franco, Jesus	El Paso
Curtiss, Mrs. Virginia	El Paso	Francy, Catherine	El Paso
		Franklin, Happy	El Paso
Darbyshire, Russell	Anthony, N.M.	Franklin, Joanna	El Paso
Daugherty, Mrs. Emily	El Paso	Franklin, Sol	El Paso
Davidson, Zelllor	El Paso	Franks, Edward	El Paso
Davis, Mrs. Gertrude	El Paso	Freeman, Leola	El Paso
Davis, Jim	El Paso	Fresquez, Joe S.	Ysleta
Davis, Mrs. Medora	El Paso	Fugate, George	El Paso
Davis, R. L.	El Paso	Fuller, Dora	Fabens
Davis, Thelma Lee	Sierra Blanca		
Davis, Mrs. Violet	Ysleta	Gaddy, James	El Paso
Dean, Charles	El Paso	Gantt, Mrs. Mildred	El Paso
Delaney, Helen W.	Ysleta	Carbrecht, Marjorie	El Paso
Delgado, Pablo	El Paso	Garcia, Armando	El Paso
Del Valle, Salvador	El Paso	Garcia-Nunez, Margarita	El Paso
Denton, George	Clint	Garrett, Mary Lena	El Paso
Des Autels, Mrs. Phebe	El Paso	Gary, Wilma	El Paso
Desmond, Vincent	Brooklyn, N.Y.	Gatlin, Mrs. Eula	El Paso
DeVito, Alfred T.	Midland	Gibb, Helen	El Paso
Diaz, Oscar	Juarez, Mexico	Gilchrist, Sophie	El Paso
Dickenson, Mrs. Helen	El Paso	Gilland, Lois	El Paso
Divelbiss, Mrs. Frankie	El Paso	Gilreath, Mrs. Josephine	El Paso
Don, Rita	El Paso	Giomi, John	El Paso
Dorris, Loris	Jacksonville	Goodwin, Jane	Kansas City, Mo.
Droleskey, Mrs. Ada	Ysleta	Gordon, Stanley	El Paso
Dugan, Helen Josephine	El Paso	Gottwald, Robert	El Paso
Duke, Louise	El Paso	Grady, Annie	El Paso
Duthie, Larry	El Paso	Graves, Mrs. Eva	El Paso
Dutton, Mary	El Paso	Gray, Mrs. Mabel	El Paso
		Green, Johnnie	Levelland
Earp, Mrs. Pina Mae	El Paso	Greening, Virginia	Plainview
Echlin, Bob	El Paso	Gruber, Doris	El Paso
Eden, George	El Paso	Gruber, Juanita	El Paso
Edwards, Lois	El Paso	Guernsey, John	El Paso
Egerton, W. G.	El Paso	Guerra, Gloria	Sierra Blanca
Elder, Fay	El Paso	Guthrie, James	El Paso
Elfers, Mrs. Nancy	El Paso	Gutierrez, Enrique	Juarez, Mexico

Haigler, Claude	El Paso	Hungerford, William	El Paso
Halbrook, Eldon	Odessa	Hunter, Mrs. Elsie	El Paso
Hall, Darwin	El Paso	Husbands, Dove	El Paso
Hall, Mrs. Mabel	El Paso	Hutchins, Lucia	El Paso
Hamilton, Mrs. Mabel	El Paso	Hyland, Mrs. Eunice	El Paso
Hamllyn, Dorothy	El Paso		
Hamllyn, Richard	El Paso	Ibarra, Rafael B.	El Paso
Hamrah, Joe	El Paso	Imle, Edgar	El Paso
Harden, Walter	El Paso	Ingels, Mrs. Willie H.	El Paso
Hardie, Liddie	El Paso	Irvin, Hallie Ray	El Paso
Hardie, Thornton	El Paso	Ives, H. D.	El Paso
Harmon, Jack	Albuquerque, N.M.	Ivey, Ben	Ysleta
Harper, Mrs. Bertha	Ysleta		
Harper, Mary	El Paso	Jameson, William	El Paso
Harrell, Christine	El Paso	Job, George Eilane	El Paso
Harris, Mozelle	El Paso	Johnsen, Arnie	Volin, S.D.
Harshbarger, John	Fredericksburg, Pa.	Jones, Mrs. Elsie	El Paso
Hart, James	El Paso	Jones, J. P.	El Paso
Hausman, Harvey	El Paso	Jones, Waldo	Duncan, Ariz.
Hawkins, John	El Paso	Jonz, Joyce	El Paso
Healy, Jack	El Paso	Jourdan, Everitt	El Paso
Heinzel, Jack	El Paso		
Heisig, Shirley	El Paso	Kahn, Louis	El Paso
Heller, Isaac	El Paso	Kanen, Josephine	El Paso
Hemley, Allen	El Paso	Kelley, Mrs. Anne	El Paso
Hendrick, Lorraine	El Paso	Kelly, Charlee	El Paso
Hernandez, Louis	El Paso	Kelly, Ellen	Clint
Herr, Richard	El Paso	Keltner, Edwarda	El Paso
Hershey, Donovan	El Paso	Kerley, Robert	Ysleta
Hester, Henry	El Paso	Kilpatrick, Bettie	El Paso
Hicks, Mrs. Colleen	El Paso	King, Edna	El Paso
Hicks, John	El Paso	King, Robert	El Paso
Higdon, James H.	El Paso	Kirksey, Tom	El Paso
Higdon, Therese	El Paso	Kiszeli, Paul J.	El Paso
Higley, Mrs. Luella	El Paso	Kitson, Nancy	El Paso
Hignett, Mrs. Mary L.	El Paso		
Hill, Aileen	Ft. Bliss	Lambeth, J. D.	El Paso
Hill, Vernon	El Paso	Lanier, Betty Sue	El Paso
Hill, William P.	El Paso	La Porte, Mrs. Alma	El Paso
Himel, Mary Alice	El Paso	La Rock, Byron	El Paso
Hines, Elizabeth Ann	El Paso	Lee, William	El Paso
Hines, Janet	El Paso	Leiper, Mrs. Ruth	El Paso
Hinton, Mrs. Mary Blair	El Paso	Lerner, Ruth	El Paso
Hodges, Dorothy	El Paso	Levenson, Sydney	El Paso
Holbrook, Eldon	Odessa	Levy, Dorothy	El Paso
Holland, Baxter	San Marcos	Liffman, Rolf	El Paso
Holley, Marie Elizabeth	El Paso	Limon, Roberto	El Paso
Homan, Mrs. Ralph	El Paso	Lind, Jack	El Paso
Hooker, Jeff	El Paso	Longuemare, Marguerite	Ysleta
Hopkins, Julian	El Paso	Lord, Mrs. Clara	El Paso
Howard, Ralph	El Paso	Loustaunau, Dolores	El Paso
Howard, Wanda	El Paso	Louzara, Amelia	Detroit, Mich.
Howe, Richard	El Paso	Love, Tom	El Paso
Hudson, Bill	El Paso	Lowrey, Bessie	Ysleta
Huff, Henry	El Paso	Lozano, Ralph	El Paso
Huffaker, Mrs. Lois	El Paso	Lynch, Jehanne	El Paso
Huffman, Mrs. Helen	Anthony, N.M.	Lynch, K. D., Jr.	El Paso
Hughhins, Mrs. Daisy	El Paso	Lynch, Mrs. Sammie	El Paso
Hughes, Sue	El Paso		

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Lyon, Mrs. Juanita.....	El Paso	Murphey, Robert	El Paso
Lyons, Peggy	El Paso	Murray, Mrs. Marguerite.....	Ysleta
McCallich, Hugh	El Paso	Mustain, A. G.....	El Paso
McCann, Leo	Midland	Myers, Alice Jean.....	Fabens
McConnell, Gladys	El Paso	Naylor, Harold	El Paso
McCormick, A. W.....	El Paso	Naylor, James	El Paso
McDaniel, Lula	El Paso	Naylor, Mary Frances.....	El Paso
McIntyre, Leo	Houston	Nelson, Lloyd, Jr.....	El Paso
McKittrick, Robert	El Paso	Newman, Robert	El Paso
McNail, Elizabeth	El Paso	Nold, Mrs. Lucille.....	El Paso
McTier, Frank	El Paso	Norcop, Lena Marie.....	El Paso
Machado, Manuel	El Paso	Nordwald, Ruth	El Paso
Macfarlane, Sheila	El Paso	Nowlin, Mrs. Gertrude.....	El Paso
Maddox, Maude	El Paso	Oden, Altanell	El Paso
Major, Mrs. Nannie.....	El Paso	Ohlemeyer, Keith	El Paso
Mann, Rudd	El Paso	Oldham, Helen	El Paso
Maraman, William	El Paso	O'Marron, Martha	El Paso
Martin, Isabel	Corsicana	O'Neal, Kermit	El Paso
Martin, James R.....	El Paso	O'Neill, Susie	El Paso
Martinez, Luis	El Paso	Oppenheim, Charles	El Paso
Martinez, Rosita	El Paso	Oppenheimer, James	El Paso
Mason, Ben	El Paso	Osborn, Mrs. Cordelia.....	Ysleta
Maxwell, Norris	El Paso	Osborn, Mrs. Hazel.....	El Paso
May, Mrs. Kathryn	El Paso	Owens, Eugene	El Paso
Mayfield, Tom, Jr.....	El Paso	Pace, Edward B.....	El Paso
Mayfield, William	El Paso	Paddock, Mrs. Alice.....	El Paso
Means, Dorothy	El Paso	Pajari, Raymond	Brooklyn, N.Y.
Medina, Jose F.....	El Paso	Palm, J. D.....	El Paso
Mena, Gloria	El Paso	Paredes, Felipe	El Paso
Mengel, Mrs. Hallett J.....	El Paso	Paredes, Pete	El Paso
Metcalf, Juanita	El Paso	Parsons, Frank	El Paso
Miller, Elizabeth D.....	El Paso	Passmore, Agnes	El Paso
Miller, Frances	El Paso	Patridge, Mildred	Fabens
Miller, Jeanne Claire.....	El Paso	Paul, Bob	El Paso
Miller, J. R.....	El Paso	Paul, Edd	El Paso
Miller, Katherine	El Paso	Payne, Mrs. Elba.....	El Paso
Miller, Leone	El Paso	Penick, Robert	Houston
Miller, William Edgar	El Paso	Perez, Carlos	Juarez, Mexico
Miskimins, Harry	El Paso	Perry, James A.....	El Paso
Miskimins, Ruth	El Paso	Petty, Raymond	El Paso
Mitchell, Mrs. Fern	El Paso	Pickles, Fanny	El Paso
Mitchell, Mary Ann	El Paso	Pickles, Florence	El Paso
Molloy, Mrs. Grace.....	Ysleta	Pitts, Howard	El Paso
Momsen, Frances	El Paso	Podliska, Elmer	El Paso
Montgomery, James	El Paso	Poppell, J. William	El Paso
Moon, Louisa	Ysleta	Poske, Alma	El Paso
Mooney, Patricia Ann.....	Ysleta	Price, Mrs. Hazel.....	Ysleta
Moore, Byron	Amlin, Nebr.	Price, Owen	Chicago, Ill.
Moore, Harry	El Paso	Price, Robert Edmond.....	El Paso
Moore, Mrs. Hazel.....	El Paso	Provencio, Antonio	El Paso
Moore, Lillian	El Paso	Purcell, Jack	El Paso
Moore, Marian	El Paso	Putnam, Kathryn	El Paso
Moran, Mary Sophia	El Paso	Quintana, Lawrence	El Paso
Morris, Dorothy Faye.....	El Paso	Quirarte, Humberto	Juarez, Mexico
Morse, Mrs. Alberta	El Paso		
Moussier, Maria Luisa.....	El Paso		
Mueller, Joseph F.....	El Paso		
Mulcahy, Catherine	El Paso		

Ragsdale, Gladys	El Paso	Silver, Henrietta	El Paso
Randall, William	El Paso	Sitton, Virginia	Pyote
Randel, Marianne	El Paso	Skousen, Mrs. Margaret	El Paso
Rapp, Mrs. C. Shaw	El Paso	Smith, Mrs. Kathleen	El Paso
Reed, Margaret	El Paso	Smith, Mrs. Maxine	El Paso
Reedman, Lawrence	El Paso	Smith, Pauline	El Paso
Reid, Mary Lillian	El Paso	Snider, Bob	El Paso
Reid, Robert	El Paso	Sommerville, Naomi	Canutillo
Rheinheimer, Emilie	El Paso	Souceck, Effie	El Paso
Rheinheimer, Frieda	El Paso	Southworth, Mrs. Irene	El Paso
Rice, Robert	El Paso	Spar, Morton	Miami, Florida
Rigdon, Mrs. Dorothy	El Paso	Sparks, Betty Anne	El Paso
Rindom, Virgil	El Paso	Spencer, Trixy	Ysleta
Rinehart, Tiffany	El Paso	Stallings, Mrs. Belle	Ysleta
Ritter, William	El Paso	Stark, Betty	El Paso
Rivera, Facundo	El Paso	Steell, Grace	El Paso
Rivers, James F.	El Paso	Stembridge, Vernie	El Paso
Roberts, Mrs. Elsie	El Paso	Stephens, Mrs. Georgie	El Paso
Robinson, Gene	El Paso	Stewart, Waldon	El Paso
Roden, Mildred	El Paso	Stringer, William	El Paso
Rodgers, Pollard	El Paso	Stringfield, Mrs. R.	El Paso
Rodriguez, Bertha	El Paso	Sweeney, Elizabeth	Gainesville
Rogers, Bill	Clint	Sweeney, Helen	El Paso
Roman, Jose	Smelter	Sweeney, Joseph	El Paso
Romo, Estela	El Paso	Szrulyovics, Dr. Ernest	El Paso
Rose, Mrs. Grace	El Paso		
Rosenbaum, Arthur	El Paso	Tatsch, Betty	El Paso
Rosenwasser, Joe	El Paso	Teague, Mrs. A. M.	El Paso
Rowdabaugh, Marshall	Warsaw, Ind.	Teague, Keith	El Paso
Rowe, Sue F.	Ft. Bliss	Telford, Jack	El Paso
Roybal, Minerva	El Paso	Terrazas, Nick	El Paso
Rudolph, Jane	El Paso	Thacker, Eula	El Paso
Rush, Mrs. Lucy	El Paso	Thomas, Cecil	Thorp Springs
Rutland, Lucy	El Paso	Thomas, Paul	El Paso
Rutland, Ruth	El Paso	Thomas, Ted	El Paso
Ryan, Mary Louise	El Paso	Thompson, Marjorie	El Paso
		Thornton, J. C.	El Paso
Sackett, Mrs. Bernice	El Paso	Threadgill, Mrs. Edythe	El Paso
Sackett, Hazel	El Paso	Tiller, Mrs. Lela	El Paso
Saffold, Marian	El Paso	Tomlinson, Elizabeth	El Paso
Safford, Mrs. Helen	El Paso	Tompkins, Dorothy	El Paso
Salem, Fred	El Paso	Tooley, Joe	El Paso
Salzer, Mrs. Rose	El Paso	Treat, Dean	El Paso
Sandoval, Irene	El Paso	Turner, Arthur	Rogers
Savage, Lucille	El Paso	Tyler, Dave	El Paso
Schneider, Louis	Washington, D.C.		
Schwankhaus, Mrs. Annie	El Paso	Unsell, Virginia	El Paso
Seddon, Carrie	El Paso		
Shamaley, John	El Paso	Valdez, Mrs. Nell	El Paso
Shannon, Mrs. Jennie	Ysleta	Vermillion, John	El Paso
Shaw, Burrell	El Paso	Vomocil, Frank	El Paso
Shaw, Lois Virginia	El Paso		
Sheid, Wallace	El Paso	Wainwright, Charles	El Paso
Sherrill, Marjorie	El Paso	Walker, John A.	El Paso
Shoopman, Billie	Odessa	Walser, J. F.	El Paso
Shuman, Mrs. M. W.	El Paso	Ward, Oscar	El Paso
Silva, Jose	El Paso	Weaver, Doris	El Paso
Silva, Roy	El Paso		

Register of Students

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Webel, Herman	El Paso	Williams, Mrs. Rena.....	El Paso
Webel, Kenneth	El Paso	Williamson, Richard	El Paso
Weber, Mrs. Helen.....	El Paso	Willie, Winifred	El Paso
Wehner, William	El Paso	Willis, Marshall	El Paso
Weiller, Harold J.....	El Paso	Wilmoth, Wilma Anne.....	El Paso
Weiss, Mildred	El Paso	Wilson, Mrs. Dorothy P.....	El Paso
Welch, Elvin C.....	El Paso	Wilson, Gordon	El Paso
Werley, Richard	El Paso	Wilson, Lorraine	El Paso
West, Dorothy	El Paso	Wilson, Louise	El Paso
White, Betty Nell.....	El Paso	Wilson, Mrs. Martha.....	El Paso
White, Emily C.....	El Paso	Wilson, Mrs. Mildred.....	El Paso
Whitsitt, Margaret	El Paso	Woelber, William	El Paso
Whittington, Jess	El Paso	Wood, Mamie Lee.....	El Dorado, Ark.
Williams, Frances Edna.....	El Paso	Woodruff, Mrs. Ruth.....	El Paso
Williams, Mrs. A. Nell.....	El Paso	Woods, Fred	El Paso
Williams, Arthur	El Paso	Worthington, Mrs. Eliz.....	El Paso
Williams, Charley Dee.....	El Paso	Wosika, Leon	El Paso
Williams, Evelyn Ann Springer, N.M.		Wright, Margaret	Terrell
Williams, Mrs. Neva.....	El Paso		

STATISTICAL SUMMARIES

Students

	Long Session, 1938-1939			Long Session 1939-1940		
	Men	Women	Total	Men	Women	Total
Engineering						
Postgraduates	2	0	2	0	0	0
Seniors	31	0	31	32	0	32
Juniors	29	0	29	44	0	44
Sophomores	77	0	77	75	0	75
Freshmen	140	0	140	126	0	126
Non-credits	0	0	0	0	0	0
Total	279	0	279	277	0	277
Academic						
Postgraduates	6	15	21	10	22	32
Seniors	34	91	125	56	79	135
Juniors	58	66	124	60	81	141
Sophomores	78	97	175	97	141	238
Freshmen	163	183	346	199	174	373
Non-credits	27	11	38	11	16	27
Total	366	463	829	433	513	946
Total Individual Students	645	463	1,108	710	513	1,223
	Summer Session, 1939			Summer Session 1940		
	Men	Women	Total	Men	Women	Total
Students registered in the first term	154	247	401	228	264	492
Students registered in the second term	140	154	294	148	165	313
Total	294	401	695	376	429	805
Total Individual Students in the Summer Session	195	282	477	276	311	587

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