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*of the*  
**COLLEGE OF MINES AND METALLURGY**  
 (A Branch of The University of Texas)  
**EL PASO, TEXAS**

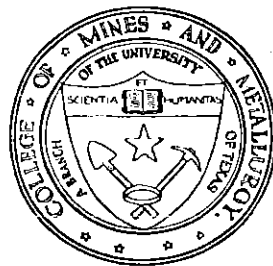
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**CATALOGUE**  
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*for*  
**1936-1937**

**With Announcements for**  
**1937-1938**

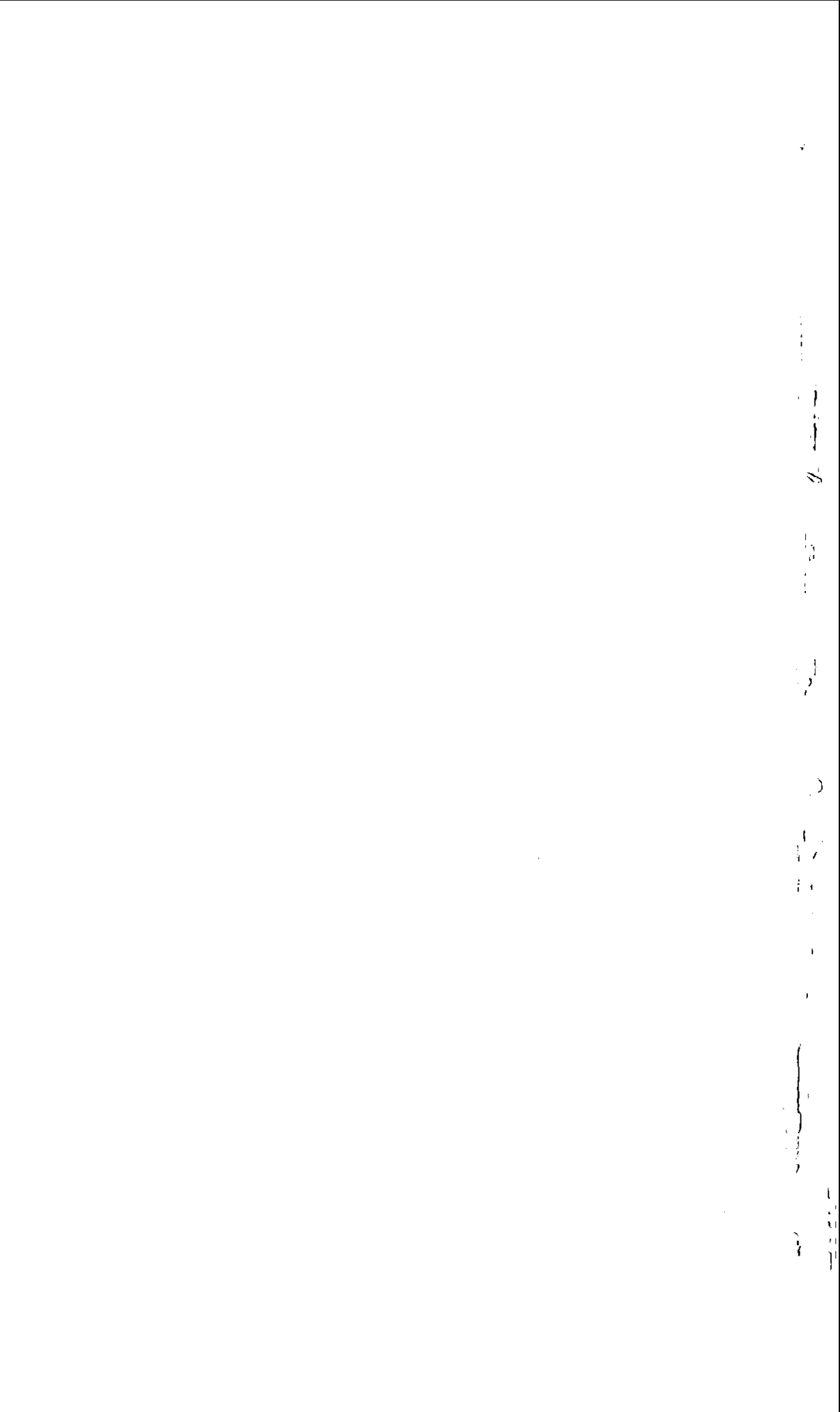



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 A Member of the Southern Association of Colleges

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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

EDWARD RANDALL, *Chairman*  
J. R. PARTEN, *Vice-Chairman*  
HARRY YANDELL BENEDICT, *President of the University of Texas,*  
*Adviser to the Board*  
LEO C. HAYNES, *Secretary*

### MEMBERS

#### Terms Expire January, 1939

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

#### Terms Expire January, 1941

GEORGE D. MORGAN.....San Angelo  
J. R. PARTEN.....Houston  
EDWARD RANDALL.....Galveston

#### Terms Expire January, 1943

E. J. BLACKERT.....Houston  
LESLIE WAGGENER.....Dallas  
H. H. WEINERT.....Seguin

### 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: Randall, Stark, Parten.  
FINANCE: Waggener, Blackert, Weinert.  
LAND: Morgan, Weinert, Parten.  
LEGISLATIVE: Parten, Blackert, Weinert.  
LIBRARY: Aynesworth, Stark, Waggener.  
MEDICAL: Randall, Aynesworth, Parten.  
PUBLIC RELATIONS: Blackert, Aynesworth, Morgan.  
BOARD FOR LEASE OF UNIVERSITY LANDS: Aynesworth, Mrs. Fairchild.

## CALENDAR

of

## THE COLLEGE OF MINES AND METALLURGY

1937

- AUGUST 16, MONDAY. Summer work in surveying begins.
- SEPTEMBER 9, THURSDAY. Examinations for admission begin.
- SEPTEMBER 14, TUESDAY. Condition, advanced standing, and postponed examinations. Petitions must be in the Registrar's Office not later than September 7.
- SEPTEMBER 14, TUESDAY. Freshman convocations, 10 A. M. and 2 P. M.
- SEPTEMBER 14, TUESDAY. Faculty registration conference, 2 P. M.
- SEPTEMBER 15-16, WEDNESDAY-THURSDAY. Registration.
- SEPTEMBER 17, FRIDAY. First semester classes begin.
- SEPTEMBER 23, THURSDAY. Deferred examinations.
- OCTOBER 2, SATURDAY. Last day students already registered may add or substitute courses.
- OCTOBER 2, SATURDAY. Last day a student may register in first semester.
- NOVEMBER 11, THURSDAY. Armistice Day, a holiday.
- NOVEMBER 25-27, THURSDAY-SATURDAY. Thanksgiving recess.
- DECEMBER 18, SATURDAY. Christmas recess begins at the close of the last class which meets on Saturday.

1938

- JANUARY 3, MONDAY. Classes resumed.
- JANUARY 21-28, FRIDAY-FRIDAY. Examinations for the first semester.
- JANUARY 24-25, MONDAY-TUESDAY. Examinations for admission.
- JANUARY 26-28, WEDNESDAY-FRIDAY. Registration of new students.
- JANUARY 29, SATURDAY. Advanced standing examinations.
- JANUARY 31, MONDAY. Registration of readmission students.
- FEBRUARY 1, TUESDAY. Second semester classes begin.
- FEBRUARY 11, FRIDAY. Condition and postponed examinations.
- FEBRUARY 12, SATURDAY. Last day students already registered may add or substitute courses.
- FEBRUARY 12, SATURDAY. Last day a student may register in the second semester.
- FEBRUARY 22, TUESDAY. Washington's Birthday, a holiday.
- MARCH 2, WEDNESDAY. Texas Independence Day, a holiday.



*Calendar*

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APRIL 21, THURSDAY. San Jacinto Day, a holiday.

MAY 7, SATURDAY. Major examinations.

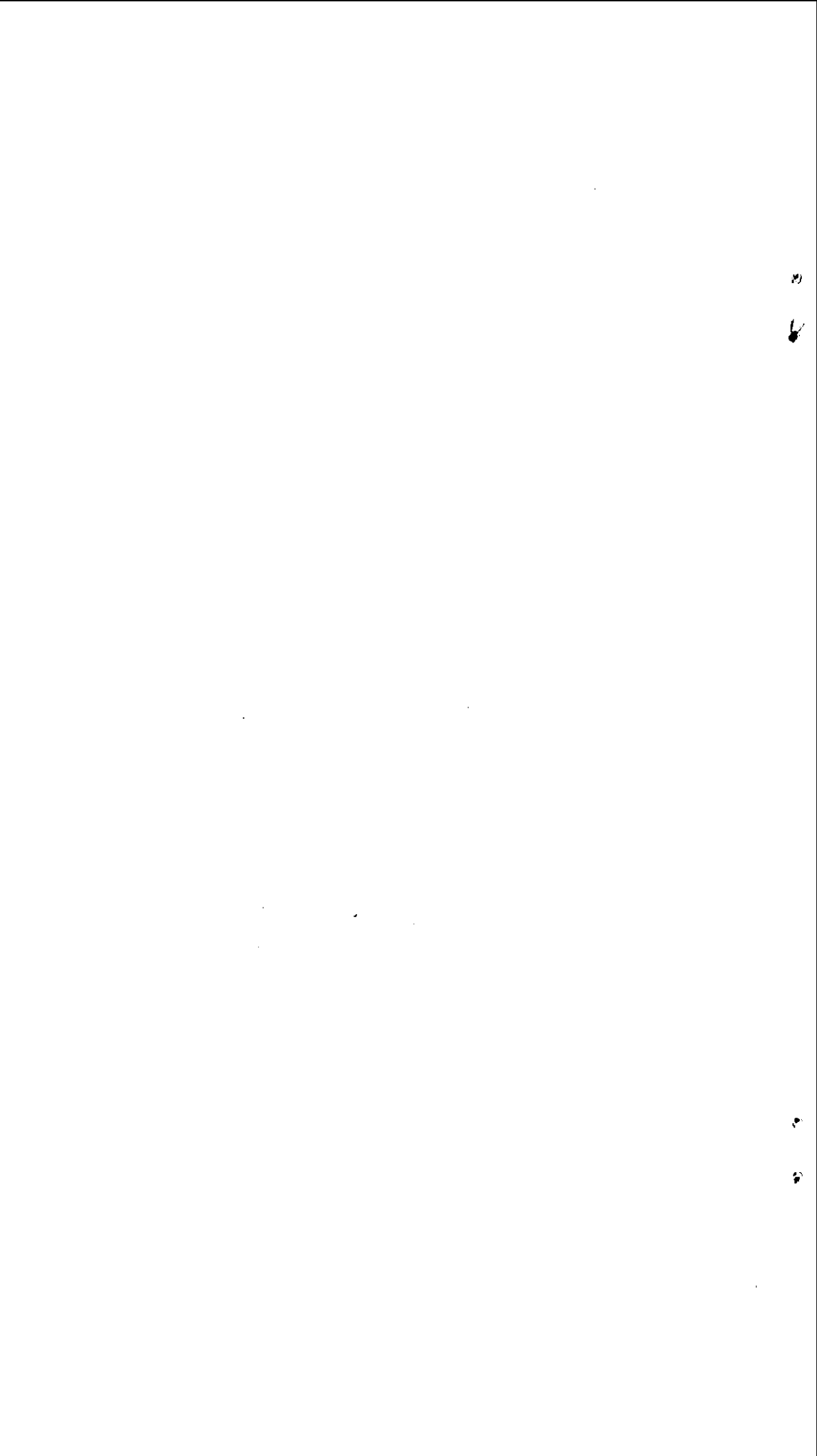
MAY 27-JUNE 3, FRIDAY-FRIDAY. Second semester examinations.

MAY 27-JUNE 3, FRIDAY-FRIDAY. Senior Week.

MAY 29, SUNDAY. Commencement Sunday.

JUNE 3, FRIDAY. Alumni and class day.

JUNE 3, FRIDAY. 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 Education*.
- JOHN WILLIAM KIDD, E.E., *Dean of Mining and Metallurgy; Superintendent of Buildings and Grounds*.
- FORREST JACK AGEE, M.Ed., *Registrar and Director of Student Life*.  
A.B., Howard Payne, 1928; M.Ed., Texas, 1937.
- MRS. LENA ELDRIDGE, M.A., *Dean of Women*.
- \*BAXTER POLK, B.A., B.S. (Library Science), *Librarian*.
- BURT FRANKLIN JENNESS, M.D., *Health Officer*.
- \*MARSHALL LEE PENNINGTON, B.B.A., *Business Manager and Instructor*.  
B.B.A., Texas, 1935.
- \*MARY ELLA POOL, B.S., *Director of Dormitories*.  
B.S., Texas, 1930.
- HOWARD EDMUND QUINN, Ph.D., *Curator of Museum*.
- †MAURINE ELIZABETH SMITH, B.A., *Assistant Business Manager*.
- ‡MARY HOLT SNOBARGER, B.S., *Librarian*.

## FACULTY

### Professors

- FREDERICK WILLIAM BACHMANN, *Professor of Modern Languages*.  
B.A., Stanford, 1922; M.A., 1924; Ph.D., Chicago, 1931.
- ANTON HELMER BECKMANN, *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 Metallurgy, 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.
- §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.
- CHARLES LELAND SONNICHSEN, *Professor of English*.  
B.A., Minnesota, 1924; A.M., Harvard, 1927; Ph.D., 1931.
- JOHN LEROY WALLER, *Professor of History*.  
B.S., Oklahoma, 1923; M.A., Colorado, 1925; Ph.D., Texas, 1929.

\*Appointed September 1, 1936.

†Title changed from "Acting Bursar" to "Assistant Business Manager" effective September 1, 1936.

‡Resigned June 1, 1936.

§Title changed from "Acting Professor" to "Professor" effective September 6, 1936.

||Title changed from "Professor of Classics and Philosophy" to "Professor of Philosophy and Psychology" effective September 6, 1936.

## Associate Professors

- PEARL WHITFIELD DURKEE, *Associate Professor of Physics*.  
B.A., Acadia University, 1903; B.S. (Electrical Engineering), McGill University, 1906; M.S., Cornell, 1935.
- WILLIAM WALTER LAKE, *Associate Professor of Chemistry*.  
B.S., Ohio State, 1913; M.S., 1921.
- LLOYD ALVINO NELSON, *Associate Professor of Geology*.  
E.M., Texas, 1916; M.S. (Geology), Colorado, 1929.
- ALVIN EDWARD NULL, *Associate Professor of History*.  
B.A., Indiana, 1910; M.A., Chicago, 1926.
- MRS. ISABELLA CORBETT ZIMMERMAN, *Associate Professor of English*.  
B.A., Occidental, 1925; M.A., 1926; Ph.D., 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*.  
B.A., Texas, 1913; M.A., 1928.
- MRS. LENA ELDRIDGE, *Assistant Professor of Modern Languages*.  
B.A., New Mexico State Normal University, 1919; M.A., Washington, 1927.
- ‡\*GLADYS GREGORY, *Assistant Professor of Government*.  
B.A., Southwestern, 1915; M.A., Texas, 1926; Ph.D., 1937.
- †LUCY CLAIRE HOARD, *Assistant Professor of Education*.  
B.A., San Diego State Teachers College, 1929; M.A., Columbia, 1934.
- BURT FRANKLIN JENNESS, *Assistant Professor of Biological Sciences*.  
M.D., Dartmouth, 1899; Lt. Cmdr. M. C., U. S. Navy, Rtd.
- 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.
- MRS. MARY KELLY QUINN, *Assistant Professor of Sociology*.  
B.A., Wellesley, 1922; M.A., Boston University, 1930.
- §NATHAN SCHWID, *Assistant Professor of Mathematics*.  
B.A., Wisconsin, 1930; M.A., 1932; Ph.D., 1934.
- ¶MAC FRANCES SMITH, *Assistant Professor of Economics and Business Administration*.  
B.A., Texas, 1931; M.B.A., 1934.
- ||REX WALLACE STRICKLAND, *Assistant Professor of Government*.  
B.A., Austin College, 1927; M.A., Southern Methodist University, 1929; Ph.D., Texas, 1937.
- EUGENE McRAE THOMAS, *Assistant Professor of Mining and Metallurgy*.  
B.S. (Mining Engineering), Texas, 1926.
- \*HUGH L. TURRITTIN, *Assistant Professor of Engineering and Mathematics*.  
B.S., Minnesota, 1927; M.S., Wisconsin, 1932; Ph.D., 1933.

\*Absent on leave for 1936-1937 session.

†Appointed September 6, 1936; part-time.

‡Appointed for 1936-1937 session only; substituting for Mr. Avrett.

‡Appointed for 1936-1937 session only; substituting for Mr. Turrittin.

†Appointed September 6, 1936.

‡Appointed for 1936-1937 session only; substituting for Miss Gregory.

¶Title changed from "Instructor" to "Assistant Professor" effective September 6, 1936.

## Instructors

- WILLIAM HENRY BALL, *Instructor in Chemistry*.  
B.S., Chicago, 1922; M.S., Iowa State College, 1925.
- MRS. ISABELLE KELLY FINEAU, *Instructor in Modern Languages*.  
B.A., Texas, 1905; M.A., 1931.
- \*FRANK JUNELL, *Instructor in Journalism*.  
B.A., Hardin-Simmons, 1934; M.A., Missouri, 1937.
- MRS. JULIA IDA KANE, *Instructor in Physical Education*.  
B.A., North Dakota, 1919; M.A., Arizona, 1930.
- †JOSEPH S. LEECH, *Instructor in Mathematics and Engineering*.  
B.A., Oklahoma, 1927; M.S., 1928.
- BULAH A. LILES, *Instructor in Mathematics*.  
B.A., Texas, 1921; M.A., Chicago, 1927.
- HARRY B. PHILLIPS, *Instructor in Physical Education*.  
B.A., Texas College of Mines and Metallurgy, 1933.
- ‡BAXTER POLK, *Instructor in Business Administration*.  
B.A. Hardin-Simmons, 1935; B.S. (Library Science), Oklahoma, 1936.
- MRS. BERTHA REYNOLDS, *Instructor in Education*.  
B.A., Colorado, 1921; M.A., 1922.
- MACK SAXON, *Instructor in Physical Education*.

## Part-Time Instructors

- MRS. MYRTLE EVELYN BALL, *Part-Time Instructor in Public Speaking*.  
B.A., New Mexico Normal University, 1926.
- \*WALTER DAVIS, *Director of Men's and Women's Glee Clubs and College Chorus*.  
Piano—Gerblg, Memphis, Tennessee; Alexander Ludwig, San Francisco, California; Otto Weldemeyer, Philadelphia, Pennsylvania.  
Voice—Bertha Staugh, New York City; Smock-Bolce Studios, New York City.
- †MRS. ANITA W. LORENZ, *Part-Time Instructor in Modern Languages*.  
B.A., Texas, 1915.
- ‡PEARL PONSFORD, *Part-Time Instructor in English*.  
B.A., Wellesley, 1919; M.A., Southern California, 1930; Ph.D., 1935.

## Administrative Assistants

- ¶FRANCES LUELLA JOB, *Information Clerk and Switchboard Operator*.  
B.A., Texas College of Mines and Metallurgy, 1935.
- MARGARET NEELY, *Stenographer*.
- VAYNE PORTER, *Assistant Registrar*.
- ‡MAURINE ELIZABETH SMITH, *Assistant Business Manager*.  
B.A., Texas College of Mines and Metallurgy, 1935.
- MRS. FRANCES SMITH STEVENS, *Secretary to the President*.

\*Appointed September 6, 1936.

†Appointed for second semester, 1936-1937 session, only.

‡Appointed September 1, 1936.

§Appointed for 1936-1937 session only; resigned March 1, 1937.

¶Title changed from "Assistant to the Bursar" to "Information Clerk and Switchboard Operator" effective September 1, 1936.

‡Title changed from "Acting Bursar" to "Assistant Business Manager" effective September 1, 1936.

## 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.

### 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% 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 manufacturing 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 sub-stations, 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 thirty-eight acres. There are twelve buildings, as follows: Main Building, Holliday Hall (the gymnasium), Burges Hall, Chemistry Building, Kelly Hall, Seamon Hall, Engineering Building, Muesum Building, a dormitory for women, a dormitory for men, a mill, and a small dressing-room building for women, recently donated by The Women's Auxiliary of El Paso. The Main Building contains the administrative offices, various lecture rooms, and laboratories for the departments of physics and geology. The Chemistry Building houses the laboratories for chemistry and assaying. In the Engineering Building are located the engineering laboratories and the heating plant. Burges Hall contains the biological laboratories, offices, and lecture rooms. The College Library occupies the entire third floor of Kelly Hall, while the first and second floors are used for lecture rooms and offices. The mill contains machinery for the testing of ores. Seamon Hall houses metallurgy equipment and laboratories. All the buildings except

the mill are of stone and are fireproof. The City of El Paso is holding a reservation of approximately twenty-five acres for the future use of the College.

#### LIBRARY

The library, situated on the third floor of Kelly Hall, is maintained for the benefit of all departments of the College. 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. The geology and mining sections of the library are especially strong. They contain several complete and valuable sets of United States Government publications, some volumes of which are no longer obtainable. The Shakespeare collection is excellent.

The library regularly receives about 150 periodicals, literary, scientific, and technical. Files of these are being accumulated, bound, and preserved, forming a valuable reference collection.

The students are given full use of the excellent facilities of the El Paso Public Library, a collection of 46,000 volumes. The Teachers Library of El Paso Public Schools may also be used.

#### 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 erected on the campus of the College of Mines through the authority of the El Paso County Advisory Committee. It is beautifully located and graces the entire college campus. The College is truly proud of the Museum and will devote every effort toward the development of a great museum for the entire Southwest. The public is welcomed 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 Woman'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 collection is excellent. It contains many fossils, principally those of the invertebrates, which have been collected from many parts of North America, particularly from Texas, and from Europe.



The biological collection, composed of both zoological and botanical specimens, occupies space in both the El Paso Centennial Museum and on the third floor of Burges Hall. The zoological collection includes preserved specimens and skeleton material representing classes and orders of the vertebrates, arranged for study of comparative anatomy, and preserved material representing 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 during the past year through gifts from the Woman's Auxiliary of the College. These include the Smith and Holden collections of Indian artifacts from the Casa Grande region of Northern Chihuahua, Mexico.

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

#### **DORMITORIES**

Two modern residence halls, one for women and one for men, made possible through the Public Works Administration, are operated for the convenience of boarding students. The hall for men accommodates sixty students and the hall for women provides ample facilities for forty students. The dining room for both men and women is located on the first floor of the residence hall for women. 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 the 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 and the degree of Bachelor of Arts with liberal choices of major subjects in both instances. Students are encouraged to determine as early as is possible their choice in pursuing the work leading to each of these 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 high standard of work as outlined. Students may be certain of obtaining a fundamental, dependable, and general education applicable to further progress in professions, teaching, and general activities of life.

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 undergraduate 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 Engineer 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. Such effort excepts petroleum and water, which are covered by other agencies. 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 will 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 problems 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.

**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

Refunding tuition and fees is permitted only when classes have not been attended by the student.

*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.

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

**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. If a student is allowed to drop a laboratory course, the fee for the semester not begun will be refunded.

**Deposits.**—All students not taking any laboratory course shall be required to make a deposit of six dollars. For students taking one or more laboratory courses the deposit required shall be eight dollars. These deposits less charges for breakage, loss, or damage to library books will be returned to the student at the end of the session or upon his withdrawal from the College. Students will be required to renew their deposits when charges have been made equal to or in excess of the original deposit.

Deposits will be refunded in cash in the Business Manager's Office for two weeks 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 all 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 extra-curricular subjects. In addition to the usual athletic and social activities, important training is given with respect to literary activities, publications, dramatics, current events, debate, advanced and special application in science and engineering, etc. At least 50% 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, modernly furnished, and adequate equipment is provided for furnishing 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 refundable at the close of the semester, provided the student does not withdraw 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 before September 10.

In event any student desires to change his place of residence at the end of the semester, it is requested 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 proper arrangements are made, delinquency in payment will provide a fine of 25c for the first day and 10c for each 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 pillow-cases. The student is requested to furnish blankets, breadspreads, 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' labor bureau 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 come to El Paso without funds sufficient for at least the first semester.

### LOAN FUNDS

**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 Mining and Metallurgy.

**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.



SUPPLEMENTARY COURSES  
SECOND SEMESTER, 1937-38

The courses listed and described below will be offered the second semester, 1937-38. They do not appear in the current catalogue, but they do appear on the schedule. \*Graduate Credit.

Business Administration 437s. PRINCIPLES OF MARKETING.--Place of marketing in our business system. Same as Economics 337 except that student is required to perform extra work designed to apply the principles of the course to business problems. Prerequisite: Economics 313. Credit value: four semester hours. May not be counted for credit in addition to Economics 337.

Education 345s. THE PSYCHOLOGY OF SOCIAL INSTITUTIONS.--Deals with the relationships between the individual and social institutions; the psychology of number, punctuality, and precision; the psychology of language; the psychology of the fine arts; the psychology of government and governmental institutions; the psychology of systems of exchange. Prerequisite: Twelve semester hours of education, or the consent of the instructor. Credit value: three semester hours.

\*Education 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. Prerequisite: Twelve semester hours of education. Credit value: three semester hours.

Journalism 310s. FEATURE STORY WRITING.--Methods of gathering material for newspaper and magazine feature stories through interviews, research, and observation; study of feature story form and style; discussions of markets for literary material; practice in writing feature stories. Prerequisite: Sophomore standing including English 1. Credit value: three semester hours.

Home Management 311. FOOD MANAGEMENT.--A practical course of value to women students and special students interested in the marketing, storing, preparing, and serving of foods as related to the efficient management of the home and the family. Attention will be given, also, to the functions of the hostess in the arrangement of foods for teas, receptions, dinners, and entertainments in the home. Prerequisite: Sophomore standing. Credit value: three semester hours.

Philosophy 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.

Psychology 319fs. 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. Credit value: three semester hours. \*\*\*\*\*

The following courses listed in the current catalogue, are offered for graduate credit at the College of Mines the second semester, such credit to be given at the University of Texas. The courses are also open to undergraduates who have the proper qualifications for the courses:

\*English 328s. AN OUTLINE OF THE ENGLISH NOVEL.--A continuation of English 327 with study of typical works of Dickens, Thackeray, George Eliot, Thomas Hardy, and Meredith. Prerequisite: English 327. Credit value: three semester hours.

\*History 336s. HISTORY OF THE UNITED STATES, 1850-1865.--Slavery controversy; manifest destiny; party history, breakdown of the Whigs, rise of the Republican 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.

SECRET

1. The following information was obtained from a confidential source who has provided reliable information in the past.

2. The source has advised that the following information is true and correct to the best of his knowledge.

3. The source has advised that the following information is true and correct to the best of his knowledge.

4. The source has advised that the following information is true and correct to the best of his knowledge.

5. The source has advised that the following information is true and correct to the best of his knowledge.

6. The source has advised that the following information is true and correct to the best of his knowledge.

7. The source has advised that the following information is true and correct to the best of his knowledge.

8. The source has advised that the following information is true and correct to the best of his knowledge.

9. The source has advised that the following information is true and correct to the best of his knowledge.

10. The source has advised that the following information is true and correct to the best of his knowledge.

## 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

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, compilations of records, advice, health bulletins, and lectures. The Health Officer also acts as advisor 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.

### 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 exercises 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 39, 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 EXTRA-CURRICULAR STUDENT ACTIVITIES**

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

##### General Organizations

- Academic Association
- Co-Ed Association
- College Band
- College Players (Dramatics)
- Economics Club
- Forensic Society (Debating)
- Glee Club
- Gold Diggers (Women's Pep Squad)
- International Relations Club
- Latin-American Club
- Pre-Medic Club
- Quill Club
- Rifle Club
- Scientific Club
- Students' Association (the organization of Student Government)
- Women's Athletic Association

##### Publications

- The Prospector (Bi-weekly)
- The Flowsheet (Annual)

##### Social Organizations

- Alpha Phi Omega Fraternity
- Alpha Psi Omega (Dramatics)
- Delta Epsilon Beta Sorority

College of Mines Exemplars  
Menorah Society  
Newman Club (Religious-Social)  
Omega Phi Delta Sorority  
Phi Beta Mex Fraternity  
Phi Sigma Psi Fraternity  
Pi Epsilon Pi Sorority

**General Regulations.**—These extra-curricular 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 sub-committees. These rules may be obtained from the chairmen of the respective sub-committees.

**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 extra-curricular 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 requirement for holding office:  
Only those who maintain a "C" average in any twelve credit hours may hold office in any extra-curricular activity. (See Rules for Participation,—Sections 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 required 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. Copies may be obtained from the office of the Registrar.

#### 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 examinations 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 responsibilities 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 extra-curricular 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 .....	1-1½-2	Early European history....	1
Plane Geometry .....	1	Modern European history	1
Solid Geometry .....	½	World history .....	1
Trigonometry .....	½	English history .....	½-1
		American history .....	½-1
		Civics .....	½-1
		Economics .....	½

**Section B**

Subject	Units	Subject	Units
Agriculture .....	½-2	Public Speaking .....	½-1
Arithmetic .....	½	Shorthand and typewriting..	1
Bookkeeping .....	1	Any other accredited sub-	
Commercial geography.....	½	ject accepted by an ac-	
Commercial law.....	½	credited secondary school	
Drawing .....	½-1	for its diploma (except	
Home economics.....	½-3	drill subjects such as pen-	
Manual training .....	½-1	manship, physical educa-	
Music .....	1	tion, military training,	
		etc.) .....	½-1

**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 10. 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 three times a year, in September, January and April.

The April series is given under the direction of the State Department of Education at accredited schools and at other approved places. Application to take these examinations should be made to the State Superintendent of Public Instruction, Austin.

The fall and winter series are held only at the College and begin on September 9 and January 24-25, respectively. Requests for full information in regard to these series should be addressed to the Registrar of the College.

It is strongly urged that applicants desiring to enter the College in September attempt the April examinations. It is permitted to divide the subjects between the spring and fall examination periods, but credits obtained at the spring examinations lapse unless the applicant passes the deferred examinations the following fall; and credits obtained at the fall examinations, if less than the total number required, are not valid later.

**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 had of 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 Registrar, 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 10. 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.

In as much 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 1937-1938 the registration days are as follows:

First semester: September 15-16, Wednesday-Thursday.

Second semester: January 26-28, Wednesday-Friday, registration of new students.

January 31, Monday, 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, can not 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 session. 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. Such permission may be contingent upon: (1) a demonstration of completion of all work in a subject, including that missed because of absence; and (2) a demonstration of competence in any subject concerned, which may include a special examination, the scope and time of which will be determined by the Dean.

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 his Dean 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.**—Wishing to encourage the student to secure a general view of the whole subject and readiness in the use of it, the Faculty has ruled that exemptions from examinations may not be given. To encourage preparation for examination, 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 for 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 extend-

ing 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.

**Uncompleted Work.**—The Grade of Incomplete: The grade of *Incomplete* 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 *Incomplete* 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 *Post-poned examination* in the course as part of the removal-of-*Incomplete* 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*, 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* will be placed on Final Trial;

and a student on Final Trial whose score cannot be determined because of grades of *Incomplete* will be dropped from the rolls of the College.

When a student is late or dilatory in handling 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 15, and March 28 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, beginning the second semester of 1934-1935, 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 after May 1, 1935, 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.

Students are divided into freshmen, sophomores, juniors, and seniors as a matter of convenience and prerequisites.

**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., 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 un-



desirability, 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 at a college.

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 Education, and Mining and Metallurgy 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.) 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 re-enters 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 can not be determined because of postponed (Inc.) 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-first Legislature enacted a law requiring candidates for degrees in State institutions and for teachers' certificates to present a course in the Constitutions of the United States and Texas, with exemptions for those having completed certain specified amounts of college work prior to 1929 and 1930.

The completion of Government 310 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.

**First Year**

First Semester	Sem. Hrs. Credit	Second Semester	Sem. Hrs. Credit
Chemistry 801a.....	4	Chemistry 801b.....	4
Drawing 301 .....	3	Drawing 302 .....	3
English 1a.....	3	English 1b .....	3
Mathematics 803a.....	4	Mathematics 803b.....	4
Geology 1a.....	3	Geology 1b.....	3
Physical Training .....	—	Physical Training .....	—
	17		17

**Second Year**

(Mining, Metallurgy, and Mining Geology Options)

First Semester	Sem. Hrs. Credit	Second Semester	Sem. Hrs. Credit
Chemistry 311.....	3	Chemistry 413.....	4
Engineering 312.....	3	Engineering 213.....	2
English 310.....	3	Mining 310.....	3
Geology 16a.....	3	Geology 16b.....	3
Mathematics 13a.....	3	Mathematics 13b.....	3
Physics 812a .....	4	Physics 812b .....	4
	19		19
SUMMER WORK: Engineering 414: Eight hours a day for four weeks .....			4

**Third Year**

(Mining Option)

First Semester	Sem. Hrs. Credit	Second Semester	Sem. Hrs. Credit
Chemistry 423.....	4	Bus. Admin. 211.....	2
Engineering 832a .....	4	Engineering 832b.....	4
Geology 321.....	3	Geology 322.....	3
Economics 312 .....	3	Chemistry 324.....	3
Metallurgy 21a .....	3	Metallurgy 21b.....	3
Mining 221.....	2	Metallurgy 423.....	4
	19		19

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(Metallurgy Option)

First Semester	Sem. Hrs. Credit	Second Semester	Sem. Hrs. Credit
Chemistry 423.....	4	Bus. Admin. 211.....	2
Engineering 832a.....	4	Engineering 832b.....	4
Geology 321.....	3	Chemistry 324.....	3
Metallurgy 21a.....	3	Metallurgy 21b.....	3
Economics 312.....	3	Chemistry 251.....	2
Mining 221.....	2	Metallurgy 423.....	4
	19		18

(Mining Geology Option)

First Semester	Sem. Hrs. Credit	Second Semester	Sem. Hrs. Credit
Chemistry 423.....	4	Engineering 832b.....	4
Engineering 832a.....	4	Geology 322.....	3
Geology 321.....	3	Chemistry 324.....	3
Geology 427.....	4	Metallurgy 423.....	4
Metallurgy 321.....	3	Economics 312.....	3
Mining 221.....	2	Chemistry 251.....	2
	20		19

**Fourth Year**

(Mining Option)

First Semester	Sem. Hrs. Credit	Second Semester	Sem. Hrs. Credit
Engineering 354.....	3	Government 310.....	3
Geology 364.....	3	Engineering 431.....	4
Metallurgy 362.....	3	Engineering 350.....	3
Metallurgy 263.....	2	Mining 67b.....	3
Mining 425.....	4	Mining 660.....	6
Mining 67a.....	3		
Mining 268.....	2		
	20		19

*College of Mines and Metallurgy*

## (Metallurgy Option)

First Semester	Sem. Hrs. Credit	Second Semester	Sem. Hrs. Credit
Engineering 354 .....	3	Engineering 431 .....	4
Mining 225 .....	2	Engineering 350 .....	3
Metallurgy 473 .....	4	Metallurgy 452 .....	4
Metallurgy 62a .....	3	Metallurgy 62b .....	3
Metallurgy 463 .....	4	Government 310 .....	3
Mining 67a .....	2	Mining 67b .....	3
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	19		20

## (Mining Geology Option)

First Semester	Sem. Hrs. Credit	Second Semester	Sem. Hrs. Credit
Engineering 354 .....	3	Government 310 .....	3
Geology 364 .....	3	Geology 565 .....	5
Mining 268 .....	2	Geology 661 .....	6
Geology 423 .....	4	Mining 67b .....	3
Mining 67a .....	3	Bus. Admin. 211 .....	2
Mining 425 .....	4		
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	19		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 Registrar 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 thirty semester hours of work counting toward the degree 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 advanced 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 a *G* 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. The completion of Government 310 satisfies this requirement.

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

1. \*Twelve semester hours in English (English 1 and 12).
2. \*Twelve semester hours of numbered courses in one foreign language, either modern or ancient. (The completion of course 12 will be considered to have satisfied this requirement.)
3. \*Six semester hours in each of any two of the natural (laboratory) sciences.
4. \*Six semester hours in mathematics or six semester hours in numbered courses of Latin or Greek or German. Any hours of Latin or Greek or German offered in satisfaction of the mathematics requirement may not be used to satisfy Requirement 2 or as a part of a major or minor.
5. \*Six semester hours in social science in addition to requirements 6 and 7.

\*These requirements should be completed by the end of the second year.

†Botany, biology, chemistry, physics, geology, zoology.

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

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6. \*Three semester hours in American government (Government 310).
7. \*Three semester hours in philosophy or psychology.
8. §Not less than twenty-four semester hours in the major subject, at least twelve of which must be of advanced courses.
9. §Not less than eighteen semester hours in a minor subject or group as set forth in the Course Outline for the major subject. At least six of these eighteen semester hours must be of advanced courses.
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 courses in the major and minor fields.
11. Enough other courses to make at least one hundred and twenty semester hours, all the foregoing being subject further to the additional requirements set forth in the Course Outline.
12. \*Physical Training as prescribed in the Course Outline, no credit.

**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.

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\*These requirements should be completed by the end of the second year.  
§The students taking Chemistry 301, 311 and 413 may count the last three semester hours as advanced. Students taking Mathematics 303 and 13 may count the semester hours in excess of the first twelve as advanced.

## BUSINESS ADMINISTRATION MAJOR

(Minor in \*Social Science)

## Requirements

	Hours
1. Business Administration 311, 314, 432, and fourteen additional semester hours of business administration, at least eight of which must be advanced.....	24
2. Eighteen semester hours of *social science, six of which must be advanced.....	18
3. English 1 and 12.....	12
4. †Foreign language—the completion of a course numbered 12.....	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. Philosophy or psychology.....	3
8. Government 310.....	3
9. Electives, twelve semester hours of which must be advanced.....	30
10. Physical training—no credit.....	0
	120

## Order and Choice of Courses

*Freshman Year.*—English 1; †foreign language 1; Mathematics 304, and 309 or 307K, or †Latin or †German or †Greek, six semester hours; science, six semester hours; elective, six semester hours; physical training, no credit. Total, thirty semester hours.

*Sophomore Year.*—English 12; †foreign language 12; Business Administration 311-314; science, six semester hours; †elective, six semester hours. Total, thirty semester hours.

*Junior Year.*—Business Administration 432; Government 310; philosophy or psychology, three semester hours; business administration, eight semester hours, two of which must be advanced; \*social science, six semester hours; elective, six semester hours. Total, thirty semester hours.

*Senior Year.*—Business Administration (advanced), six semester hours; \*social science, six semester hours; \*social science (advanced), six semester hours; elective (advanced), twelve semester hours. Total, thirty semester hours.

\*Economics or history or sociology or government or philosophy or psychology or combination.

†See Number 4 under Course Requirements.

‡The student is urged to use his elective here in beginning work on his minor.

**ECONOMICS MAJOR**

(Minor in Business Administration or \*Social Science)

**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. Eighteen semester hours of business administration or of *social science (other than economics), six of which must be advanced.....	18
3. English 1 and 12.....	12
4. Foreign Language†—the completion of a course numbered 12.....	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. Philosophy or psychology.....	3
8. Government 310.....	3
9. Electives, twelve semester hours of which must be advanced.....	30
10. Physical training—no credit.....	0
	120

**Order and Choice of Courses**

*Freshman Year.*—English 1; †foreign language 1; Mathematics 304, and 309 or 307, or †Latin or †German or †Greek, six semester hours; science, six semester hours; elective, six semester hours; physical training, no credit. Total, thirty semester hours.

*Sophomore Year.*—English 12; †foreign language 12; Economics 312-313; science, six semester hours; †elective, six semester hours. Total, thirty semester hours.

*Junior Year.*—Economics 329; philosophy or psychology, three semester hours; Government 310; economics, nine semester hours, three of which must be advanced; business administration or \*social science, six semester hours; elective, six semester hours. Total, thirty semester hours.

*Senior Year.*—Economics (advanced), six semester hours; business administration or \*social science, six semester hours; business administration or \*social science (advanced), six semester hours; elective (advanced), twelve semester hours. Total, thirty semester hours.

\*History or sociology or government or philosophy or psychology or a combination.

†See Number 4 under Course Requirements.

‡Students are urged to use their elective to begin their minor.

## EDUCATION MAJOR

(Minor in any two teaching subjects)

## Requirements

	Hours
1. Education—twenty-four semester hours, including Education 27 or 28 and six additional semester hours of advanced courses .....	24
2. *First teaching subject—eighteen semester hours of numbered courses, six of which must be advanced.....	18
3. *Second teaching subject—eighteen semester hours of numbered courses, six of which must be advanced.....	18
4. English 1 and 12.....	12
5. *Foreign language—the completion of a course numbered 12 .....	12
6. Science (laboratory)—six semester hours in each of any two of the following sciences; botany, biology, chemistry, physics, geology, zoology.....	12
7. Mathematics or numbered courses of *Latin or *German or *Greek .....	6
8. †Social Science .....	6
9. Philosophy or psychology.....	3
10. Government 310 .....	3
11. Elective, advanced courses.....	6
12. Physical Training—no credit.....	0

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## Order and Choice of Courses

*Freshman Year.*—Education, six semester hours; first teaching subject, six semester hours; English 1; science, six semester hours; Mathematics or \*Latin or \*German or \*Greek, six semester hours; physical training, no credit. Total, thirty semester hours.

*Sophomore Year.*—Education, six semester hours; first teaching subject, six semester hours; English 12; second teaching subject, six semester hours; foreign language 1, six semester hours. Total, thirty semester hours.

*Junior Year.*—Education (advanced), six semester hours; first teaching subject (advanced), six semester hours; second teaching subject, six semester hours; science, six semester hours; \*foreign language 12, six semester hours. Total, thirty semester hours.

*Senior Year.*—Education 27 or 28; second teaching subject (advanced), six semester hours; †social science, six semester hours; Government 310; philosophy or psychology, three semester hours; elective (advanced), six semester hours. Total, thirty semester hours.

\*See Number 4 under Course Requirements.

†Government or history or economics or sociology or philosophy or psychology or combination.

ENGLISH MAJOR

(Minor in French or Spanish or \*Social Science)

Requirements	Hours
1. English 1, 12, and twelve additional semester hours of advanced courses .....	24
2. †French or †German or †Spanish—twelve semester hours of numbered courses.....	12
3. Twelve semester hours of *social science.....	12
4. Science (laboratory)—six semester hours each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology .....	12
5. Mathematics or numbered courses of †Latin or †German or †Greek .....	6
6. Philosophy or psychology.....	3
7. Government 310 .....	3
8. Electives, twelve semester hours of which must be advanced .....	42
9. Physical training—no credit.....	0
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10. †French or †Spanish—six additional semester hours of advanced courses .....	6
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	120
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10. †*Social science—six additional semester hours of advanced courses .....	6
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	120

Order and Choice of Courses

*Freshman Year.*—English 1; †French 1 or †Spanish 1 or †German 1; Mathematics or †Latin or †German or †Greek, six semester hours; science, six semester hours; elective, six semester hours; physical training, no credit. Total, thirty semester hours.

*Sophomore Year.*—English 12; †French 12 or †Spanish 12 or †German 12; \*social science, six semester hours; science, six semester hours; elective, six semester hours. Total, thirty semester hours.

*Junior Year.*—English (advanced), six semester hours; \*social science, six semester hours; philosophy or psychology, three semester hours; Government 310; †French (advanced) or †Spanish (advanced), or †elective, six semester hours; elective, six semester hours. Total, thirty semester hours.

*Senior Year.*—English (advanced), six semester hours; \*social science (advanced) or †elective, six semester hours; elective (advanced), twelve semester hours; elective, six semester hours. Total, thirty semester hours.

\*History or sociology or government or economics or philosophy or psychology or combination.

†See Number 4 under Course Requirements.

‡If minor is in French or Spanish.

§If minor is in social science.

## HISTORY MAJOR

(Minor in \*Social Science)

## Requirements

	Hours
1. History—twenty-four semester hours, twelve of which must be advanced.....	24
2. *Social science—eighteen semester hours, six of which must be advanced.....	18
3. English 1 and 12.....	12
4. †Foreign language—the completion of a course numbered 12.....	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. Philosophy or psychology.....	3
8. Government 310.....	3
9. Electives, twelve semester hours of which must be advanced.....	30
10. Physical training—no credit.....	0
	120

## Order and Choice of Courses

*Freshman Year.*—English 1; history, six semester hours; Mathematics or †Latin or †German or †Greek, six semester hours; science six semester hours; elective, six semester hours; physical training, no credit. Total, thirty semester hours.

*Sophomore Year.*—English 12; history, six semester hours; \*social science, six semester hours; science, six semester hours; elective, six semester hours. Total, thirty semester hours.

*Junior Year.*—History (advanced), six semester hours; \*social science, six semester hours; †foreign language 1, six semester hours; philosophy or psychology, three semester hours; Government 310; elective, six semester hours. Total, thirty semester hours.

*Senior Year.*—History (advanced), six semester hours; \*social science (advanced), six semester hours; †foreign language 12; elective (advanced), twelve semester hours. Total, thirty semester hours.

\*Economics or government or sociology or philosophy or psychology or combination.

†See Number 4 under Course Requirements.



MODERN LANGUAGE MAJOR

(Major in French or Spanish—Minor in Spanish or French or English)

Requirements	Hours
1. *Major language—courses 1 and 12 and twelve additional semester hours of advanced courses.....	24
2. *A second language—courses 1 and 12.....	12
3. English 1 and 12.....	12
4. †Social science .....	6
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. Philosophy or psychology.....	3
8. Government 310 .....	3
9. Elective, twelve semester hours of which must be advanced .....	36
10. Physical training—no credit.....	0
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11. ‡Second language—six additional semester hours of advanced courses .....	6
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12. §English—six additional semester hours of advanced courses .....	6
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	120

Order and Choice of Courses

*Freshman Year.*—English 1; language 1; second language 1; science, six semester hours; elective, six semester hours; physical training, no credit. Total, thirty semester hours.

*Sophomore Year.*—English 12; language 12; second language 12; Mathematics or \*Latin or \*German or \*Greek, six semester hours; elective, six semester hours. Total, thirty semester hours.

*Junior Year.*—Major language (advanced), six semester hours; †social science, six semester hours; science, six semester hours; psychology or philosophy, three semester hours; Government 310; elective, six semester hours. Total, thirty semester hours.

*Senior Year.*—Major language (advanced), six semester hours; ‡second language (advanced), or §English (advanced), six semester hours; elective (advanced), twelve semester hours; elective; six semester hours. Total, thirty semester hours.

\*See Number 4 under Course Requirements.

†History or sociology or government or economics or philosophy or psychology or combination.

‡If minor is in language.

§If minor is in English.

**\*SCIENCE MAJOR**

(†Biological, Chemistry, Geology, Mathematics, Physics)

**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.....	12
4. Foreign language—the completion of a course numbered 12.....	12
5. †Mathematics.....	6
6. §Social science.....	6
7. Philosophy or psychology.....	3
8. Government 310.....	3
9. Elective, twelve semester hours of which must be advanced.....	36
10. Physical training—no credit.....	0

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**Order and Choice of Courses**

*Freshman Year.*—Major science, at least six semester hours; second science, at least six semester hours; English 1; †Mathematics, at least six semester hours; elective six semester hours; physical training, no credit. Total, at least thirty semester hours.

*Sophomore Year.*—Major science, at least six semester hours; second science, at least six semester hours; English 12; foreign language 1, six semester hours; elective, six semester hours. Total, at least thirty semester hours.

*Junior Year.*—Major science (advanced), at least six semester hours; foreign language 12, six semester hours; Government 310; philosophy or psychology, three semester hours; §social science, six semester hours; elective, six semester hours. Total, at least thirty semester hours.

*Senior Year.*—Major science (advanced), at least six semester hours; second science (advanced), at least six semester hours; elective (advanced), twelve semester hours; elective, six semester hours. Total, at least thirty semester hours.

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

†Includes Biology, Botany, and Zoology.

‡Mathematics 303 is required for majors in chemistry, mathematics, and physics; and for minors in mathematics and physics.

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

**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**

*Minimum Requirements for Admission to The University of Texas School of Law*

*Freshman Year:* English 1, six semester hours in mathematics, History 4, a natural science, an elective.

*Sophomore Year:* English 12, Government 310 and 311, Economics 312 and 313, History 315 and 316, and any other academic course which requires sophomore standing or completion of a freshman course as a prerequisite.

**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; six semester hours in French or German; six semester hours in mathematics; Chemistry 801; Zoology 1.

*Sophomore Year:* English 12; six additional semester hours in the foreign language taken in the freshman year; Chemistry 311 and 413; Physics 1; Zoology 14.

*Junior Year:* Chemistry 821 and 423; Government 310 and 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.

**STATE TEACHERS' CERTIFICATES**

Students are not encouraged to apply for certificates until at least two years of college work have been completed.

The requirements for the six-year elementary teacher's certificate or the four-year high-school certificate are sixty semester hours of credit work including English 1, Government 310, and Education 301, 302 or 305, 314, and 317.

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, 302 or 305, 314, 317, 27, and six other semester hours of advanced courses in education.

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

*306f. Biology.*—A study of the structure and physical properties of plant and animal cells, nutrition in plants and animals, relation of bacteria to man, a brief survey of the anatomy of the frog, histology of animal tissues and heredity. This course is intended for students taking work in physical education and allied subjects and does not satisfy premedical requirements nor the prerequisites for courses in zoology. Two lectures and three laboratory hours, or the equivalent. Laboratory fee, \$2. Credit value: Three semester hours.

*307s. Biology and Human Physiology.*—Continuation of Biology 306. Anatomical study of a mammal, kinesiology-action of muscles and joints, human physiology and hygiene. This course is intended for students taking work in physical education and allied subjects and does not satisfy premedical requirements nor the prerequisites for courses in zoology. Prerequisite: Biology 306. Two lectures and three laboratory hours or the equivalent. Laboratory fee, \$2. Credit value: Three semester hours.

*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. Credit value: Three semester hours.

*317s. Evolution.*—Some of the topics considered in this course are: The evidence of evolution; the methods of evolution; the course which evolution has taken. This course may not be used to satisfy the science requirement for the A.B. degree. Prerequisite: Six semester hours of complete courses in a laboratory science and sophomore standing. Credit value: Three semester hours.

*29. General Bacteriology.*—Designed to present the fundamental concepts of bacterial life. A study of the structure, reproduction and classification of bacteria, immunity, the preparation of culture

media, the principles of sterilization, the microscopic observations and isolation of pathogenic germs, and the bacterial investigation of water, air, soil and milk. Prerequisite: Twelve semester hours in botany, chemistry or zoology. Two lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

### Botany

1. *Elementary Botany*.—General survey of the development of the plant kingdom; cell structure, tissues, physiological processes, methods of reproduction, relation to environment, distribution, and economic importance of plants. Three lectures and two laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

### Zoology

1. *General Zoology*.—For students beginning the study of zoology. General survey of animal life, with emphasis upon the important phases of theoretical biology. Two lectures and four laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

14. *Vertebrate Zoology*.—Laboratory study of dog-fish, necturus, turtle, bird, mammal, and perhaps other typical vertebrates. Prerequisite: Zoology 1. Two lectures and four laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

320s. *Cellular Biology*.—The study of cell phenomena, such as the structure of the cell, maturation, fertilization, sex-determination, cell division. Prerequisite: Zoology 14; for juniors and seniors, Zoology 1 completed with a grade of at least C, and Zoology 14 in parallel. 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 1 and 14; for juniors and seniors, Zoology 1 completed with a grade of at least C, and Zoology 14 in parallel. Zoology 14 must be completed before the student can get credit for Zoology 321. Two lectures and four laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

## CHEMISTRY

PROFESSOR SEAMON; ASSOCIATE PROFESSOR LAKE; INSTRUCTOR BALL.

1. *General Chemistry*.—Fundamental principles of chemistry. This course does not satisfy degree requirements in engineering. Two

lectures or recitations and three laboratory hours. 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. Two lectures, one recitation, and three laboratory hours. Laboratory fee, \$4. Credit value: Eight semester hours.

*311f. 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 801 or Chemistry 1 with a grade of C. 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 423 concurrently; but credit will not be given until Chemistry 423 has been completed. 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.

*422. Organic Preparations.*—A study of the most important synthetic organic methods. Prerequisite: Chemistry 821. Six laboratory hours per week each semester. Laboratory fee, \$4. Credit value: Four semester hours.

*423f. Quantitative Analysis.*—A continuation of Chemistry 413. Prerequisite: Chemistry 413. One lecture and eight laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours.

*324s. Assaying.*—The determination of gold, silver, and lead by fire methods in minerals, ores, and products of mills and smelters. Prerequisite: Chemistry 423. One lecture and six laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

*251s. Physical Chemistry.*—The more important principles of physical chemistry. Properties of substances in the solid, liquid, and gaseous state; the mass-action law applied to homogeneous and

heterogeneous equilibria; the phase rule kinetics of chemical reactions. Prerequisite: Chemistry 413, Physics 812, Mathematics 13, and junior standing. Two lectures per week. Credit value: Two semester hours.

860. *Physical Chemistry*.—Properties of substances in the gaseous, liquid, and solid state; solutions; thermochemistry, homogeneous and heterogeneous equilibria; kinetics of reaction; electrochemistry. Prerequisite: Chemistry 423 and 821, Mathematics 13 in advance or concurrently, and Physics 1. Three lectures and three laboratory hours per week. Laboratory fee, \$4. Credit value: Eight semester hours.

### ECONOMICS AND BUSINESS ADMINISTRATION

PROFESSOR MORRIS; ASSISTANT PROFESSOR \*SMITH; INSTRUCTOR †POLK.

#### Economics

312fs. *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; transportation; markets; value and price. Prerequisite: Sophomore standing. Credit value: Three semester hours.

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

321f. *Public Finance*.—A general treatment of financial administration in the United States with incidental references to European countries. Tax studies; analysis of expenditures; public credit. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

322f. *Money and Banking*.—Study of the principles of money and banking, the existing money and banking systems of the United States and selected foreign countries, with mention of important theories underlying credit, its creation and expansion. History of precious metals; bimetallicism; bank development; relation of money and credit to prices; fiat money; principles of foreign exchange. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in alternate years; offered in 1937-1938.)

325s. *Business Cycles*.—A study of value and its relation to the oscillation of business. Isolation and interpretation of facts relating to

†Appointed September 1, 1936.

\*Appointed September 6, 1936.



business cycles. Analysis and evaluation of American and foreign theories of depressions. Emphasis upon current problems and proposed and attempted alleviations. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

329s. *Economic Statistics*.—Training in the quantitative methods of dealing with data. The use of graphic and tabular methods of presentation of facts. Measures of central tendency; index numbers; measures of deviation and skewness; time series; correlation. Prerequisite: Economics 313 and six semester hours of mathematics. One lecture, one discussion, and five laboratory hours. Laboratory fee \$4. Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 432.)

330s. *Economic and Financial History of the United States*.—The development of agriculture, industry, and commerce of this country. Banking; trade; public finance; governmental regulation; and general economic development from colonial times to the present. Growth in size and complexity of economic and business units. Problems raised by such development. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in alternate years; offered in 1937-1938.) Formerly Economics 326.

332f. *Corporation Finance*.—The promotion of corporations in the process of formation; capital structure and its sources; internal financial management; receiverships; reorganizations; the relationship of corporation finance to banks; social consequences of over-promotions. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in alternate years; offered in 1937-1938.)

336f. *Agricultural Economics*.—Development of financial needs of agriculture; development of economic problems of a specialized agriculture; problems of production, prices, and the standard of living; cooperative farming projects. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

349f. *Labor Problems*.—Problems of the State and the 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 C. I. O.; other organizations; strikes; lockouts; current issues. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in alternate years; offered in 1937-1938.)

357f. *Investments*.—A study of the principles governing the proper investment of personal and institutional funds; the sources of, the demand for, and the yield on investment funds; formulation of a general

investment program for the individual; the characteristics of types of investment securities; analysis of financial statements; the stock and commodity markets. Prerequisite: Economics 313. Credit value: Three semester hours. (Omitted in 1937-1938.)

358s. *International Economic Relations*.—Mercantilism as a background; English commercial development; American colonial development; tariff history of the United States; problems of free trade; international movements of money; international commercial entanglements; inter-governmental debt payments; reparations. Prerequisite: Economics 313 and three semester hours of advanced economics. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

#### Business Administration

01. *Elementary Typewriting*.—A non-credit course, equivalent to the typewriting work of Business Administration 10, given for the benefit of those who do not desire shorthand. Laboratory fee, \$4.

10. *Shorthand and Typewriting*.—Mastery of the principles of Gregg shorthand; transcription; and typewriting. Credit given for shorthand only. Six semester hours credit allowed when shorthand and typewriting are taken together; no credit otherwise. Prerequisite: Sophomore standing. Three shorthand lecture periods and three typewriting periods per week. Laboratory fee, \$4. Credit value: Six semester hours.

211s. *Theory and Principles of Accounting*.—Similar to Business Administration 311. For engineering students. Prerequisite: Sophomore standing. Two lectures, per week. Credit value: Two semester hours.

311f. *Theory and Principles of Accounting*.—Principles of double entry bookkeeping and theories of general financial accounting. The analysis and recording of business transactions; adjusting and closing entries; financial statements; sole proprietorship. Prerequisite: Sophomore standing. Credit value: Three semester hours.

314s. *The Practice of Accounting*.—A continuation of Business Administration 311. Partnership accounting; corporation accounting; reserves and reserve funds; manufacturing accounts; asset valuation. Prerequisite: Business Administration 311. One discussion period and six laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

420f. *Business Correspondence*.—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, credit, adjustment, claim, order, and collection letters; and a part of the course is given over to the theory and practice of

report writing. Prerequisite: English 12 and Business Administration 314. Credit value: Four semester hours. (Given in alternate years; offered in 1937-1938.)

23. *Business Law*.—By the textbook and case method; cases on the law of contracts, agency, bankruptcy, bailments, sales, mortgages, negotiable instruments, presented in brief form; Texas statutes affecting these subjects. Prerequisite: Business Administration 314. Credit value: Six semester hours. (Given in alternate years; offered in 1937-1938.)

326j. *Intermediate Accounting, First Course*.—Classification and codification of accounts, form and content of financial statements; theory involved in current assets and liabilities; practical problems. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in alternate years; offered in 1937-1938.)

327ks. *Intermediate Accounting, Second Course*.—Theory involved in fixed assets; statement of application of funds; statement of variation of net profits; installment and long-term contracts; practical problems. Prerequisite: Business Administration 326. Credit value: Three semester hours. (Given in alternate years; offered in 1937-1938.)

329f. *Cost Accounting*.—Accounting for material, labor and burden distribution under job costs; continuous process and assembly systems; commercial and distribution costs. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

330s. *Auditing*.—Auditing procedure, reports, and working papers used in financial investigations; balance sheet and detailed audits. Prerequisite: Three semester hours of advanced accounting. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

432s. *Business Statistics*.—Training in the quantitative methods of analysis in dealing with the problems of business. The use of graphic methods in presenting data; the organization and description of data; the frequency distribution; measures of central tendency; index numbers; measures of variation and skewness; time series; correlation. Prerequisite: Business Administration 314. Credit value: Four semester hours. One lecture, one discussion period, and eight laboratory hours. Laboratory fee, \$4. (May not be counted for credit in addition to Economics 329.)

334f. *Office Organization and Practice*.—The location, equipment, organization, and general practice in office routine. Use of the mimeograph, dictaphone, and other equipment. Designed especially for those intending to go into office work. Prerequisite: Business Administra-

tion 314 and 10. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

*339f. Business Salesmanship.*—A study of the economic problems connected with personal selling; an analysis of the products and market; the planning and execution of an interview; building good will; and a consideration of the relationship between the salesman and his employer. Individual demonstrations of selling constitute an important part of the course. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

*340s. Business Advertising.*—A study of the underlying principles of advertising; the economic value of advertising; recent trends; correlating advertising budgets with movements in the price cycle. Studies of the psychology of individual advertisements; a consideration of the different media and the values of each. Prerequisite: Junior standing. Credit value: Three semester hours. (Offered first semester, summer of 1937.)

*251s. Practical Bank Operation.*—Organization procedure, departmental set-up and practice, loan administration, and operating problems of commercial banks. Prerequisite: Business Administration 314 and Economics 313. Credit value: Two semester hours. (Given in alternate years; offered in 1937-1938.)

*353s.—Foreign Exchange.*—Methods and forms used in financing the international movement of goods and services; the rate of exchange and its effect on the movement of commodities and the flow of gold; means of controlling gold movements and exchange rates and the economic effects of such policies. Prerequisite: Business Administration 314 and Economics 313. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.)

*454s. Short-Term Finance.*—Operations of commercial banks, trust companies, and other credit-granting institutions, in their relation to business; principles of banking and finance which are involved; credit analysis. Prerequisite: Business Administration 314 and Economics 313. Credit value: Four semester hours. (Given second semester, summer of 1937.)

*357f. Investments.*—Investment principles, investment banking, security flotation, stock exchange trading, investment analysis, and investment policies. Prerequisite: Business Administration 314 and Economics 313. Credit value: Three semester hours. (Given in alternate years; omitted in 1937-1938.) Formerly Economics 357.

*358. Life Insurance.*—Principles of life insurance; business and personal uses of life insurance; classification and analysis of policies; reserves and policy values; organization and administration of life insurance companies. Prerequisite: Economics 313. Credit value: Three semester hours. (Omitted in 1937-1938.)

EDUCATION AND PHYSICAL EDUCATION

PROFESSOR PUCKETT; ASSISTANT PROFESSOR \*HOARD; INSTRUCTORS  
REYNOLDS, AGEE, SAXON, KANE, PHILLIPS

Education

*301fs. 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.

*305fs. 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.

*313f. The Teaching of Reading in the Primary Grades.*—A study of characteristic interests of children from four to seven years which affect their reading interests; the development of reading readiness; acquiring of desirable reading attitudes, skills, and habits; evaluation of current practice in methods and materials of teaching reading. Prerequisite: Education 301, and 302 or 305, and sophomore standing. Credit value: Three semester hours. (Not offered in 1937-1938.)

*314fs. Child Psychology.*—A study of the changes which take place in the life of the child as related to the processes of education. Prerequisite: Education 301, and 302 or 305, 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 302 or 305, and sophomore standing. Credit value: Three semester hours.

*321f. Public School Organization and Administration.*—Problems confronting the administrative officer in local schools, such as relation of superintendent with board and public, organization of schools, development of curricula, selection and promotion of teachers. Prerequisite: Twelve semester hours in education. Credit value: Three semester hours. (Given in alternate years; not offered in 1937-1938.)

*27. Student-Teaching in the High School.*—A study of the principles of teaching, observation of class work, construction of lesson plans, and teaching under supervision. Ordinarily, one period daily for six days a week will be required, but students are expected to have two consecutive hours, between 9 and 3 o'clock throughout the week, in order to facilitate making the teaching assignments. Required of all candidates for a permanent high-school certificate. Prerequisite: Education 314 and 317. Credit value: Six semester hours.

\*Appointed September 6, 1936; part-time.

28. *Student-Teaching in the Elementary and Primary Grades.*—Similar to Education 27, but for the elementary and primary grades. Ordinarily, one period daily for six days a week will be required, but students are expected to have two consecutive hours, between 9 and 3 o'clock throughout the week in order to facilitate making the teaching assignments. Prerequisite: Education 314 and 317. Credit value: Six semester hours.

332f. *Curriculum Production in the Elementary Schools.*—A course in curriculum production including individual and group observation and research work in curricular materials, technique, administration, any type lessons. Class discussions supplemented by observations in elementary school classrooms. Prerequisite: Twelve semester hours of education. Credit value: Three semester hours.

332Ts. *Analysis of Current Materials and Methods in the Intermediate Grades.*—Study of the teaching materials and problems of method presented by the social studies, arithmetic, and the special subjects in the fourth, fifth, and sixth grades. Includes examination of textbooks, courses of study, tests, and the literature on the different subjects; intensive laboratory activity in curriculum organization. Prerequisite: Education 314 and 317 and junior standing. Credit value: Three semester hours.

333s. *Organization and Administration of the Public School Curriculum.*—Foundation principles underlying curriculum construction, reconstruction movements since 1900, present developments in co-operative curriculum construction and administration. Prerequisite: Twelve semester hours in education. Credit value: Three semester hours.

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: Twelve semester hours in education. Credit value: Three semester hours.

347f. *Modern Techniques in the Primary Grades.*—Changes in theory, methods, and materials made necessary by a changing curriculum in the primary grades. A study will be made of the Texas Curriculum program with special attention to new methods of teaching in the language arts. Prerequisite: Twelve semesters of education. Credit value: Three semester hours.

348s. *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: Twelve semester hours of education. 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 317. Credit value: Three semester hours. (Given in alternate years; not offered in 1937-1938.)

#### Physical Education

310f. *Theory and Practice of Playground Activities.*—This course will consider content, progression, and instruction in plays and games. Training will be given in the organization and supervision of play activities for the elementary schools. Practice in teaching and officiating is required. Open to both men and women. Laboratory fee, \$2. Prerequisite: Sophomore standing. Credit value: Three semester hours.

311f. *Personal Hygiene.*—This course presents personal and general hygiene as a means for the improvement of living. Open to both men and women. Prerequisite: Sophomore standing. Credit value: Three semester hours.

312f. *Health Service.*—The scope of health service with emphasis upon the purpose, technique, and adaption of health examinations of school children. Open to both men and women. Prerequisite: Sophomore standing. Credit value: Three semester hours.

313s. *Technique of Minor Sports.*—Theory and practice in methods and materials for the following: soccer, basket ball, playground ball, baseball, volley ball, track, and minor sports. Open to both men and women. Laboratory fee, \$2. Prerequisite: Sophomore standing. Credit value: Three semester hours.

314s. *Nature and Function of Play.*—An interpretation of play and a study of the function of play as it relates to each division of child life. Open to both men and women. Prerequisite: Sophomore standing. Credit value: Three semester hours.

315s. *Elementary Methods in Health Education.*—A lecture and conference course dealing with materials and practical methods in health education. Open to both men and women. Prerequisite: Sophomore standing. Credit value: Three semester hours.

316f. *Technique of Major Sports.*—Theory and practice in methods and materials especially for the following: football, basket ball. Open to men. Laboratory fee, \$2. Prerequisite: Sophomore standing. Credit value: Three semester hours.

317s. *Technique of Major Sports.*—Theory and practice in methods and materials, especially for the following: baseball, track, tennis. Open to men. Laboratory fee, \$2. Prerequisite: Sophomore standing. Credit value: Three semester hours.

### ENGINEERING AND DRAWING

PROFESSOR KIDD; ASSISTANT PROFESSOR DECKES; INSTRUCTOR \*LEECH

#### Engineering

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. Laboratory fee, \$2. Credit value: Three semester hours.

213s. *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. Two lectures. Credit value: Two semester hours.

414. *Field Surveying.*—Summer work; practical field course covering the topics outlined in Engineering 213. Accurate and rapid work will be insisted upon. Prerequisite: Engineering 213. Eight hours daily for four weeks preceding the opening of the session. Laboratory fee, \$4. Credit value: Four semester hours.

315f. *Technical Mechanics.*—Concurrent, parallel, and non-concurrent 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.

431s. *Direct and Alternating Current.*—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. Prerequisite: Physics 812 and Mathematics 13. Three lectures and three laboratory hours. 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

\*Appointed February 1, 1937.



of materials. The funicular polygon; moment diagram; shear diagram; determination of stresses in various types of roof and bridge trusses; completed designs in steel and timber; comparisons as to weight and cost. Prerequisite: Drawing 302, Mathematics 13, and Physics 12 or 812. Three lectures and three laboratory hours. Credit value: Eight semester hours.

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

354f. *Hydraulics*.—Brief course of hydrostatics; 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. Credit value: Three semester hours.

### Drawing

301f. *Engineering Drawing*.—For all engineering students. Geometrical construction, freehand lettering, orthographic projection, pictorial methods, working drawings, tracing, and blueprinting. One one-hour discussion and eight hours of supervised drawing per week. Laboratory fee, \$2. Credit value: Three semester hours.

302s. *Descriptive Geometry*.—Includes intersections and development of solids, curved lines, curved surfaces, and warped surfaces, in addition to the point, line, and plane problems. Prerequisite: Drawing 301. One one-hour discussion, and eight hours of supervised drafting per week. Credit value: Three semester hours. Laboratory fee, \$2.

## ENGLISH, JOURNALISM, AND PUBLIC SPEAKING

PROFESSOR SONNICHSEN; ASSOCIATE PROFESSOR ZIMMERMANN; ASSISTANT  
PROFESSORS MOSES, EGG; INSTRUCTOR \*JUNELL; PART-TIME  
INSTRUCTORS BALL, †PONSFORD

## English

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

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

*310f. 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 is prerequisite to all other courses in English literature. Credit value: Six semester hours.

*12as. Outline History of English Literature.*—Repetition of the first semester of English 12.

*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. Credit value: Three semester hours. (Not offered in 1937-1938.)

*321s. Shakespeare: The Later Plays.*—Detailed study of some of the great tragedies, followed by a rapid reading of other plays writ-

\*Appointed September 6, 1935.

†Resigned March 1, 1937.

ten after 1600. Prerequisite: English 320. Credit value: Three semester hours. (Not offered in 1937-1938.)

322f. *Victorian Poetry*.—Consideration of the poetic works of Browning primarily, and study of such noteworthy minor poets as Arnold, Clough, James Thomson, and others. Prerequisite: English 12. Credit value: Three semester hours.

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. Credit value: Three semester hours.

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. Credit value: Three semester hours.

328s. *An Outline History of the English Novel*.—A continuation of English 327 with study of typical works of Dickens, Thackeray, George Eliot, Thomas Hardy, and Meredith. Prerequisite: English 327. Credit value: Three semester hours.

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. Credit value: Three semester hours. (Not offered in 1937-1938.)

330s. *English Romantic Poetry, the Later Phase*.—Consideration of the work of Byron, Shelley, Keats, and some of their contemporaries. Prerequisite: English 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

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. Credit value: Three semester hours.

332s. *The Development of the American Drama*.—A study of the drama of the Colonial and Revolutionary Periods. Study of the development of the drama to modern times including the study of such modern playwrights as the Mackayes, Thomas, Sheldon, Kaufman and Connelly, Crothers, Hughes, Davis, and O'Neill. Prerequisite: English 12. Credit value: Three semester hours.

334f. *Contemporary Poetry*.—Prerequisite: English 12. Credit value: Three Semester hours. (Not offered in 1937-1938.)

335s. *Contemporary Prose*.—Prerequisite: English 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

336f. *American Literature*.—A study of the chief American poets and prose writers including those of the Colonial and Revolutionary periods and the early nineteenth century. Prerequisite: English 12. Credit value: Three semester hours.

337s. *American Literature*.—A study of the most important American poets and prose writers of the middle and late nineteenth century. Prerequisite: English 12. Credit value: Three semester hours.

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. Credit value: Three semester hours. (Not offered in 1937-1938.)

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. Credit value: Three semester hours. (Not offered in 1937-1938.)

341f. *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. Credit value: Three semester hours.

342s. *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. Credit value: Three semester hours.

#### Journalism

12. *News Gathering and Reporting*.—Instruction and practice in interviewing and writing; discussions of news sources, news values, and various types of news stories; study of the organization of newspaper staffs and newsgathering associations. Prerequisite: Sophomore standing, with credit or registration for typewriting. Credit value: 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.

*305s. 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 makeup; 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 theater. 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.

## GEOLOGY

PROFESSOR QUINN; ASSOCIATE PROFESSOR NELSON

*1. Principles of General Geology.*—Designed to provide a critical study of the fundamental principles of physiography and geology. The laboratory work, three hours each week, for students registered in mining engineering options will be more rigorous and quantitative. Lectures, recitations, excursions, and collateral reading. Three hours of lectures and two hours of laboratory demonstration or field work. Laboratory fee, \$4. Credit value: Six semester hours.

*16. Mineralogy.*—Beginning course in the determination of minerals. The course will include the study of crystallography and the determination of the more common minerals by means of their physical properties, the blow pipe, and wet methods. Prerequisite: Geology 1 and Chemistry 1 (Chemistry 801 for engineering students) in advance or concurrently. One lecture and six hours of laboratory work. Laboratory fee, \$4. Credit value: Six semester hours.

*321f. 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 16. Three lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three 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 321. Credit value: Three semester hours.

423f. *Paleontology*.—Study of fossil plants and animals by lectures and laboratory work. Prerequisite: Twelve semester hours in geology. Two lectures and six laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours. (Given in alternate years; not offered in 1937-1938.)

427f. *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 321 in advance or concurrently. Two lectures and six laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours. (Given in alternate years; offered in 1937-1938.)

261s and 661s. *Advanced Economic Geology*.—Discussions and original papers on new developments in the field of ore deposits, non-metallics and hydrocarbons. 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 advance or concurrently and 322. Three lectures and six laboratory hours. Laboratory fee: 261, \$2; 661, \$4. Credit value: Two semester hours for 261; Six semester hours for 661.

364f. *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 as evidence of the successful completion of this course. Prerequisite: Six semester hours of advanced courses in geology. One lecture and five hours in field studies. Laboratory fee, \$2. Credit value: Three semester hours.

565s. *Field Geology*.—A continuation of Geology 364. Prerequisite: Geology 364. Two lectures and nine hours in field. Laboratory fee, \$4. Credit value: Five semester hours.

### HISTORY, GOVERNMENT, AND SOCIOLOGY

PROFESSOR WALLER; ASSOCIATE PROFESSOR NULL; ASSISTANT PROFESSORS QUINN, \*GREGORY, †STRICKLAND

#### History

4. *History of England*.—Survey of the social, economic, political and intellectual development of Britain and the British Empire.

\*Leave of absence, long session, 1936-1937.

†Substituting for Miss Gregory, long session, 1936-1937.

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.

312f. *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.

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.

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.

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.

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 State's Rights. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours.

327f. *Social and Intellectual Development of the United States before 1860.*—This course deals with the gradual development of American civilization. Emphasis is given to social customs, economic influences, racial contributions, religious beliefs, and humanitarian movements, as well as to the intellectual, artistic, and scientific interest of the people. May be counted as advanced work in sociology. Prerequisite: Twelve semester hours in history or Sociology 310 and 311, depending upon whether the course is to be counted as advanced work in history or sociology. Credit value: Three semester hours.

328s. *Social and Intellectual Development of the United States since 1860.*—Special emphasis is given to the shifting of American life to the cities and the influence of new immigrants. May be counted as advanced work in sociology. Prerequisite: Twelve semester hours in history or Sociology 310 and 311, depending upon whether the course is to be counted as advanced work in history or sociology. Credit value: Three semester hours.

- 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.

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

347f. *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. (Not offered in 1937-1938.)

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. (Not offered in 1937-1938.)

353f. *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. (Not offered in 1937-1938.)

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. (Not offered in 1937-1938.)

355f. *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. (Not offered in 1937-1938.)

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. (Not offered in 1937-1938.)

357s. *Contemporary Europe.*—Background and historical significance of socialism, communism, fascism, nazism. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Not offered in 1937-1938.)

359f. *Anglo-American Southwest.*—American expansion into Texas and the Far Southwest; filibustering expeditions into Texas; Pike and early exploratory expeditions; the Austins and American colonization of Texas; Santa Fe trade; Texas Revolution and Independence; Texas Republic; English and American rivalry in Texas and California; Mexican War and acquisition of California. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Not offered in 1937-1938.)

## Government

*310fs. American Government.*—The government of the United States—national, state, and local—with special emphasis upon the Constitutions 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: Three semester hours.

*311fs. European Governments.*—The governments of the British Empire, the British Commonwealth of Nations, France, Germany, Switzerland, Italy, and Russia, with some attention to the governments of the lesser European states. Prerequisite: Sophomore standing. Credit value: Three semester hours.

*321f. American State and Local Government.*—Origin and growth of state constitutions; organization and work of state departments; local governments; relation between state and local governments. Prerequisite: Government 310 and 311. Credit value: Three semester hours. (Not offered in 1937-1938.)

*322s. American State and Local Government.*—Organization, powers, functions, and business methods of state and local administrative agencies; problems of integration, centralization, budget and fiscal control. Plans for reorganization and cooperation with federal and local agencies. Special reference to Texas. Prerequisite: Government 310 and 311. Credit value: Three semester hours. (Not offered in 1937-1938.)

*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. Credit value: Three semester hours. (Not offered in 1937-1938.)

*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. Credit value: Three semester hours. (Not offered in 1937-1938.)

*334f. American National Government and Administration.*—The making of the national government; the principles of the Federal system; Citizenship and Constitutional Rights; the organization of Congress; the National Executive and the National Court system. Prerequisite: Government 310 and 311. Credit value: Three semester hours.

335. *American National Government and Administration*.—A general view of the powers of Congress; National Executive and National Court System; the organization, personnel, and work of the Civil Service and of the Budget Bureau. Prerequisite: Government 310 and 311. Credit value: Three semester hours.

### 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 view point; defects in social organization; poverty and dependency; pathology of personality. Social controls applied to social problems. Prerequisite: Sophomore standing. Credit value: Three semester hours.

345f. *The Community: A Study of Rural Life*.—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.

346s. *The Community: A Study of Urban Life*.—Prerequisite: Sociology 310 and 311. Credit value: Three semester hours.

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. (Not offered in 1937-1938.)

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. (Not offered in 1937-1938.)

## MATHEMATICS AND PHYSICS

PROFESSOR KNAPP; ASSOCIATE PROFESSOR DURKEE; ASSISTANT PROFESSORS \*TURRITTIN, †SCHWID; INSTRUCTORS LILES, ‡LEECH

## Mathematics

803. *Elementary Mathematical Analysis*.—The first two weeks are devoted to an intensive review of secondary-school algebra. Students who at the end of this period show that they do not possess a good working knowledge of secondary-school algebra are transferred to a special section and given additional work. The course is designed to give the student a good foundation for the study of calculus, the natural sciences, and engineering. Four recitations. Credit value: Eight semester hours.

304fs. *Algebra*.—Rapid review of algebra with extensions to prepare the student for Mathematics 309. Credit value: Three semester hours.

208s. *Solid Geometry*.—Required of candidates for engineering degrees who do not present solid geometry for entrance. These students must pass it in first semester of the first year in order to continue under that registration. Counts toward academic degrees but not toward engineering degrees. Credit value: Two semester hours.

307Ks. *Mathematics of Investment*.—An elementary course in the theory and application of the mathematics of finance. Topics covered include logarithms, progressions, simple and compound interest, annuities, amortization, perpetuities. Credits earned may be applied toward satisfying the mathematics requirement or elective hours for the B.A. degree. Prerequisite: Mathematics 304 or 803a. Credit value: Three semester hours.

309fs. *Mathematical Analysis*.—A course in mathematical analysis designed for general students who do not plan to take any further courses in college mathematics. Elements of statistics, graphical methods in the solution of common problems, logarithms, progressions, investments. Prerequisite: Mathematics 304. Credit value: Three semester hours.

13. *Calculus*.—In this course differential calculus and integral calculus are carried on together. In differential calculus, special attention is given to the derivation of formulas and to the application of derivatives to the solution of problems in maxima, minima, rates, velocity, acceleration, and geometrical applications. The work in

\*Leave of absence, long session, 1936-1937.

†Substituting for Mr. Turrittin, long session, 1936-1937.

‡Appointed February 1, 1937.

integral calculus drills the student in the integration of forms occurring in mechanics and physics; in evaluating areas, moments, moments of inertia, and volumes, in finding the center of gravity and center of stress; and in the derivation and application of the fundamental formulas of hydrostatics and hydraulics. Prerequisite: Mathematics 208 unless solid geometry is presented for entrance, and Mathematics 803. The last two semester hours of this course count as advanced. Three recitations. Credit value: Six semester hours.

25. *Advanced Calculus and Differential Equations.*—During the first semester the topics of Mathematics 13 will be extended to include the differentiation and integration of wider classes of functions and the application of these processes to the solution of a wider range of problems; Maclaurin's and Taylor's series, hyperbolic functions, partial differentiation, complex variables, and elementary Fourier expansions. The second semester will be devoted to a study of the common types of ordinary and partial differential equations of geometry, mechanics, and electricity. Prerequisite: Mathematics 13. Credit value: Six semester hours. (Given in alternate years; not offered in 1937-1938.)

41. *Analytical Mechanics.*—Equilibrium and motion of a particle and rigid body in two or three dimensions. May be counted as six advanced semester hours in physics. Prerequisite: Mathematics 13 with a grade of C. Credit value: Six semester hours. (Given in alternate years; offered in 1937-1938.)

### Physics

1. *General Physics.*—Three lectures and two laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

12. *Second-Year Physics.*—First semester: light and heat; second semester: sound, electricity, and magnetism. Prerequisite: Mathematics 803; Physics 1, and Mathematics 13 concurrently. Two lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

812. *Physics: Mechanics, Heat, Electricity, and Magnetism.*—Includes a thorough grounding in kinematics, dynamics, statics, kinetics, the elements of precision of measurements, properties of matter, thermometry, expansion, calorimetry, heat and work, change of state, vaporization, condensation of gases, radiation, magnetism, the magnetic field, magnetic induction, electrostatics, electrodynamics, radioactivity. Particular attention is given to composition and resolution of forces, accelerations, and velocities, to simple harmonic motion and to the moment of inertia. Prerequi-

site: Mathematics 803, and Mathematics 13 concurrently. Three recitations and three laboratory hours. Laboratory fee, \$4. Credit value: Eight semester hours.

34. *Electricity and Magnetism*.—Advanced theory and laboratory work. Prerequisites: Physics 12 or 812, and Mathematics 13. Two lectures and three laboratory hours. Credit value: Six semester hours. Laboratory fee, \$4.

*Mathematics 41. Analytical Mechanics*.—Equilibrium and motion of a particle and rigid body in two or three dimensions. May be counted as six advanced semester hours in physics. Prerequisite: Mathematics 13 with a grade of C. Credit value: Six semester hours. (Given in alternate years; offered in 1937-1938.)

## MINING AND METALLURGY

PROFESSOR GRAHAM; ASSISTANT PROFESSOR THOMAS

### 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, Drawing 302, Geology 1a, and Physics 812a. Three lectures. Credit value: Three semester hours.

221f. *Mining Methods*.—Continuation of Mining 310s. Prerequisite: Mining 310. Two lectures. Credit value: Two semester hours.

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.

425f. *Mine and Route Surveying*.—Mine Surveying: Shaft plumbing, underground surveying, mapping of underground connections, surface surveying in connection with mineral claims, and all ordinary operations that the mining engineer is called upon to perform. Two lectures for the first half of the semester. In addition to the lectures, forty-eight hours of field work are required. This field work is given during one week, at the convenience of the department, and at this time a survey is made of one of the several mines in the vicinity of the College. The student is required to pay for transportation to and from the property and living expenses while on the trip.

Route surveying: Simple, reverse and compound curves; rights of way; cross-sections; and estimates. Two lectures and six laboratory hours during the last half of the semester. Prerequisite:

Engineering 414 and senior standing. Laboratory fee, \$4. Credit value: Four semester hours.

*225f. Mine Surveying.*—This course consists of the first part of Mining 425 and is given to metallurgy students not required to take route surveying. Prerequisite: Engineering 414 and senior standing. Lectures and field work as outlined under Mining 425. Laboratory fee, \$2. Credit value: Two semester hours.

*660s. Advanced Mining.*—Underground transport, hoisting plant, shaft pockets, ore bins, compressed air plant, mechanical ventilation, pumping, and electric power for mine service. In the laboratory, a detailed study is made of compressed air drills, compressors, and mine plant in general. Also, the student is required, from a sampled mine or drilling exploration, to determine the value of the property, select the mining system, choose suitable equipment, and write a detailed report. Prerequisite: senior standing. Three lectures and nine laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

*67. Management.*—Mine examination, sampling, reporting, welfare, organization, financing, and other interesting management problems are considered in a lecture course given only to students who have senior standing in mining engineering options. Three lectures. Credit value: Six semester hours.

*268f. Mining Law.*—The principles governing contracts, liabilities of mine operators, compensation and insurance of workmen, and the laws and court decisions of the United States, Texas, and Mexico, so far as they relate to locations and acquirements of titles to mines, are carefully considered in a course of lectures. Prerequisite: Senior standing in mining engineering options. Two lectures. Credit value: Two semester hours.

### Metallurgy

*321f and 21. 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 302 or 16. Three lectures. Credit value for 321: Three semester hours; for 21: Six semester hours.

*423s. Ore Dressing and Milling.*—Study of the principles of crushing and grinding, amalgamation, concentration, and ore dressing. Prerequisite: Metallurgy 321 or 21a. Three lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours.

452s. *Advanced Metallurgy*.—In this course, considerable attention is given to the principles of pyrometallurgy, more especially copper. In addition, the electric furnace and the pyrometallurgical applications of the electric current are given an intensive study. Prerequisite: Metallurgy 21 and Chemistry 251. Four lectures. Credit value: Four semester hours.

362f and 62. *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 21. Two lectures and three laboratory hours, first semester; nine laboratory hours, second semester. Laboratory fee, \$2, each semester. Credit value for 362: Three semester hours; for 62: Six semester hours.

463f. *Ore Dressing and Milling*.—A continuation of Metallurgy 423, with the emphasis laid upon ore testing and plant design. Prerequisite: Metallurgy 423. Two lectures and six laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours.

263f. *Ore Dressing and Milling*.—Metallurgy 463 without the laboratory. Prerequisite: Metallurgy 423. Two lectures. Credit value: Two semester hours.

473f. *Metallography*.—An elementary course in the metallography of various metals and products and the heat treatment of iron and steel. Prerequisite: Metallurgy 21 and Chemistry 251. Three lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours.

#### MODERN LANGUAGES

PROFESSOR BACHMANN; ASSISTANT PROFESSORS \*AVRETT, ELDRIDGE,  
†OLMSTED; INSTRUCTOR FINEAU; PART-TIME INSTRUCTOR †LORENZ

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.

The department offers majors in Spanish and French.

\*Leave of absence, long session, 1936-1937.

†Substituting for Mr. Avrett, long session, 1936-1937.

‡Appointed February 1, 1937.



## 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 Reading and Elementary Survey of Literature.*—Reading of an easy anthology and of selected masterpieces. Oral and written reports, weekly conferences and assigned outside readings; outline of the history of the literature. Prerequisite: Course 1. Credit value: Six semester hours.

## French

336f. *Classical Drama.*—A study of selected masterpieces by Corneille, Racine, and Molière. Outside readings and reports. Prerequisite: French 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

335f. *Modern Novel: Early Period.*—Reading of eighteenth century novelists such as Lesage, L'abbé Prévost and Bernadin de St. Pierre and of 19th century novelists up to about 1850. Prerequisite: French 12. Credit value: Three semester hours.

336f. *Modern Drama: Early Period.*—Plays by followers of Molière, such as Lesage, Marivaux and Beaumarchais will be read as well as dramas by Hugo, de Vigny, and Musset. Prerequisite: French 12. Credit value: Three semester hours.

337s. *Modern Novel: Later Period.*—A study of the naturalistic school of novelists from Flaubert to Maupassant. Prerequisite: French 12. Credit value: Three semester hours.

338s. *The Romantic Period.*—The poetry of Lamartine, de Vigny, Hugo, Musset, and Gautier, together with some of the minor poets of the period will be studied. The beginnings of the romantic drama will be discussed. Outside readings and reports. Prerequisite: French 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

340s. *Modern Drama: Later Period.*—A study of the naturalistic and social drama from Becque to Brieux. Parallel readings and reports. Prerequisite: French 12. Credit value: Three semester hours.

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: French 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

358s. *Contemporary Literature.*—Readings from the works of Anatole France, Paul Bourget, Maurice Barrès, and other recent and contemporary writers. Outside reading and reports. Prerequisite: French 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

### Spanish

18. *Social and Business Usage.*—Translation, composition, and conversational practice in the language of business, journalism, 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 do not wish to continue into courses in the literature. Prerequisite: Spanish 1. Credit value: Six semester hours.

328f. *Golden Age Drama.*—A study of the leading dramatists, such as: Lope de Vega, Calderon de la Barca, Rojas Zorrilla, Agustín Moreto, etc. Readings of selected masterpieces; outside readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours.

332s. *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.

334f. *The Ballad.*—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.

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, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

336f. *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 authors as: Leandro Fernandez de Moratin, Breton de los Herreros, Lopez de Ayala, Tamayo y Baus, Echegaray, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

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: Perez Galdos, Pardo Bazan, Palacio Valdéz, Blasco Ibanez, Pio Baroja, Ricardo León, Perez de Ayala, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

338s. *The Romantic Period.*—A study of the development of romanticism in the literature of the early nineteenth century. Selected readings of such writers as: Espronceda, José de Larra, Duque de Rivas, García Gutierrez, Hartzenbusch, José Zorilla, etc.; outside readings. Prerequisite: Spanish 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

339f. *The Cuento and Short Story in Spain.*—Study of various types of the 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.

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 authors as: Perez Galdos, Jacinto Benavente, Linares Rivas, Los Quinteros, Martínez Sierra, Eduardo Marquina, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Not offered in 1937-1938.)

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.

358s. *Contemporary Literature.*—A consideration of the movements in contemporary literature, with study of representative authors of the various movements. Outside readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours.

## PHILOSOPHY AND PSYCHOLOGY

PROFESSOR ROTH

## Philosophy

**312f. *Logic.***—Introduction to essentials of correct thinking; deductive and inductive reasoning; fallacies and argumentation. Prerequisite: Sophomore standing. Credit value: Three semester hours.

**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. (Not offered in 1937-1938.)

**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.

**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. (Not offered in 1937-1938.)

**328f. *History of Ancient Philosophy.***—Survey of the development of philosophic thought from Thales to Descartes with readings from the philosophers. Prerequisite: Six semester hours in philosophy, or three semester hours in philosophy and three semester hours in psychology. Credit value: Three semester hours.

**329s. *History of Modern Philosophy.***—Survey of the development of philosophic thought from Descartes to the end of the nineteenth century with readings from the philosophers. Prerequisite: Six semester hours in philosophy, or three semester hours in philosophy and three semester hours in psychology. Credit value: Three semester hours.

**333f. *Individualism.***—The place of the self in nature and society; conflicts of interests and their treatment; selfishness, altruism and universalism. Prerequisite: Six semester hours in philosophy. Credit value: Three semester hours. (Not offered in 1937-1938.)

**355s. *Æsthetics.***—A critique of the nature of art and beauty and the various sources of æsthetic effect; the criteria of artistic creation and appreciation; the relation of æsthetic values to other human

interests. Prerequisite: Six semester hours in philosophy. Credit value: Three semester hours. (Not offered in 1937-1938.)

**Psychology**

*310f. 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.

## DEGREES CONFERRED IN JUNE, 1936

### BACHELOR OF SCIENCE IN MINING ENGINEERING

Arguelles, Alfredo	Montgomery, Jack Lenoard
Ferguson, John Alexander	Payne, Valentine
Forbes, Henry Milton	Quijada, Amador
Hamlyn, Wilfred Thomas	Roberts, Ben David

### BACHELOR OF ARTS

Carrera, Felicia	Masten, Juanita Frances
Cregor, Sarah Alice	Meisel, Helen Alice
Dunlap, Eva Ellen	Pritchard, Mrs. Maud S.
Eisert, Leo Francis	Puckett, Mrs. Fidelity M.
Escajeda, Josefina	Riley, Mrs. Florence C.
Garcia, Elena Maria	Rosenblum, Birdie Grace
Graham, Mary Jane	Rosenfeld, Louise
Hannifin, Margaret	Rutherford, Wm. Henry
Heisel, Harold Naylor	Schell, Edith Cecilia
Herlin, Tess Charlotte	Stoddard, Mrs. Ida T.
Hill, Frances Clark	Stueber, Margaret E.
Hoover, Margaret Melba	Tilley, Kathleen B.
Howard, Wanda Lenore	Walton, Mrs. Betty B.
Jonz, Wray	Walton, J. B.
King, Margaret Elizabeth	West, Bertha Elizabeth
Lockhart, Hazel Miller	Wilson, Rose

## DEGREES CONFERRED IN AUGUST, 1936

### BACHELOR OF SCIENCE IN MINING ENGINEERING

Brinsmade, Harold S.	Highfield, Norman James
Carreon, Daniel	

### BACHELOR OF ARTS

Clifton, Mrs. Minnie	Sanchez, Francisco R.
Daniel, Rosalie Hassell	Scott, Mary Allan
Gish, Evert Lewis	Sides, Ansel Joe
Hart, Joe Howard	Smith, Mrs. Marguerite Blocksom
Hornedo, Consuelo	Spence, Charles T.
Knotts, Margaret Hart	Stevenson, Robert Murrell
Krauskopf, Nora Hines	Wallingford, Doris Ethelyn
MacCallum, Frank K.	Webb, Charles Wallace, Jr.
Rogers, Marye O'Neal	Wilson, Mrs. Betty Converse

## REGISTER OF STUDENTS

### LONG SESSION, 1935-36

An asterisk (\*) indicates that the student was in attendance during the first semester only; a dagger (†) indicates that he was in attendance during the second semester only. All other students were in attendance during both semesters.

Abadie, Robert Alan	Austin	El Paso
Abdou, Mary Lee*	El Paso	El Paso
Abraham, Mary	El Paso	El Paso
Adams, Juliette E.*	El Paso	El Paso
Adkins, Marvin E.	Lawton, Okla.	El Paso
Agee, Mrs. Myrtle R.	El Paso	El Paso
Alexander, Mrs. Emmie	El Paso	El Paso
Allen, Faye W.	El Paso	El Paso
Alvarez, Carment	El Paso	El Paso
Alvarez, Fernando R.	El Paso	El Paso
Alverson, Hunter M.*	El Paso	El Paso
Anderson, Mrs. Amelia*	El Paso	El Paso
Andrews, John Weeks†	El Paso	El Paso
Andrews, Lionel	Canton	El Paso
Antoine, Mary†	Clarksville	El Paso
Arguelles, Alfredo	Laredo	El Paso
Arguelles, Edmundo R.	El Paso	El Paso
Arguelles, Eduardo	El Paso	El Paso
Armstrong, Fred	Pecos	El Paso
Arnold, Ira C.	Roscoe	El Paso
Arroyo, Cesar	El Paso	El Paso
Arroyo, Irene	El Paso	El Paso
Ashley, Frank	Cumby	El Paso
Atkinson, Mrs. Frances L.†	El Paso	El Paso
Austin, Robert E.*	El Paso	El Paso
Austin, Roy*	El Paso	El Paso
Bagley, Henry S.	Denver, Colo.	El Paso
Ballentine, Kelly	Ysleta	El Paso
Baltz, Ferd*	El Paso	El Paso
Banks, Mary Etta†	El Paso	El Paso
Barberle, John Douglas	Chihuahua, Chih.	El Paso
Bardsley, Bernard	El Paso	El Paso
Barlow, Emily E.	El Paso	El Paso
Barnes, Margaret	El Paso	El Paso
Barnett, Lee	Crane	El Paso
Bartlett, Alma	El Paso	El Paso
Beal, Nellis Bess	El Paso	El Paso
Beaubien, Mark†	El Paso	El Paso
Beaudett, Anne	El Paso	El Paso
Becker, Gentry*	Haldeman, Ky.	El Paso
Beeman, Frances*	El Paso	El Paso
Bellman, Anna Lee	El Paso	El Paso
Benolt, Bert Charles†	El Paso	El Paso
Benold, Ruby	El Paso	El Paso
Benson, Robert	El Paso	El Paso
Berliner, Edwint	El Paso	El Paso
Bernhardt, George	El Paso	El Paso
Bess, Virginia	El Paso	El Paso
Bevan, Donald†	El Paso	El Paso
Beys, George	El Paso	El Paso
Bickley, Rachel	El Paso	El Paso
Biggerstaff, Mary Lee	El Paso	El Paso
Biggs, Irene M.	El Paso	El Paso
Biles, Viola*	El Paso	El Paso
Billard, J. B.*	El Paso	El Paso
Black, Wilma	El Paso	El Paso
Blackmon, Paul Edward	El Paso	El Paso
Btalock, William W.†	El Paso	El Paso
Blanchard, Mrs. Kate P.	El Paso	El Paso
Bianco, Victor†	El Paso	El Paso
Blon, Robert*	El Paso	El Paso
Boshm, Frederick†	El Paso	El Paso
Bohling, Bill†	El Paso	El Paso
Bond, Charles H.	El Paso	El Paso
Bottoff, Martha*	El Paso	El Paso
Bowers, Martha Louise*	El Paso	El Paso
Bowling, Robert Leroy	El Paso	El Paso
Bowman, Betty	El Paso	El Paso
Bowman, E. R., Jr.	El Paso	El Paso
Bowman, Nathan	El Paso	El Paso
Bradshaw, Elizabeth	El Paso	El Paso
Bradt, Estelle J.	El Paso	El Paso
Braem, Helen Louise*	El Paso	El Paso
Branch, Amelia Louise	El Paso	El Paso
Brasmer, Leanova	El Paso	El Paso
Brinsmade, H. S.	San Luis Potosi	El Paso
Britton, Thomas Marvin	El Paso	El Paso
Brown, Wilma	El Paso	El Paso
Brundage, Grace Grimest†	El Paso	El Paso
Buckner, Edna†	El Paso	El Paso
Buhler, Mildred K.†	El Paso	El Paso
Bulger, Gordon	El Paso	El Paso
Burclaga, Ernesto Z.	El Paso	El Paso
Burgard, Pete	El Paso	El Paso
Burrus, Madeline	Ysleta	El Paso
Byers, Ballard Thomas*	El Paso	El Paso
Camp, Fannie	El Paso	El Paso
Camp, Jennie	El Paso	El Paso
Campbell, Frank G.	El Paso	El Paso
Campos, Josef	El Paso	El Paso
Cannon, Antoinette de Long	El Paso	El Paso
Carpenter, Alfred J.*	El Paso	El Paso
Carreon, Daniel A.	El Paso	El Paso
Carrera, Felicia	El Paso	El Paso
Carson, Barbara	El Paso	El Paso
Carter, James	El Paso	El Paso
Castor, Gaylord	El Paso	El Paso
Cates, Martha Ruth	El Paso	El Paso
Cavanaugh, Edmund S.†	El Paso	El Paso
Ceballos, Alberto	Juarez, Chih.	El Paso
Chamberlain, Paul	El Paso	El Paso
Chant, Leonard Howard	El Paso	El Paso
Chew, Gan	El Paso	El Paso
Chew, Jack*	El Paso	El Paso
Chinn, Patty Mae	El Paso	El Paso
Christman, Robert*	El Paso	El Paso
Clayton, Frances	El Paso	El Paso
Clements, Josephine	El Paso	El Paso
Clifford, Mary Ellen	El Paso	El Paso
Clifton, Mrs. Minnie	El Paso	El Paso
Clossin, J. R.†	El Paso	El Paso
Cobos, Oscar	El Paso	El Paso
Coffin, W. C.*	El Paso	El Paso
Cole, Louise Robinson*	El Paso	El Paso
Cole, Mary Lou	Balmorhea	El Paso
Collaer, Ruth	El Paso	El Paso
Collins, Walter*	El Paso	El Paso
Colson, Howard	El Paso	El Paso
Connell, Mrs. Erma B.	El Paso	El Paso
Connolly, Julia	El Paso	El Paso
Connolly, Patrick J.	El Paso	El Paso
Connor, Leonard	El Paso	El Paso
Conway, Geraldene	El Paso	El Paso
Cooley, Elizabeth Ann	El Paso	El Paso
Cordell, Mona Grant*	El Paso	El Paso
Coulehan, Lee	El Paso	El Paso
Cowherd, Florence May	El Paso	El Paso
Cox, Dona Opal*	El Paso	El Paso

Cox, Willmoth H.†	El Paso	Ford, Mary Louise	El Paso
Cregor, Sarah	El Paso	Foret, Mrs. Belle	El Paso
Cresap, Sam	Presidio	Forsman, Mrs. Elizabeth	El Paso
Crimen, Johnell	El Paso	Foster, Faith	El Paso
Crockett, Bob Houston	El Paso	Foster, Susan Elizabeth	El Paso
Crockett, Robert	El Paso	Francis, John J.	El Paso
Cronkrite, Glen	El Paso	Franklin, Susan Elizabeth†	El Paso
Crouse, Patricia*	El Paso	Fugate, Bill*	El Paso
Cuen, A. N.	El Paso	Fuller, Seale†	El Paso
Culbreath, Annette	Canutillo	Funk, Thomas	El Paso
Cummins, E. J.	El Paso	Galatzan, Joe	El Paso
Cummins, Hazel	El Paso	Gallagher, Helen*	El Paso
Cunningham, Annabelle	El Paso	Gallagher, Ivey*	El Paso
Curd, Howard	El Paso	Garcia, Edmundo G.†	El Paso
Dale, Randolph	El Paso	Garcia, Elena Maria	El Paso
Daly, David D.	El Paso	Garcia, Lugardo*	El Paso
Daniel, Rosalie Hassell	El Paso	Garrett, Leroy†	Katy
Daniels, Dorothy	El Paso	Gates, Walter*	El Paso
Davey, Richard	El Paso	Gavaldon, Alberto Jose*	El Paso
Davis, Jimmie, Jr.	El Paso	Gibbons, Mrs. Mary	El Paso
Davis, Mrs. Margaret*	El Paso	Gibson, Harland N.	Crystal, Idaho
Davis, Roy N.†	El Paso	Gilcrest, Nancy	El Paso
Davis, William M.	El Paso	Gilliland, Marjorie Louise*	El Paso
Dawson, Jerry†	El Paso	Gish, Evert L.	El Paso
Deal, Tom	Laredo	Given, Sherman	El Paso
De Fee, Mrs. Lillie†	El Paso	Glasgow, Octavia M.	El Paso
Desouches, Andre R.†	El Paso	Gore, Herbert Carr	El Paso
Diehl, Consuelo*	El Paso	Gonzales, Graciela	El Paso
Dixon, Loula Erwin	El Paso	Gonzales, Rosario	El Paso
Dollahite, Kenneth*	Ft. Bliss	Graef, Kathryn W.†	El Paso
Dominguez, Robert†	El Paso	Graham, Donald Cory	El Paso
Dowell, Lillian*	El Paso	Graham, Mary Jane	El Paso
Drees, Mary Alice	El Paso	Grant, Ruby	El Paso
Duke, Jack Newton	El Paso	Graves, Donald†	El Paso
Dumm, Arthur	El Paso	Gribble, Jane	El Paso
Dunaway, Bill	Pampa	Gruber, Doris Charlotte	El Paso
Duncan, Wayne*	El Paso	Guerra, Hector	Sierra Blanca
Dunlap, Eva Ellen	El Paso	Guinn, Dick	El Paso
Dunne, Dorothy	El Paso	Haden, Eugene	El Paso
Dupuy, Frank	El Paso	Haggard, Jerry	El Paso
Durham, Doris	El Paso	Hale, Betty Lee	El Paso
Dyer, Virginia	El Paso	Hale, Nadine	El Paso
Easley, Myrtis	El Paso	Hall, Helen	El Paso
Eastham, Henry Clay†	El Paso	Halpern, Beulah	El Paso
Eckhardt, Mrs. Alvine†	El Paso	Hamilton, La Frances	Snyder
Eisert, Leo Francis	El Paso	Hamiyn, Wilfred Thomas	El Paso
Elliott, Henry Nelson*	El Paso	Hammond, Lee R.	El Paso
Elliott, Mrs. Leona*	El Paso	Hanks, D. D.	El Paso
Ellis, Marton	El Paso	Hannifin, Margaret	El Paso
Ellis, Marjorie*	El Paso	Hanson, Lawrence	El Paso
Erwin, Kathleen	El Paso	Hardage, Margaret	El Paso
Escajeda, Josefina	Fabens	Hardaway, George	El Paso
Escajeda, Maria Luisa	Fabens	Hargrove, Nell	El Paso
Esperson, George†	El Paso	Harlacker, Mary Louise	El Paso
Evans, Margaret Evelyn†	El Paso	Harman, Mary E.*	El Paso
Fant, Jack	El Paso	Harper, James	El Paso
Farnsworth, Mary Lee	Ysleta	Harris, Anne	Santa Barbara, Chih.
Feedback, Johnnie*	El Paso	Harris, George	El Paso
Ferguson, John A.	El Paso	Harris, Helen	Santa Barbara, Chih.
Ferguson, Ruth*	El Paso	Harrison, Joe Edman†	El Paso
Ferguson, Wilma*	El Paso	Harrison, Katherine Ayers	El Paso
Fernandez, William	El Paso	Harrison, Wiltz A.	El Paso
Fessinger, Louis L.	El Paso	Hart, James	El Paso
Fields, Sarah Evelyn†	El Paso	Hart, Joe	Plainview
Finley, Marshall	El Paso	Hart, William Douglas†	El Paso
Fino, Ben	El Paso	Hartsfield, Mary	Ysleta
Fisher, Alice	El Paso	Houghton, Rosemary	El Paso
Fite, Madalee*	El Paso	Hausman, Jeanette K.*	El Paso
Flint, M. P.*	East St. Louis Ill.	Hawley, Louis Lee	El Paso
Floyd, John E.	El Paso	Hayward, Kenyon*	El Paso
Folk, Bob	El Paso	Heid, Mrs. Lilly Belle G.	El Paso
Fondren, Cody	Frederick, Okla.	Heirich, F. Xavier*	El Paso
Foot, Mrs. Sara	El Paso	Heisel, Harold Naylor	Canutillo
Forbes, Henry M.	El Paso	Henderson, Andrew*	Iraan
Force, James A., Jr.†	El Paso	Henderson, Jeanette	El Paso
Ford, Jackie Luella Anthony, N. M.		Hendon, Louise	El Paso



Henry, Arnold*	Belton	Klstenmacher, Irby	El Paso
Herlin, Tess	El Paso	Kltsou, Jack*	El Paso
Hermes, Elleen	El Paso	Klamm, Victor*	Shreidan, Wyo.
Hermes, Raymond	El Paso	Kluger, Annette	El Paso
Hernandez, Jesse Joseph*	El Paso	Knotts, Margaret†	El Paso
Hernandez, Tony	El Paso	Knox, Katherine	Pecos
Herron, Delma Lee	El Paso	Kornfeld, Leonard B.†	El Paso
Higdon, Rosemary†	El Paso	Kowalewski, Sigmund F.	El Paso
Higfield, Norman	El Paso	Kramp, Walter Henry†	El Paso
Hill, Dan*	El Paso	Krauskopf, Nora H.	El Paso
Hill, Frances	El Paso	Kurita, Isabelle Hisako	El Paso
	North Birmingham, Ala.	Kusel, Vincent Meyer*	El Paso
Hilworth, Jerry	El Paso		Sioux Falls, S. D.
Himel, Bill	El Paso	Lackland, Nancy	El Paso
Hoard, Dorothy Marlon	El Paso	Lambert, Cyrus	El Paso
Hoard, Ellen*	El Paso	Lance, John F.†	El Paso
Hoard, Frances	El Paso	Lance, Odis Paul*	El Paso
Hoard, Roy†	El Paso	Latham, Lindley	Bowie
Hodges, Mildred†	El Paso	Laurel, Louis	El Paso
Holguin, John A.	El Paso	Lavigne, Virginia	El Paso
Holley, Minetta	El Paso	Lawson, Kate	El Paso
Holmes, Vela Bess.	Fabens	Lawson, Laura†	El Paso
Holzman, Carl	El Paso	Lee, Henry Millard†	El Paso
Hoover, Margaret	El Paso	Lee, Vivian†	El Paso
Hornedo, Consuelo	El Paso	Lickel, William Chester†	El Paso
Hourigan, Richard*	Balmorhea	Licon, Francisco	El Paso
Housman, Henry	El Paso	Light, Edward	El Paso
Howard, John B.*	El Paso	Light, Ellen M.	El Paso
Howard, Wanda	El Paso	Liles, Audrey	El Paso
Howell, Maurinet†	El Paso	Lockhart, Hazel M.	El Paso
Hubbard, E. W.	El Paso	Lofquist, Bernice	El Paso
Hubert, Florence	Minerva	Loomis, Eliza Berrieu	El Paso
Hughey, Merlet	El Paso	Loomis, Jane Honto	El Paso
Hungerford, Merle	El Paso	Lopez, Manuel E.	El Paso
Hunnicut, Mary Scott	El Paso	Lorenz, Elsie	New York, N. Y.
Hunter, Frank*	El Paso	Lott, Ellison	El Paso
Indermuehle, Lloyd R.	El Paso	Lowe, Thomas	El Paso
Irvine, Wesley	El Paso	Lyon, Mary Eleanor	El Paso
Ivey, Carl Theo.	El Paso	McBeth, Leslie	El Paso
Jackson, Roy Dale, Jr.*	El Paso	McCammon, Mary Ardeene	El Paso
Jameson, Louise	El Paso	McCarthy, Bill	El Paso
Jameson, William*	El Paso	McCollough, Elizabeth D.*	El Paso
Jarrett, Juanita	El Paso	McComas, L. D., Jr.†	El Paso
Jenness, B. F.†	El Paso	McConachie, Lawrence	El Paso
Jenness, Richard	El Paso	McConachie, Mrs. Phyllis	El Paso
Job, Frances†	El Paso	McCormick, Francis	El Paso
Johnson, Betty	El Paso	McDonald, Mrs. Ethel	Ft. Bliss
Johnson, Forrest W.	La Tuna	McDonnell, Henry, Jr.	El Paso
Johnson, Jack*	Big Spring	McDonnell, Margaret	El Paso
Johnson, Lloyd S.	Ysleta	McKenna, Martha	El Paso
Johnston, Roy†	Ft. Bliss	McKenney, Leslie	El Paso
Jones, Juanita†	El Paso	McMillan, Joe	El Paso
Jonz, Wray	El Paso	McNamee, John P.	El Paso
Jordan, Adolfo Louist.	Tornillo	McNeil, Irving	El Paso
Jordan, Eugene	Wills Point	McNeil, Mary Elizabeth	El Paso
Jorgenson, Don W.*	Weslaco	McQuade, Edward W.*	El Paso
Kaffer, Jeanne	El Paso	MacCallum, Frank K.	El Paso
Kaffer, Margaret	El Paso	Mackin, Elizabeth	El Paso
Kalberer, Klem*	El Paso	Maechtel, Helen Louise†	El Paso
Karstendick, Albert	Ysleta	Maese, Beatrice†	El Paso
Keating, Frances	Toyah	Major, Nannie May†	El Paso
Keith, Kathleen Marcella*	El Paso	Malinowski, Rufus T.	El Paso
Kelly, Kathryn Anne	Vinton	Malone, Mrs. Larette†	El Paso
Kendall, Karl*	El Paso	Mann, Douglas*	El Paso
Kerley, Bernard	Ysleta	Mann, Mary Ethelyn	El Paso
Kerley, Daniel	Ysleta	Mansfield, Jewell†	El Paso
Kiely, Donald*	El Paso	March, Rufus	El Paso
Kilgore, Zora Zong†	El Paso	Marshall, H. Grady	El Paso
Kimball, Willard C.	Asheville, N. C.	Marshall, Howard	El Paso
King, Beth	El Paso	Martin, James Robert	El Paso
King, Betty	El Paso	Martin, Vivian	El Paso
King, James Harrison†	El Paso	Martindale, Dorothy†	El Paso
King, James V.	El Paso	Martinez, Fernando	El Paso
King, Ruth Eleanor	El Paso	Masten, Juanita Frances	El Paso
Kirby-Smith, Frank*	El Paso	Mateus, Carlota	El Paso
Kirby-Smith, Seldon, Jr.	El Paso	Maurice, James Matthew	Odessa

Maxon, Louise	El Paso	Perner, Evelyn†	El Paso
Mayfield, J. Davis*	El Paso	Peters, Dorothy	El Paso
Melsel, Alice	El Paso	Pettijohn, Fern†	El Paso
Melendez, Jose	El Paso	Phelan, Langdon	Winnipeg, Manitoba
Mier, Carlos Alberto†	El Paso	Phillips, Jack†	El Paso
Miller, Laymon	El Paso	Ptckles, Florence	El Paso
Miller, W. H.	El Paso	Pitts, Richard	El Paso
Mitcham, Robert	El Paso	Polser, Pauline	El Paso
Mitcham, Tom	El Paso	Pool, Heath†	Troup
Mitchell, Mary*	El Paso	Porter, David K., Jr.	Breckenridge
Mitchellmore, Nannie Lee†	El Paso	Porter, Vayne*	El Paso
Monroe, Donald	El Paso	Prado, Enrique	El Paso
Montague, Harry L.	El Paso	Prado, Miguel	El Paso
Montenegro, Alfonso G.	El Paso	Pratt, Marjorie Louise	El Paso
Montgomery, T. L.	El Paso	Prestwood, Hugh	El Paso
	Juarez, Chih.	Prieto, Juan J.	El Paso
Moor, Mary Lou	El Paso	Prieto, Phillip	El Paso
Morales, Antonio H.†	El Paso	Puckett, Mrs. C. A.	El Paso
Morales, Arturo M.	El Paso	Pukil, Frank	El Paso
Morgan, Mayme †	El Paso	Purdy, Delbert G.*	El Paso
Morrel, George	El Paso	Quevedo, Alberto	El Paso
Morris, Harriet	El Paso	Quijada, Amador-Los Angeles, Calif.	
Morrow, Louise	El Paso	Radcliffe, Edward G.†	Bristow, Okla.
Mosley, Harold	El Paso	Rainey, Helen	El Paso
Moye, Adelalde	El Paso	Ramsey, Peggy	El Paso
Mueller, William E.	El Paso	Rascon, Lupe†	El Paso
Muerdter, Kurt M.†	El Paso	Ratcliff, Mrs. Kathleen	El Paso
Munoz, Julius*	El Paso	Rathbun, La Vonne	El Paso
Nail, George R., Jr.*	El Paso	Ratliff, Frances	El Paso
Najera, Celestino C.†	El Paso	Ravel, Herbert	El Paso
Nalley, Hardy Clifford	El Paso	Ravel, Jerome	El Paso
Nations, Leona*	El Paso	Reed, Sam H., Jr.	El Paso
Navarro, Albert J.	El Paso	Regalado, Edward†	El Paso
	Los Angeles, Calif.	Reichl, Bernard*	El Paso
Naylor, Harold	El Paso	Reil, Anita*	San Antonio
Neel, Alan	El Paso	Rice, Virginia	El Paso
Neeson, Mary	El Paso	Richmond, Kenneth	El Paso
Neill, La Rue Johnson	El Paso	Riley, Florence Anne	El Paso
Neugebauer, Albert*	El Paso	Rivera, Carlos	El Paso
Neugebauer, Eugene	El Paso	Roberts, Ben D.	El Paso
Newell, Oliver J. Point Loma, Calif.		Roberts, Jo Ruth	El Paso
Nigra, John O.	El Paso	Roberts, Sarah Frances	El Paso
Nigra, Le Roy	El Paso	Robinson, George C.†	El Paso
Niland, Bill	El Paso	Robinson, John S.	El Paso
Noguera, Ignacio	El Paso	Robinson, Leona*	El Paso
Nold, Elmer E.	El Paso	Robinson, Mary Jo	El Paso
Norman, Mildred	El Paso	Robinson, Mrs. Patricia	El Paso
Oates, George F.	El Paso	Robinson, Richard C.	El Paso
	La Republica, Moris	Rodriguez, Siomara	El Paso
Odell, Mrs. Nellie Brig†	El Paso	Rogers, Bill	Wink
O'Donnell, Tom†	Fabens	Romero, Robert F.	El Paso
O'Keefe, Adelbert	El Paso	Rosenberg, Evelyn*	El Paso
Ollver, Mary	El Paso	Rosenberg, Sam	El Paso
O'Neal, Margaret	El Paso	Rosenblum, Birdie	El Paso
O'Neal, Marye Muriel	El Paso	Rosenfield, Louise	El Paso
Ortiz, Ignacio, Jr.†	El Paso	Rosenfield, Nancy	El Paso
	Chihuahua City, Chih.	Rosenfield, Mary Lyon	El Paso
Owen, Cornelia Love†	El Paso	Roslyn, Mrs. Margaret D.	El Paso
Page, L. O., Jr.	Quanah	Ross, Rose	El Paso
Page, Nelson†	Quanah	Rouse, Joseph†	El Paso
Page, Sallie	El Paso	Rowden, Mrs. Dorothy*	Clint
Paredes, Felipe	El Paso	Russell, James Edmond	Ysleta
Paredes, Peter Albert	El Paso	Rutherford, William H.	El Paso
Park, Billy	El Paso	Ryan, Julia Ann	El Paso
Park, Ola Daniel†	El Paso	Saldana, Nicanor	El Paso
Parsons, Frank	El Paso	Saldivar, Eflen Rodolfo*	El Paso
Payne, Valentine	El Paso	Salser, J. K.*	Lamesa
Peden, Jack	Roscoe	Salser, Robert Allan	Lamesa
Peden, Jowell L.†	Roscoe	Sanchez, Francisco R.	El Paso
Peinado, Emilio	El Paso	Sanders, Virgil	Big Spring
Pell, George*	El Paso	Schell, Edith Cecilia	El Paso
Penick, Billy	Sonora	Scherr, Joe Samuel	El Paso
Perdue, George†	El Paso	Schuck, Louise*	El Paso
Perez, Luis F.	El Paso	Schuyler, Peter, Jr.	El Paso
Perez, Nick	El Paso		
Perez, Porfirio	El Paso		

Schwankhaus, Annie Laura†	El Paso	Tomlinson, Shields, Jr.	El Paso
Schwartz, Jean Elizabeth	El Paso	Tovar, Salvador†	El Paso
Schwartz, Nandor*	El Paso	Tracy, Donald	El Paso
Scott, Mrs. Lillian E.	El Paso	Travis, Nell	El Paso
Scott, Mary Allan	El Paso	Traylor, Aubrey†	El Paso
Scott, Vere Dixon	El Paso	Treadwell, James†	El Paso
Segall, Bradford R.*	El Paso	Trimble, Elizabeth	El Paso
Sellers, Frances	El Paso	Trotter, Josef	El Paso
Sellers, Melvin J.	El Paso	Turner, Diana*	El Paso
Sharp, Addie Jo	El Paso	Twiss, Freeman	El Paso
Sheehan, Betty	El Paso	Valdes, Evaristo	El Paso
Sheehan, Catherine	El Paso	Valencia, Samuel	El Paso
Shelton, De Emma	El Paso	Valkenaar, John J.	El Paso
Shilling, Roy S.	El Paso	Vance, Mary Frances	El Paso
Sides, Ansel Joe	Coleman	Vandemoer, Edward*	El Paso
Silberg, Arthur	El Paso	Vasquez, Rebecca	El Paso
Simpson, Violet June	El Paso	Vega, Arnulfo	El Paso
Skiff, Alonzo	El Paso	Vertiz, Oscar	El Paso
Smith, Breedlove, Jr.	El Paso	Walker, Allen	El Paso
Smith, Emma Lee	El Paso	Walker, C. O.	El Paso
Smith, Howard†	El Paso	Wallace, Mrs. A.	El Paso
Smith, Mary Frances	El Paso	Wallingford, Doris E.	El Paso
Smith, O. K. Hoke*	El Paso	Walton, Betty Graves	El Paso
Smith, Ralph E.*	El Paso	Walton, J. B.	El Paso
Snider, Robert N.	El Paso	Walton, Julia	El Paso
Solomon, Mrs. Willa May	El Paso	Warne, John David	El Paso
Soltner, Marie	El Paso	Watson, Mrs. Mary M.†	El Paso
Sonnichsen, Augusta J.	El Paso	Weaver, J. Carroll* Carbondale, Ill.	El Paso
Sparks, Glynn	El Paso	Weaver, Margaret	El Paso
Specht, Isabel Pauline	El Paso	Webb, Charles W., Jr.†	El Paso
Spence, Charles T.	El Paso	Weiss, Harold	El Paso
Stacy, Jim†	El Paso	West, Bertha E.	El Paso
Stacy, Mary Gray	El Paso	Weyerts, Lucille	El Paso
Stafford, Harry N.	El Paso	White, Argyra	El Paso
Stansbury, Ruth	El Paso	White, Emily C.	El Paso
Stansbury, Virginia	El Paso	White, Harris Frances	El Paso
Steele, Hart, Jr.	El Paso	White, James†	El Paso
Stevenson, Boynton	El Paso	White, Mary Cochran*	El Paso
Stewart, Glendyne	El Paso	White, W. M.*	El Paso
Stitt, Barbara Lee	El Paso	Whitenack, Katherine	El Paso
Stitt, Jack	El Paso	Whitlock, R. A., Jr.	El Paso
Stoddard, Mrs. Ida Taylor†	El Paso	Whittington, Russell R.	El Paso
Stowell, Alta M.	El Paso	Wiggs, John H.	El Paso
Stringer, Billy†	El Paso	Wigley, Charles H.*	Colorado
Stueber, Margaret Elizabeth*	El Paso	Wilkenfeld, Allen†	Houston
Sullivan, Adella M.†	El Paso	Wilkerson, Paul*	El Paso
Sullivan, Eugene	El Paso	Wieland, Bernard	El Paso
Sullivan, Gerald	El Paso	Williams, Edna May	El Paso
Sullivan, Marian*	El Paso	Williams, Frances Edna	El Paso
Sullivan, Virginia	El Paso	Williams, George	El Paso
Sundquist, Edythe†	El Paso	Williams, Loyce Serena	Clint
Sweeney, Joe U.	El Paso	Williams, Marjorie Bernice	El Paso
Tappan, Marion	El Paso	Williams, Ruth	El Paso
Tapper, Benjamin	El Paso	Williams, William Allen	El Paso
Tapper, Ruby Ponsford	El Paso	Willis, Joe Sam†	El Paso
Tatum, Marion C.	El Paso	Wilson, Catherine Jane	El Paso
Taylor, Edna Louise	El Paso	Wilson, Lorraine Converse	El Paso
Teague, Keith	El Paso	Wilson, Rose	El Paso
Terrazas, Alfredo T.†	El Paso	Wineberg, Anne	El Paso
Terrazas, Sostenes, Jr.	El Paso	Wiser, Ortell†	El Paso
_____ Silver City, N. M.		Wolfe, Mrs. Elizabeth K.†	El Paso
Thede, Mary Elizabeth	El Paso	Womack, Harold	El Paso
Thomas, Clarence G.*	El Paso	Woods, John L., Jr.	El Paso
Thomas, Hazelann	El Paso	Worman, Helen Rebecca	El Paso
Thompson, Gerald†	El Paso	Wright, Fanny	El Paso
Thompson, Marvin*	El Paso	Wright, Mrs. Marguerite*	El Paso
Tiller, Lela Dodson	El Paso	Wright, Mina Ruth	El Paso
Tilley, Joseph Otto	El Paso	Wright, Richard	El Paso
_____ Ft. Clayton, C. Z.		Wynn, A. O., Jr.	El Paso
Tilley, Kathleen	El Paso	Young, Bess	El Paso
Tillman, James Harold†	El Paso	Young, Gilbert*	El Paso
Tinnin, Lee R.	El Paso	Young, Janet H.	El Paso
Tipton, Stanley	El Paso	Young, Letha Bray	El Paso
Todd, Gertrude C.	El Paso	Zlabovsky, Esther	El Paso
		Zlabovsky, Julia	El Paso
		Zozaya, Jose B.	El Paso

## REGISTER OF STUDENTS

SUMMER SESSION, 1936

An asterisk (\*) indicates that the student was in attendance during the first term only a dagger (†) indicates that he was in attendance during the second term only. All other students were in attendance both terms.

Abadie, Bob*	Austin	Crockett, Robert B.†	El Paso
Adams, Mrs. Elizabeth M.*	El Paso	Crockett, Velma Mabel†	El Paso
Adkins, Marvin	Lawton, Okla.		Gallup, N. M.
Ainsworth, John M.	El Paso	Cronkhite, Glen	El Paso
Allen, Faye Winniefred†	El Paso	Cuen, A. N.	El Paso
Alvarez, Fernando R.	El Paso	Cuen, Gloria (Garza)	El Paso
Andrews, Lionel*	Wills Point	Dale, Randolph*	El Paso
Antoine, Mary Katherine*	El Paso	Daniel, Mrs. Rosalie	El Paso
Arnold, Boyd†	Bearden, Ark.	Davidson, Guy*	El Paso
Arroyo, Cesar	El Paso	Deal, Tom†	El Paso
Bagge, Louise*	El Paso	Dean, Mrs. Helen L.*	El Paso
Bagley, Henry	El Paso	Dennis, Elizabeth Ann*	El Paso
Bancroft, Jane*	El Paso	Desouches, Andre*	El Paso
Barberie, J. Douglas*		Dickenson, Helen	El Paso
	Chihuahua City, Chih.	Dockray, Grace Barkert†	El Paso
Barnes, Marguerite Lane*	El Paso	Dougherty, Emily*	El Paso
Barrett, Gwynne†	El Paso	Drees, Mary Alice*	El Paso
Bartlett, Alma J.*	El Paso	Drtskill, Mattie E.*	El Paso
Bellman, Anna Lee†	El Paso	Droleskey, Mrs. Ada*	Ysleta
Beys, George	El Paso	Duke, Jack†	El Paso
Black, Wilmat†	El Paso	Dunne, Dorothy	El Paso
Blanchard, Mrs. Kate*	El Paso	Duty, Eddie Mae	El Paso
Bond, Charles Henry	El Paso	Duty, Lucille†	El Paso
Borunda, Carlota†	El Paso	Earp, Pina May*	El Paso
Bowman, E. R., Jr.	El Paso	Easley, Myrtis	El Paso
Boyer, Mildred*	El Paso	Eastham, Henry Clay†	El Paso
Bradshaw, Elizabeth	El Paso	Egerton, William Gray*	
Bramwell, Gladiolus*	Tornillo		San Elizario
Branch, Amella	El Paso	Eisert, Leo	El Paso
Brasmer, Mrs. D. D.	El Paso	Escajeda, Josefa*	El Paso
Britton, Thomas Marvin	El Paso	Evans, Margaret†	El Paso
Brown, Horace Frederick†	El Paso	Farnsworth, Mary Lee†	Ysleta
Brundage, Joe†	El Paso	Fernandez, William*	El Paso
Bulger, Gordon	El Paso	Feuille, Mrs. Margaret Levy*	
Burciaga, Z. Ernesto	El Paso		El Paso
Burke, Jane	El Paso	Fields, Sarah†	Chnt
Burrus, Constance*	Ysleta	Finley, Marshall*	El Paso
Burrus, Madeline*	Ysleta	Fino, Ben*	El Paso
Cagle, Louise Billard*	El Paso	Folk, Bob†	El Paso
Campos, Francisco Jose*	El Paso	Foot, Sara Bain	El Paso
Carpenter, Alfred Joseph	El Paso	Force, Charlotte M.	El Paso
Carreon, Daniel*	El Paso	Foret, Mrs. Belle Bacon†	El Paso
Carrera, Julius	El Paso	Foster, Faith†	El Paso
Carson, Julia*	El Paso	Foulks, Clayton†	El Paso
Casad, Margaret*	Canutillo	Franklin, Susan Elizabeth*	El Paso
Ceballos, Albertot†	Winslow, Ariz.	French, Mrs. Alice W.	El Paso
Chambers, I. Marie*	El Paso	Fryckberg, Hollice Grace	
Chant, Leonard Howard*	El Paso		San Antonio
Chapman, Maggie*	El Paso	Funk, Thomas	El Paso
Clark, Mary Young†	El Paso	Galatzan, Joe	El Paso
Clark, Robert	El Paso	Gallagher, Mary Bailey	El Paso
Clary, Jim C.†	El Paso	Galvan, Juliet	El Paso
Clifton, Mrs. Minnie	El Paso	Gambrell, Orell H.*	El Paso
Cobos, Oscar	El Paso	Gantt, Mildred Starks†	El Paso
Coffin, William	El Paso	Garcia, Edmundo*	El Paso
Collaer, Ruth	El Paso	Gary, Queen	El Paso
Conly, Myrtis*	El Paso	Gates, Walter B.	El Paso
Connally, Julia Mary†	El Paso	Gatlin, Eula Caint	El Paso
Cook, Charles R.	Toyah	Gibson, Dorothea V.*	El Paso
Coppedge, Mrs. Elna May*	El Paso	Gibson, Harland	Crystal, Idaho
Cowherd, Florence May†	El Paso	Gillespie, Mrs. Dorothy B.†	El Paso
Cox, Mrs. Wilmoth C.*	El Paso	Gish, Evert Lewis	El Paso
Cox, Wilmoth H.	El Paso	Glasgow, Octavia†	El Paso
Crain, Horace Bruce	El Paso	Goakes, Ruby R.*	El Paso
Crawford, Charlotte	El Paso	Gonzales, Rosario Aguirre	El Paso

Grant, Ruby	El Paso	McKenney, Leslie	El Paso
Gruber, Doris C.	El Paso	McKinney, Mrs. Elizabeth*	El Paso
Guthrie, Julia Anne D.	El Paso	McKnight, Mary*	El Paso
Hass, Wilma*	Canutillo	MacCallum, Frank K.	El Paso
Haffner, Mary Louise†	El Paso	MacFarlane, Graham†	Asheville, N. C.
Halpern, Beulah	El Paso	MacWhorter, Thelma	El Paso
Hanna, Ethel Myers*	El Paso	Maddox, Paul	Anthony, N. M.
Hannifin, Margaret*	El Paso	Maese, Beatriz	El Paso
Hardle, Bill*	El Paso	Malone, Mrs. Lorette*	El Paso
Hargrove, Eugene Alexander	El Paso	Mann, Douglas	El Paso
	El Paso	March, Rufus*	El Paso
Harper, Mary*	El Paso	Marshall, Howard J.	El Paso
Harris, Annet	El Paso	Martin, James Robert*	El Paso
Harris, Helen†	El Paso	Martinez, Fernando	El Paso
Harrison, Joe E.	El Paso	May, O. P.†	Livingston, La.
Hart, Joe*	Plainview	Mayhew, Hayden*	Dallas
Hart, Leo*	Miles	Melendez, Josef	El Paso
Hartsfield, Mary*	El Paso	Melvin, Maxine*	El Paso
Hartsfield, Vera Nell*	Clint	Midkiff, Floy	Ysleta
Heinrich, Frances Zavler*	Galveston	Miller, Mrs. Fred M.* Strauss, N. M.	N. M.
	El Paso	Miller, Robert	El Paso
Hendon, Mrs. Louise	El Paso	Miller, Wm. Edgar	El Paso
Hernandez, Tony*	El Paso	Miller, Wm. Howell	El Paso
Hershey, Addie Alice	El Paso	Morales, Arturo	El Paso
Higdon, Rosemary	El Paso	Morgan, Jeraldine T.*	Alamogordo, N. M.
Highfield, Norman James	El Paso	Morrill, Elizabeth Ostheimer*	El Paso
Hillworth, Jerry	El Paso	Morris, Mrs. Era†	Alamogordo, N. M.
Hinton, Mary Blair	El Paso	Morris, Harriet	El Paso
Hornedo, Consuelo*	El Paso	Morris, Myra	El Paso
Huey, Mary Jane*	El Paso	Morse, Alberta H.	El Paso
Huffman, Grace Hope*	El Paso	Morton, Mrs. Elizabeth C.	El Paso
Hughes, Lucille*	El Paso	Narrance, Dorothy	El Paso
Hultron, Estela Romo†	El Paso	Naylor, Harold	El Paso
Hungerford, Merle Ross, Jr.†	El Paso	Neill, La Rue J.†	El Paso
	El Paso	Newell, Oliver J.†	Point Loma, Calif.
Irvin, Hallie*	El Paso	Newman, Tom	El Paso
Isbell, Mrs. Billie D.*	El Paso	Nigra, Le Roy	El Paso
Iverson, Marguerite*	El Paso	Niland, Bill	El Paso
Ivey, Lee R.	El Paso	Norman, Mildred	El Paso
Jameson, Louise	El Paso	Nowlin, Mrs. Gertrude*	El Paso
Jameson, Mrs. Naomi	El Paso	O'Donnell, Tom	Fabens
Jarrett, Juanita	El Paso	O'Keefe, Adelbert	El Paso
Jones, Elsie Bristol*	El Paso	Old, Margaret Cowherd†	El Paso
Jones, J. Byron	El Paso	Oliver, Mary	El Paso
Jones, Juanita	El Paso	O'Neal, Margaret*	El Paso
Joseph, Mater Phineast	El Paso	O'Neill, Susie*	El Paso
Kahn, Louise†	El Paso	Ornelas, Angela Irene	El Paso
Keeler, Kathryn Annt	El Paso	Osborn, Cordelia McPherson*	Ysleta
Kennelly, William J.*	Houston	Osborn, Oliver*	El Paso
Kilgore, Voltat	El Paso	Page, L. O., Jr.*	El Paso
Kimball, Willard C.	Asheville, N. C.	Palm, Bob†	El Paso
King, Beth*	El Paso	Palm, John†	El Paso
King, Ruth†	El Paso	Park, Mrs. Ola D.	El Paso
Knotts, Margaret	El Paso	Parsons, Frank*	El Paso
Koch, Kathryn	Houston	Pearson, Virginia*	El Paso
Krauskopf, Nora†	El Paso	Perazzo, Buray*	El Paso
Kroeckel, Lella Rolston*	El Paso	Perez, Nick†	El Paso
Kurita, Isabelle†	El Paso	Perez, Porfirio	El Paso
Lambert, Cyrus	El Paso	Pickrell, Mignon*	El Paso
Lavigne, Virginia	El Paso	Pool, Heath	Troup
Lawson, Kate*	El Paso	Price, Hazel Garner*—Capitan, N. M.	N. M.
Lee, Henry	El Paso	Prieto, Phillip*	El Paso
Lefkowitz, Florence*	El Paso	Purdy, Delbert*	El Paso
Lefkowitz, Mildred*	El Paso	Ratliff, Frances*	El Paso
Lewis, Catherine*	Capitan, N. M.	Ravel, Jerome*	El Paso
Light, Edward S.*	El Paso	Reading, Bonnie Beth†	El Paso
Long, Florence*	Roswell, N. M.	Reedmon, Lawrence Harris*	El Paso
Loomis, Mrs. Eliza B.	El Paso		El Paso
Love, Mrs. Myrtle	El Paso		
McBeth, Leslie*	El Paso		
McCormick, Francis William†	El Paso		
	El Paso		
McDonald, Ethel Raynor*—Ft. Bliss	Ft. Bliss		
McGuire, Harriett—Anthony, N. M.	Anthony, N. M.		

Rice, Virginia*	El Paso
Rickard, Constance Neville*	El Paso
Riggins, Lee	El Paso
Riggs, Ted Hayes*	El Paso
Ritter, Bob*	El Paso
Robinson, Leona	El Paso
Robinson, Mrs. Patricia A.	El Paso
Rogers, Marye O'Neal	El Paso
Rogers, William	Wink
Rose, Mrs. Grace B.*	El Paso
Ross, Rose*	El Paso
Rush, Mrs. Lucy L. H.*	El Paso
Ryan, Julia Anne*	El Paso
Salsner, Furber F.	Lamesa
Salsner, Robert A.	Lamesa
Sanchez, Francisco*	El Paso
Sanders, Virgil	Big Spring
Savage, Mary Frances*	El Paso
Schleicher Vera Craint	Victoria
Schwartz, Jean Elizabeth*	El Paso
Scott, Mary Allan	El Paso
Seddon, Carrie Elizabeth*	El Paso
Seller, Bessie Vaughan*	Anthony, N. M.
Settle, Jimmie*	El Paso
Shannon, Jennie Lee*	Ysleta
Shaw, Richard*	El Paso
Sheehan, Betty	El Paso
Sides, Ansel Jo*	El Paso
Simpson Janet	El Paso
Sims, Annie Mary*	El Paso
Skiff, Josephine	El Paso
Skinner, Maurine	Ciint
Smith, Marguerite Blocksom	El Paso
Smith, Martha E.*	El Paso
Spence, Charles T.*	Washington, D. C.
Spencer, Trixy E.*	Ysleta
Stablein, Betty*	El Paso
Staten, Ruth*	El Paso
Steagall Lorenat	El Paso
Stevens, Ida*	Palestine
Stevenson, Boynton	El Paso
Stewart, Concha*	El Paso
Stewart, James Weldon*	Brownwood
Stoker, Eryline*	El Paso
Stowell, Alta F.	El Paso
Stringer, Billy*	El Paso
Sturman, William A.	El Paso
Sullivan, Patrick Gerald*	El Paso
Tappan, Marian†	El Paso
Tatum, Marian Calnan*	El Paso
Taylor, Lamar Arwell*	El Paso
Teague, Ailsa M.†	El Paso
Terrazas, Alfredo†	San Antonio
Thomas, Mrs. Nellie K.†	El Paso
Thomas, Remust	El Paso
Thomason, Isabelle	El Paso
Thompson, Grace Link*	El Paso
Threadgill, Mrs. Edythe L.	El Paso
Tickle, Lilly Stedmond*	El Paso
Tillman, Juanice	El Paso
Todd, Mrs. Gertrude C.*	El Paso
Trachsel, Margaret†	El Paso
Tracy, Donald	El Paso
Trigg, Wilma Patton*	El Paso
Trimble, Elizabeth†	El Paso
Uhlig, Alice Gwinn*	El Paso
Valkenaar, John	El Paso
Vance, Mary Frances	El Paso
Van Trease, Mrs. Ruth†	El Paso
Vasquez, Rebecca	El Paso
Vega, Arnulfo†	El Paso
Villalobos, Carmen*	El Paso
Vinson, Bertha Ellen†	San Angelo
Wafer, James*	Ysleta
Walde, Roxye Lee*	El Paso
Walker, Allen†	El Paso
Walker, Rosalie W.*	El Paso
Wallingford, Doris E.	El Paso
Want, Mrs. Marguerite Taylor*	El Paso
Watson, Mrs. Mary M.	El Paso
Webb, Charles W., Jr.	El Paso
Weisenhorn, Marian*	Las Cruces, N. M.
Wells, Lois*	El Paso
Wells, Louise†	El Paso
West, Mrs. Bertha†	El Paso
Weyerts, Lucille	El Paso
Whitaker, Mrs. Nell	El Paso
White, Argyra L.	El Paso
White, Betsy	El Paso
White, James H.*	El Paso
White, Mrs. Lilly Mae	La Tuna
White, Sarah†	El Paso
Wiley, Howard	El Paso
Wilkenfeld, Allan	Houston
Williams, Athalia Nell†	El Paso
Williams, William Allen	El Paso
Wilson, Betty Converse	El Paso
Wilson, Janet	El Paso
Wilson, Mildred†	El Paso
Woods, John L.	El Paso
Worman, Rebecca*	El Paso
Wright, Fanny A.	El Paso
Yanagawa, Kimi†	El Paso
Yarbro, May Belle	El Paso
Yarbrough, Ida Lee*	El Paso
Young, Mrs. Elmore C.*	Canutillo
Zlabovsky, Vera*	El Paso
Zollars, Fannilee	El Paso
Zozaya, Jose B.*	El Paso

## STATISTICAL SUMMARIES

### DEGREES CONFERRED, 1916-1936

Engineer of Mines (1916-1934).....	44
Bachelor of Science in Mining Engineering (1924-1936).....	123
Bachelor of Arts (1932-1936).....	209
Total Number of Degrees Conferred .....	376

### STUDENTS

	Long Session, 1934-35					Long Session, 1935-36				
	Men		Women		Total	Men		Women		Total
	Reg-ular	Irreg-ular	Reg-ular	Irreg-ular		Reg-ular	Irreg-ular	Reg-ular	Irreg-ular	
<b>ENGINEERING:</b>										
Postgraduates .....	1	0	0	0	1	0	0	0	0	0
Seniors .....	13	2	0	0	15	14	0	0	0	14
Juniors .....	11	1	0	0	12	14	0	0	0	14
Sophomores .....	21	2	0	0	23	25	1	0	0	26
Freshmen .....	64	3	0	0	67	109	5	0	0	105
Unclassified .....	0	0	0	0	0	0	1	0	0	1
<b>Totals.....</b>	<b>110</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>118</b>	<b>153</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>160</b>
<b>ACADEMIC:</b>										
Postgraduates .....	1	0	1	1	3	0	3	0	5	8
Seniors .....	14	3	34	24	75	11	1	19	26	57
Juniors .....	21	3	29	40	93	31	3	34	37	105
Sophomores .....	44	4	47	28	123	40	5	66	20	131
Freshmen .....	120	10	111	15	256	116	16	109	18	259
Unclassified .....	0	0	0	0	0	0	3	0	1	4
<b>Totals.....</b>	<b>200</b>	<b>20</b>	<b>222</b>	<b>108</b>	<b>560</b>	<b>198</b>	<b>31</b>	<b>228</b>	<b>107</b>	<b>564</b>
<b>TOTAL INDIVIDUAL STUDENTS IN THE COLLEGE OF MINES AND METALLURGY--</b>	<b>310</b>	<b>28</b>	<b>222</b>	<b>108</b>	<b>668</b>	<b>351</b>	<b>38</b>	<b>228</b>	<b>107</b>	<b>724</b>

### STUDENTS, SUMMER SESSIONS

	1935			1936		
	Men	Women	Total	Men	Women	Total
Students registered in the first term....	83	220	303	112	182	294
Students registered in the second term....	56	134	232	91	129	220
Total registered in both terms....	181	354	535	203	311	514
Students registered in both terms (deduct) .....	56	98	154	67	76	143
<b>Individual students in the Summer Session .....</b>	<b>125</b>	<b>256</b>	<b>381</b>	<b>139</b>	<b>235</b>	<b>371</b>





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Philosophy		Fee	19
Courses in	96	Permission for	37
Physical Education, Courses in	75	Welfare, Physical	23
Physical Examination for		Women's Auxiliary Loan Fund	21
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Physical Training Required of		Amount of, Permitted	38
Freshmen	23	Minimum to Be Passed	44
Physical Welfare	23	Standards Required	44
Physics, Courses in	89	Uncompleted	42
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