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COLLEGE of MINES and METALLURGY
(A Branch of The University of Texas)
EL PASO, TEXAS

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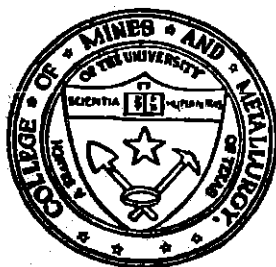
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A Member of the Southern Association of Colleges

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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

LESLIE WAGGENER, *Chairman*
K. H. AYNESWORTH, *Vice-Chairman*
LEO C. HAYNES, *Secretary*

MEMBERS

Terms Expire January, 1943

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

Terms Expire January, 1945

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

Terms Expire January, 1947

FRED C. BRANSON _____ Galveston
ORVILLE BULLINGTON _____ Wichita Falls
DAN J. HARRISON _____ Houston

STANDING COMMITTEES

ATHLETICS: Weinert, Stark, Harrison.
AUDITING: Stark, Branson, Blackert.
BUILDINGS AND GROUNDS: Mrs. Fairchild, Branson, Stark.
COLLEGE OF MINES AND METALLURGY: Branson, Mrs. Fairchild, Weinert.
COMPLAINTS AND GRIEVANCES: Bullington, Mrs. Fairchild, Blackert.
EXECUTIVE: Waggener, Aynesworth, Branson.
FINANCE: Harrison, Blackert, Weinert.
LAND: Bullington, Weinert, Harrison.
LEGISLATIVE: Blackert, Harrison, Branson.
LIBRARY: Aynesworth, Stark, Bullington.
MCDONALD OBSERVATORY VISITING: Stark, Mrs. Fairchild, Bullington.
MEDICAL BRANCH: Branson, Aynesworth, Weinert.
MUSEUM: Stark, Aynesworth, Bullington.
PUBLIC RELATIONS: Blackert, Stark, Harrison.
BOARD FOR LEASE OF UNIVERSITY LANDS: Aynesworth, Mrs. Fairchild.

CALENDAR
of the
COLLEGE OF MINES AND METALLURGY

1942

- SEPTEMBER 10, THURSDAY. Examinations for admission.
- SEPTEMBER 11, FRIDAY. Compulsory freshman examinations at 9 A.M. and 1 P.M. in the Museum.
- SEPTEMBER 12, SATURDAY. Condition, advanced standing, and postponed examinations. Petitions must be in the office of the Registrar not later than September 8.
- SEPTEMBER 14, MONDAY. Freshman convocation at 9 A.M. in Holliday Hall.
- SEPTEMBER 14, MONDAY. Faculty registration conference at 2 P.M.
- SEPTEMBER 15-16, TUESDAY-WEDNESDAY. Registration.
- SEPTEMBER 17, THURSDAY. Classes begin.
- SEPTEMBER 23, WEDNESDAY. Deferred examinations.
- SEPTEMBER 25, FRIDAY. Last day students may add or substitute courses.
- SEPTEMBER 25, FRIDAY. Last day of registration for the first semester.
- NOVEMBER 11, WEDNESDAY. Armistice Day, holiday.
- NOVEMBER 16, MONDAY. Mid-semester reports.
- NOVEMBER 26-28, THURSDAY-SATURDAY. Thanksgiving recess.
- DECEMBER 19, SATURDAY. Christmas recess begins at the close of the last class on Saturday.

1943

- JANUARY 4, MONDAY. Classes are resumed.
- JANUARY 4-13, MONDAY-WEDNESDAY. Preregistration.
- JANUARY 19-25, TUESDAY-MONDAY. Examinations for the first semester.
- JANUARY 21, THURSDAY. Examinations for admission.
- JANUARY 22, FRIDAY. Freshman convocation at 9 A.M. in Holliday Hall and compulsory freshman examinations immediately thereafter in the Museum.
- JANUARY 23, SATURDAY. Compulsory freshman examinations in the Museum.
- JANUARY 25, MONDAY. Registration of new students.
- JANUARY 26, TUESDAY. Grade day.
- JANUARY 29-30, FRIDAY-SATURDAY. Registration of readmission students.
- JANUARY 30, SATURDAY. Condition, postponed, and advanced standing examinations (not for Engineering students).
- FEBRUARY 1, MONDAY. Classes begin.
- FEBRUARY 6, SATURDAY. Last day students may add or substitute courses.
- FEBRUARY 6, SATURDAY. Last day for registration in the second semester.
- MARCH 24, WEDNESDAY. Mid-semester reports.
- MARCH 27, SATURDAY. Condition examinations for Engineering students.
- APRIL 23-26, FRIDAY-MONDAY. Easter holidays.
- MAY 1, SATURDAY. Major examinations.
- MAY 20-26, THURSDAY-WEDNESDAY. Examinations for the second semester.
- MAY 23, SUNDAY. Baccalaureate Services.
- MAY 27, THURSDAY. Grade day.
- MAY 28, 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 Sciences*.
- JOHN WILLIAM KIDD, E.E., *Dean of Engineering; Superintendent of Buildings and Grounds*.¹
- Eugene McRae Thomas, M.S., *Acting Dean of Engineering; Superintendent of Buildings and Grounds*.²
- Norma Egg, M.A., *Dean of Women*.³
- John Thomas Haney, B.A., *Registrar*.
B.A., Hardin-Simmons University, 1931.
- Marshall Lee Pennington, B.B.A., *Business Manager*.
B.B.A., Texas, 1935.
- Baxter Polk, B.S., *Librarian*.
B.A., Hardin-Simmons University, 1935; B.S. (Library Science), Oklahoma, 1936.
- Burt Franklin Jenness, M.D., *Health Officer*.
- Helen Norwood Deathe, B.S., *Director of Dormitories*.⁴
B.S., Texas State College for Women, 1932.
- William S. Strain, M.S., *Curator of Museum*.
- Andrew William Hunt, Jr., Ph. D., *Director of Student Life*.⁵

FACULTY

Professors

- Frederick William Bachmann, *Professor of Modern Languages*.
B.A., Stanford, 1922; M.A., 1924; Ph.D., Chicago, 1931.
- Anton Helmer Berkman, *Professor of Biological Sciences*.
B.A., Texas, 1924; M.A., 1926; Ph.D., Chicago, 1936.
- Jack C. Curtice, *Professor of Physical Education*.⁶
B.A., Transylvania, 1930; M.A., Columbia, 1938.
- John Fraser Graham, *Professor of Mining and Metallurgy*.
B.S., Michigan College of Mining and Technology, 1905; E.M., 1924.
- John William Kidd, *Professor of Engineering*.⁷
B.S., Oklahoma Agricultural and Mechanical College, 1904; E.E., Texas Agricultural and Mechanical College, 1909.
- Edwin John Knapp, *Professor of Mathematics and Physics*.
Ph.B., Wisconsin, 1921; Ph.D., 1931.
- Walter S. Knox, *Professor (Part-time) of Physical Education*.
B.A., Iowa, 1927; M.A., Texas Christian University, 1934; Ph.D., Iowa, 1938.
- William Walter Lake, *Professor of Chemistry*.
B.S., Ohio State, 1913; M.S., 1921; Ph.D., Chicago, 1941.
- Thomas Erl Morris, *Professor of Economics and Business Administration*.
B.B.A., Texas, 1931; M.B.A., 1932.

¹Died December 29, 1941.

²Appointed January 1, 1942.

³Resigned as Dean of Women February 1, 1942.

⁴Appointed June 1, 1941.

⁵Appointed February 1, 1942.

⁶Appointed February 1, 1942.

⁷Died December 29, 1941.

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.*⁸
M.E., Missouri School of Mines, 1891.

Charles Leland Sonnichsen, *Professor of English.*
B.A., Minnesota, 1924; M.A., Harvard, 1927; Ph.D., 1931.

John Leroy Waller, *Professor of History.*
B.S., Oklahoma, 1923; M.A., Colorado, 1925; Ph.D., Texas, 1929.

ASSOCIATE PROFESSORS

Pearl Whitfield Durkee, *Associate Professor of Physics.*
B.A., Acadia University, 1903; B.S. (Electrical Engineering), McGill University, 1906;
M.S., Cornell, 1935.

Gladys Gregory, *Associate Professor of Government.*
B.A., Southwestern, 1915; M.A., Texas, 1926; Ph.D., 1937.

Andrew William Hunt, Jr., *Associate Professor of Education.*
B.A., Baylor, 1932; M.A., 1933; Ph.D., Texas, 1941.

Lloyd Alvino Nelson, *Associate Professor of Geology.*
E.M., Texas College of Mines, 1916; M.S. (Geology), Colorado, 1929; Ph.D., 1937.

Mack Saxon, *Associate Professor of Physical Training.*⁹

Nathan Schwid, *Associate Professor of Mathematics.*
B.A., Wisconsin, 1930; M.A., 1932; Ph.D., 1934.

Rex Wallace Strickland, *Associate Professor of History.*
B.A., Austin College, 1927; M.A., Southern Methodist University, 1929; Ph.D., Texas, 1937.

Eugene McRae Thomas, *Associate Professor of Mining and Metallurgy.*
B.S. (Mining Engineering), Texas College of Mines, 1926; M.S., Massachusetts Institute of Technology, 1939; E.M., Texas College of Mines, 1940.

Mrs. Isabella Corbett Zimmerman, *Associate Professor of English.*
B.A., Occidental, 1925; M.A., 1926; Ph.D., University of Southern California, 1934.

ASSISTANT PROFESSORS

William Robert Avrett, *Assistant Professor of Modern Languages.*
B.A., Texas, 1927; M.A., 1928.

William Henry Ball, *Assistant Professor of Chemistry.*
B.S., Chicago, 1922; M.S., Iowa State College, 1925.

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 Normal University, 1919; M.A., Washington, 1927.

Herbert Walter Hargreaves, *Assistant Professor of Economics.*
B.A., Nevada, 1935; M.A., Clark, 1936; Ph.D., Duke, 1941.

Harry C. Harmsworth, *Assistant Professor of Sociology.*¹⁰
B.A., Colorado State College, 1928; M.A., 1932.

Burt Franklin Jenness, *Assistant Professor of Biological Sciences.*
M.D., Dartmouth, 1899; Lt. Comdr. M.C., U.S. Navy, Retd.

⁸Retired September 1, 1941.

⁹Resigned June 15, 1942.

¹⁰Appointed for Long Session 1941-1942 only.

- Glen R. Johnson, *Assistant Professor of Music; Director of Band.*
B.A., Baylor, 1936.
- A. D. Beach Langston, *Assistant Professor of English.*
B.A., The Citadel, 1933; M.A., Claremont, 1935; Ph.D., North Carolina, 1940.
- Dorothy McCuskey, *Assistant Professor of Education.*
B.A., College of Wooster, 1929; M.A., Radcliffe, 1930; Ph.D., Yale, 1936.
- Leon Denny Moses, *Assistant Professor of English.*
B.A., Columbia, 1923; M.A., 1924.
- Richard Hubbell Olmsted, *Assistant Professor of Modern Languages.*
B.A., Minnesota, 1922; M.A., 1932; Ph.D., 1934.
- Eugene O. Porter, *Assistant Professor of History.*
B.A., Ohio Wesleyan, 1920; M.A., Ohio State, 1936; Ph.D., 1939.
- Mrs. Mary Kelly Quinn, *Assistant Professor of Sociology.*¹¹
B.A., Wellesley, 1922; M.A., Boston University, 1930.
- Mac F. Smith, *Assistant Professor of Business Administration.*
B.B.A., Texas, 1931; M.B.A., 1934.
- Judson F. Williams, *Assistant Professor of Journalism; Director of Publicity.*
B.A., Hardin-Simmons, 1934; M.A., Missouri, 1940.
- Vera Wise, *Assistant Professor of Design and Interior Decorating.*
B.A., Williamette, 1920; Chicago Academy of Fine Arts; Kansas City Art Institute.

INSTRUCTORS

- Mrs. Myrtle Evelyn Ball, *Instructor in Public Speaking.*
B.A., New Mexico Normal University, 1926.
- Thomas Grogard Barnes, *Instructor in Mathematics.*
B.A., Hardin-Simmons, 1933; M.S., Brown, 1936.
- Leon Camp, *Instructor in Mathematics.*
B.A., North Texas State Teachers College, 1927; M.A., Columbia, 1928; Ph.D., Texas, 1941.
- Charles C. Campbell, *Instructor in Engineering.*¹²
B.S. (Civil Engineering), Oklahoma Agricultural and Mechanical College, 1941.
- Mrs. Isabelle Kelly Fineau, *Instructor in Modern Languages.*
B.A., Texas, 1905; M.A., 1931.
- Milton E. Gross, *Instructor in Journalism.*
B.J., Missouri, 1939; M.A., 1941.
- Jesse A. Hancock, Jr., *Instructor in Chemistry.*
B.S., Gonzaga, 1939; M.S., 1940.
- Mrs. Maurine Howell Heath, *Instructor (Part-time) in Public Speaking.*
B.A., Texas College of Mines, 1938.
- Gene Hemmle, *Instructor in Music; Director of Glee Clubs.*
B.M., Southern Methodist University, 1937; Kansas City Conservatory; Student of Estelle Liebling and Oscar Seagle, New York City.
- Joseph Hopkins James, Jr., *Instructor in English.*
B.A., Alabama, 1929; M.A., 1931.
- Mrs. Julia Ida Kane, *Instructor in Physical Education.*
B.A., North Dakota, 1919; M.A., Arizona, 1930.
- Bulah A. Liles, *Instructor in Mathematics.*
B.A., Texas, 1921; M.A., Chicago, 1927.
- Robert George Mers, *Instructor in Chemistry.*
B.A., Austin College, 1934; M.A., Texas, 1936; Ph.D., 1940.
- Ross Moore, *Instructor in Physical Education.*
B.A., Texas College of Mines, 1939.
- Mrs. Elizabeth Y. Nealon, *Instructor (Part-time) in English.*
B.A., Converse College, 1901.

¹¹Absent on leave, 1941-1942.¹²Appointment for Long Session 1941-1942 only.

- Harry B. Phillips, *Instructor in Physical Education*.¹³
B.A., Texas College of Mines, 1933.
- Pearl Olive Ponsford, *Instructor in English*.
B.A., Wellesley, 1919; M.A., University of Southern California, 1930; Ph.D., 1936.
- Mrs. Louise F. Resley, *Instructor in Mathematics*.
B.A., Texas College of Mines, 1939.
- Mrs. Bertha Reynolds, *Instructor in Education*.
B.A., Colorado, 1921; M.A., 1922.
- George Perry Steen, *Instructor in Engineering*.¹⁴
B.S. (Civil Engineering), Missouri School of Mines, 1933; M.S., 1938.
- William S. Strain, *Instructor in Geology; Curator of Museum*.
B.S., West Texas State Teachers College, 1932; M.S., Oklahoma, 1937.

ASSISTANTS

- Julia Connolly, *Assistant in the Department of Physical Education*.¹⁵
B.A., Texas State College for Women, 1938.
- Charles C. Craven, *Laboratory Assistant in the Department of Mathematics and Physics*.
- Dorothy Davis, *Assistant in the Department of Physical Education*.¹⁶
B.S., North Texas State Teachers College, 1938; M.S., 1940.
- Mrs. Mary Eleanor Duke, *Laboratory Assistant in the Department of Biological Sciences*.^{16a}
B.A., Texas College of Mines, 1939.
- Jack Hunt, *Assistant in the Department of Economics and Business Administration*.
- Mrs. Sue McCamant Sax, *Laboratory Assistant in the Department of Biological Sciences*.^{16b}
B.A., Colorado, 1941.
- Marshall Willis, *Assistant in the Department of Economics and Business Administration*.
- Byron Williamson, *Laboratory Assistant in the Department of Chemistry*.

ADMINISTRATIVE ASSISTANTS

- Mrs. Monica G. Adams, *Assistant (Part-time) in the Museum*.
- Lu Venia Arnold, *Secretary and Filing Clerk, Office of the Registrar*.
B.A., Texas College of Mines, 1940.
- Annie Marie Griffin, *Switchboard Operator*.
- Christine Harrell, *Secretary and Clerk, Office of the Business Manager*.
B.A., Texas College of Mines, 1941.
- Mrs. Isabel Abdou Hatchett, *Assistant Bookkeeper and Voucher Clerk, Office of the Business Manager*.
B.A., Texas College of Mines, 1933.
- Mrs. Marjorie Erwin Heyser, *Assistant Librarian*.
B.A., Texas College of Mines, 1934; B.S. (Library Science), Pratt Institute, 1935.
- Mrs. Maurine Smith Jerrell, *Assistant Business Manager*.
B.A., Texas College of Mines, 1935.
- Frances Luella Job, *Transcript Clerk, Office of the Registrar*.
B.A., Texas College of Mines, 1935.

¹³Resigned June 15, 1942.

¹⁴Absent on leave, 1941-1942.

¹⁵Resigned January 31, 1942.

¹⁶Appointed February 1, 1942.

^{16a}Resigned January 31, 1942.

^{16b}Appointed February 25, 1942.

- Zazle Kirkpatrick, R.N., *Resident Nurse.*
 Mrs. Elizabeth Y. Nealon, *Assistant Librarian.*
 B.A., Converse College, 1901.
 Margaret Neely, *Secretary to the Faculty.*
 Wayne Porter, *Assistant Registrar.*¹⁷
 Mrs. Frances Smith Stevens, *Secretary to the President.*
 Betty Anne Thedford, *Assistant Registrar.*¹⁸
 B.A., Texas, 1926.

CRITIC TEACHERS IN ELEMENTARY TEACHER TRAINING

(El Paso Public Schools)

- Lozier Condon.
 B.A., Alabama, 1924; M.S., University of Southern California, 1939.
 Charlotte Crawford.
 B.A., Texas College of Mines, 1941.
 Pina Mae Earp.
 B.A., Texas College of Mines, 1940.
 Ethel Hanna.
 Sul Ross State Teachers College.
 Edna King.
 Colorado State College; University of Texas; Teachers' College, Columbia University.
 Eliza B. Loomis.
 B.A., Texas College of Mines, 1939.
 Alice J. Nelson.
 B.E., University of California at Los Angeles, 1931.
 Beatrice Sims.
 B.A., Texas State College for Women, 1931; M.A., Sul Ross State Teachers College, 1939.
 Marjorie Talley.
 B.A., Arkansas, 1931; M.A., Sul Ross State Teachers College, 1941.
 Lucile Tillman.
 B.A., Texas College of Mines, 1932.

CRITIC TEACHERS IN HIGH-SCHOOL TEACHER TRAINING

(El Paso Public Schools)

- Margaret Bivins.
 B.A., College of Mines and Metallurgy, 1936.
 Louise Bogardus.
 B.A., Simmons College, 1911.
 Sudie Buck.
 B.S., Baylor University, 1907; M.A., University of Chicago, 1913.
 Clarabelle Butler.
 B.A., Baylor University, 1924; M.A., Sul Ross, 1940.
 Rebekah Coffin.
 B.A., New Mexico State Teachers College, 1924.
 Lena Cole.
 B.L., Baylor University, 1906; M.A., Texas Tech, 1936.
 Ralph Cummins.
 B.A., Ohio State University; M.A., University of Colorado.
 Josephine Escajeda.
 B.A., Texas College of Mines and Metallurgy, 1936.

¹⁷Resigned November 30, 1941.

¹⁸Appointed January 1, 1942.

Catherine Flynn.

B.A., Texas College of Mines and Metallurgy, 1932.

Fannie Foster.

B.A., Beloit College, 1906.

Vernon Hill.

Ph.B., Baylor University, 1904.

Anne Kelly.

B.A., University of Texas, 1925.

Lena McBee.

B.A., West Virginia University, 1924; M.A., Columbia University, 1926.

Mary Mitchell.

B.A., Galloway College, 1923; M.A., Northwestern University, 1925.

Elaine Morrell.

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

Hibbard Polk.

B.A., Hardin-Simmons University, 1938.

Freda Powell.

B.S., Sul Ross, 1937.

Katherine Ross.

B.A., University of Texas, 1930.

Josephine Skiff.

B.A., Western College for Women, 1931; M.A., Sul Ross, 1939.

Louise Springer.

B.S., Northwestern University, 1929.

Ruby Tapper.

B.A., Wellesley College, 1920.

Alice Uhlig.

B.S., Central Missouri State Teachers College, 1932; M.A., University of New Mexico, 1939.

Nora Ward.

Ph.D., Baylor University, 1907; M.A., University of Texas, 1941.

Ouida Watson.

B.A., Texas Woman's College.

GENERAL INFORMATION

HISTORY

In 1913 the Thirty-third Legislature in regular session passed an act creating the State School of Mines and Metallurgy, to be located in El Paso. The act provided that the School of Mines should be placed under the control of the Board of Regents of The University of Texas. In 1919 an act of the Thirty-sixth Legislature made the school 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 El Paso Military Institute grounds and buildings. This provision was met and the school was formally opened in September, 1914. On October 29, 1916, the Main Building of the College burned. It was then decided that the College should be moved to a new site to the west of Mount Franklin. The Thirty-fifth Legislature voted an emergency appropriation of \$100,000 for new buildings.

In 1927 the State Legislature provided for the enlargement of the program of the school to include the liberal arts. Following this provision, the Board of Regents in 1931 authorized the College to confer the degree of Bachelor of Arts. At the same time, the Board provided for a presidency for the College and vested direct administrative authority in that office. In 1940 the Board of Regents authorized the conferring of the degree of Master of Arts.

LOCATION

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

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

Its extreme dryness and medium latitude, combined with a moderately high altitude (3,800 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.

The second largest custom smelter in the world is situated near the College of Mines and Metallurgy. Within a short distance is also a most modern electrolytic copper refinery, which has a capacity of 20,000,000 pounds of copper in process. Nearby are located a large cement plant, two large brick plants, and three oil refineries. The manufacture of lime, tile, and other non-metallics is carried on 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.

BUILDINGS AND GROUNDS

The campus consists of forty-eight acres. Its thirteen buildings include the Library and Administration Building, Main Building, Holliday Hall (the gymnasium), Burges Hall, Chemistry Building, Kelly Hall, Seamon Hall, Engineering Building, Museum Building, a dormitory for women, a dormitory for men, and a small dressing-room for women, donated by the Woman's Auxiliary of the College of Mines. The architectural style of all the buildings is Tibetan and the construction is from native stone. The campus is most picturesque and blends beautifully into the mountainous background.

LIBRARY

The main book collection of some 30,000 volumes is housed on the second floor and in the West annex of the library-administration building. The nucleus of the book collection was the library of the late W. H. Seamon, a mining engineer and member of the faculty.

The selection of books and periodicals has been made with the curriculum in mind. As the curriculum has expanded, so has the subject material in the library. Consequently, the geology, mining, language, economics, and literary sections of the library are especially strong. The library is a depository for a select group of government publications and contains an invaluable collection of United States Geological Survey and Bureau of Mines bulletins and reports, some volumes of which are no longer obtainable.

The library regularly receives about 325 periodicals—technical, general, literary and popular. Current issues of these periodicals are placed in the Magazine room and students are encouraged to browse freely in this room. Many of the popular fiction and non-fiction books are placed in general circulation, so that students may find enjoyment in recreational reading. There is also a very up-to-date pamphlet collection on miscellaneous subjects to which the students are given full access.

The facilities of the El Paso Public Library, The Teachers' Library of the El Paso Public Schools, and three or four private libraries are made available to students.

MUSEUM

The El Paso Centennial Museum, allocated by the Commission of Control for the Texas Centennial Celebrations was erected by the State under the supervision of the State Board of Control at a cost of \$50,000. This thoroughly

modern and spacious museum building was located on the campus of the College of Mines through the authority of the El Paso County Advisory Committee. It is beautifully situated and graces the entire college campus. The college is truly proud of it and is devoting every effort toward the development of a great museum for the entire Southwest. The public is welcome to visit the Museum and students will find an excellent opportunity for studying the various phases in the evolution of the civilization of this part of the country.

Permanent Collections: These exhibits include an excellent display of minerals and rocks with special emphasis being placed on southwestern varieties. The archaeological collections have been assembled to show local cultures; therefore the El Paso Polychrome and Chihuahua pottery displays are outstanding. With the assistance of the Works Progress Administration, the Museum has assembled a large quantity of vertebrate paleontological material and this, in conjunction with the invertebrate paleontological specimens, presents a splendid display of prehistoric life. The biological collections, representing modern plants and animals, occupy space in Burges Hall.

Loan Collections: A number of the collections in the Museum have been loaned by individuals and groups in the community. Outstanding among these are the El Paso Pioneer's Association and the El Paso Volunteer Firemen's Association Collections, and the Collections of the United Daughters of the Confederacy.

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

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

DORMITORIES

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

DETERMINATIONS AND TESTS

General principles.—The College of Mines and Metallurgy is charged with teaching and research in mining, metallurgy, and allied subjects in

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

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

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

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

SCHOLARSHIPS, LOAN FUNDS, AND EMPLOYMENT

SCHOLARSHIPS

High School.—The College annually offers this scholarship to the valedictorian, boy or girl, graduating from an accredited secondary school located in the State of Texas, who meets specific requirements as to grades. The financial benefit is exemption from the registration fee of \$50 in the College, and is only valid for the first long session after graduation from high school. *The honor student must be certified through the Texas State Department of Education.* Particulars may be obtained from high-school principals.

LOAN FUNDS

Unless otherwise specified, the following rules apply:

1. The amount of an individual loan will be limited to the sum of fees and deposits.
2. Endorsements required are those of the parent or guardian, and one other person suitable to the Committee.
3. Interest will be charged at the rate of six per cent per annum with a minimum charge of twenty-five cents. This interest is payable when the loan matures.
4. Repayment is required within the semester or term for which the loan is granted.
5. A student, generally, is expected not to apply for a loan until after one semester of attendance at the College of Mines.
6. Applications should be directed to Lloyd A. Nelson, Chairman of the Student Loan Committee.

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 Lloyd A. Nelson, Chairman of the Student Loan Fund Committee, and applications should be directed to him.

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.

Applications should be directed through Eugene M. Thomas, Acting Dean of Engineering.

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.

EMPLOYMENT

Students' Employment Service.—To a student who is working his way, a city the size of El Paso offers a large field of opportunity. The Employment Service acts as a clearing house to coördinate the efforts of the student and the employer. The Bureau will make every endeavor to assist the student in securing employment, but other than this, the College assumes no responsibility. *In no case should the student enter the College for the first time without sufficient funds for at least the first semester.* Applications should be directed to T. E. Morris, Chairman, Student Employment Service.

National Youth Administration.—For several years funds have been provided by the Federal Government through the National Youth Administration to provide part-time employment to needy students. Selection of students is according to National Youth Administration standards and is based primarily on scholarship and financial need of the applicant. The amount which could be earned during the school year 1941-42 varied from \$7.20 to \$15.00 monthly. Since these funds are appropriated yearly, there is no assurance of continuance. Applications should be directed to J. T. Haney, Registrar.

EXPENSES

Average registration cost for resident academic students per semester runs from \$32.00 to \$39.00, including fees.

Average registration cost for resident engineering students per semester runs from \$32.00 to \$48.00, including fees.

FEES AND DEPOSITS

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

TUITION—RESIDENT STUDENTS

Each resident student is required to pay tuition at the following rate for each semester:

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

TUITION—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 immediately 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 Registrar.

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

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

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

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

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

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

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

LABORATORY FEES

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

*Sections of the non-resident fee law have been interpreted by the Attorney General of Texas to mean that: (1) a minor cannot acquire a domicile of choice during his minority; (2) the residence of a minor follows that of the father, or if the father is dead, that of the mother; (3) if both parents are dead the residence of the minor follows that of the grandparent, provided the minor lives with the grandparent; (4) the minor whose parents and grandparents are dead would not be assigned the domicile of any other relatives with whom he lived; (5) a self-supporting minor who comes to Texas after the death of his parents who are residents of another state is a non-resident; (6) a person over twenty-one years of age must reside in Texas at least twelve months after attaining his majority in order to be classified as a resident student.

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

Biology 29, 330	\$ 2.00
Botany 301, 302	2.00
Business Administration 1, 311, 21, 314, 332, 334.....	2.00
Chemistry 1, 801, 21, 821, 311, 323.....	2.00
413, 460, 461.....	4.00
Civil Aeronautics 411, 621.....	4.00
Design 301, 302, 310, 311, 312, 313.....	2.00
Drawing 301, 302.....	2.00
Economics 329	2.00
Engineering 322, 224.....	2.00
410, 412, 414, 415, 431, 434, 533.....	4.00
Geography 303	2.00
Geology 301, 302, 316, 317 & 217, 361, 264.....	2.00
418, 419, 421, 427, 463.....	4.00
Journalism 307	2.00
Metallurgy 324, 325, 362, 364, 264, 265.....	2.00
423, 473	4.00
Mining 261, 262.....	2.00
Music (Voice 201)	25.00
Physical Education 01, 02, 03, 05, 07, 09, and Band 01 when substituted for P. E.....	2.00
Physics 1, 801, 12, 812, 222, 34.....	2.00
Zoology 301, 14, 302, 320, 321.....	2.00

OPTIONAL FEES—PER YEAR

Co-Ed	\$ 1.00
Flowsheet (Cost of year book)	
Student Association Members	4.00
Non-Student Association Members.....	5.00
Hospitalization—per semester (required of dormitory students) —	1.50
Student Association Memberships per year (Federal Tax not included)	10.00

Students' Association fee.—The Students' Association fee is \$10.00 without Federal Tax. Payment of this fee at the beginning of each session is necessary in order that students may receive valuable training in extracurricular subjects. In addition to the usual athletic and social activities, important training is given with respect to literary activities, publications, dramatics, current events, advanced and special application in science and engineering, etc. At least 50 per cent of the subscription price of the *Prospector*, College newspaper, shall be taken from the regular student association fee.

MISCELLANEOUS FEES

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.

Special Examination Fee.—A fee of \$1.00 is required of persons who wish to take an advanced standing examination or to remove a *PX* or a condition by examination. Permission of the Dean and Registrar must be secured in advance.

DEPOSITS

General property deposit.....	\$ 7.00
Dormitory room deposit.....	\$ 5.00

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

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

ROOM AND BOARD CHARGES

Room rent per semester*.....	\$ 45.00
Board per semester*.....	123.75
Average cost of room and board per month*.....	37.50

HOUSING

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

There are two very modern and conveniently located residence halls, one for men and one for women. Each of these halls is fireproof in construction and modernly furnished. Adequate equipment is provided for supplying meals. Facilities also include recreation rooms which contribute to a pleasant social life for all resident students.

A room deposit of \$5.00 is required in advance in order to make proper room reservation. This deposit is refunded at the close of the semester, pro-

*Subject to change on thirty days' written notice.

vided the student does not withdraw from the dormitory before that time, and provided there is no deduction for breakage. The deposit will be returned to those students who cannot be accommodated in the college dormitories and to those applicants who cancel their reservations ten days prior to the opening of the session.

Room will be furnished in each of the dormitories at the rate of \$45.00 per semester. Board is provided at the rate of \$123.75 per semester. The College reserves the right to change the charges for room and board, or both, by giving written notice of such increases thirty days before the change.

The detailed regulations governing student life in the dormitories, the payment for room and board, refunds, changes of residence, etc. are published in pamphlet form. *Students concerned are held individually responsible for and charged with the knowledge of these regulations.* Copies can be obtained upon request from the Director of Dormitories or the Registrar.

Official Lists of Rooming and Boarding Houses.—The College of Mines publishes annually official lists of rooming houses for men and for women. Any rooming house is eligible to a place upon one of these official lists and to receive the publicity through the College accruing therefrom, provided it complies with the College regulations.

In order to be placed upon this official list, the proprietor must be of good moral character and must be willing to cooperate with the College in carrying out its regulations. All houses on the official list are subject to inspection by representatives of the College of Mines Health Service or by the Director of Student Activities. The College reserves the right to remove at anytime any house from the official list for cause deemed sufficient by the Committee on Student Living Accommodations.

The detailed regulations governing student life in boarding houses, standards to be met by proprietors, etc. are published in pamphlet form. *Students and proprietors concerned are held individually responsible for and charged with the knowledge of these regulations.* Copies can be obtained upon request from the Registrar or the Chairman of the Committee on Student Living Accommodations.

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.

Physical Examination.—A physical examination by the College Health Officer is required of all students who have not previously attended the College of Mines. An applicant must either be vaccinated by the College Health Officer or he 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 upon my honor not to encourage nor participate in hazing or rushes during my attendance in the College of Mines and Metallurgy, a branch of The University of Texas, provided that contests among students, conducted according to the rules approved by the faculty, shall not be classed as rushes."

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.

Admission Requirements

	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
General _____	1	American history _____	½-1
		Civics _____	½-1
		Economics _____	½

Section B

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

ENGINEERING

The unit requirements for admission to Engineering are as follows:

SUBJECT	UNITS
1. English _____	3
2. Mathematics*	
Algebra _____ $1\frac{1}{2}$	} _____ 3
Plane Geometry _____1	
Solid Geometry _____ $\frac{1}{2}$	
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 Engineering, except that neither the English nor the mathematics requirement may be absolved under "Quality Provisions."

Quality provisions.—Quality, however, is more important than quantity. A course thoroughly mastered is worth more than one completed with lower 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.

Students expecting to specialize in foreign languages in college should begin in high school. Those looking forward to college work in the sciences, mathematics, medicine, business administration, statistics, or law should take at least $1\frac{1}{2}$ years of algebra and 1 year of plane geometry in high school.

*Beginning September, 1943, 2 units in Algebra will be required.

†Beginning September, 1943, $3\frac{1}{2}$ units will be required.

Students who plan to study engineering must have 2 years of algebra and 1 of plane geometry in high school. They are also strongly advised to take $\frac{1}{2}$ year of solid geometry in high school.

STUDENTS FROM OTHER COLLEGES

A student seeking admission from another college must present an official transcript of his entire college record, including his admission units. Much trouble and time will be saved by sending this official record to the Registrar not later than September 1, as students are not allowed to register until this transcript is on file.

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

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

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

An applicant who has attended another collegiate institution is not at liberty to disregard his collegiate record and apply for admission to the college on the basis of his high-school record, but must submit his college record. This regulation applies whether the student attended another institution for only a brief period or if he finished one or more semesters; it also applies without regard to whether or not the student wishes credit here for college work done elsewhere.

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 of the high-school they attended. It is of the highest importance that the applicant send this blank, properly filled out, to the Registrar not later than September 1. Valuable time will be lost if he does not do so, and more if he has to send for it after he arrives. Without it he cannot be admitted at all.

In case of students from schools outside Texas, graduates of schools on the approved list, issued by the United States Department of the Interior, are accepted on the same basis as they would be accepted 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.

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

The fall and winter series are held only at the College and begin on September 10, and January 21, respectively. Requests for full information in regard to these series should be addressed to the Registrar of the College.

Junior-senior high-school graduates.—Applicants who have passed through and graduated from a junior-senior high-school organization in which the usual type of college entrance subjects were not given in the junior school may be admitted on twelve acceptable units completed in the senior high school (the last three grades), including the unit requirements listed under "Unit Requirements," plus three unspecified units from the junior high school.

ADMISSION BY INDIVIDUAL APPROVAL

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

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

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

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

Students so admitted may register for courses other than freshman courses only with the approval of the chairman of the department concerned and the Dean, given because of evidence of special fitness. This approval can rarely

be granted, however, because most individual approval students have less preparation than any other students in the College.

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

HOW TO ABSOLVE ADMISSION CONDITIONS

General.—Admission conditions may be removed by the following methods:

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 general paragraph at the beginning of this section. The penalties and restrictions of that paragraph also apply to individual approval students.

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.

HEALTH SERVICE

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

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

PHYSICAL EDUCATION AND RECREATION

Beginning with the Fall Semester of 1942, all freshman and sophomore men and women must take physical education each semester.

At the discretion of the student's Dean the physical education requirement may be waived in the case of students over 23 years of age.

Students whose physical examinations indicate that regular class work would be inappropriate for them may be given modified work.

Participation in the Band or the Gold Diggers may be substituted for one year of physical education.

Attendance in physical education is subject to the provisions under the heading Attendance and Absences, page 36, with the exception that a student who must be absent due to illness is required to report said case of illness to the Health Officer of the College immediately. Work missed in physical education 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.

See page 111 for list of service and professional courses in health and physical education.

INTRAMURAL ATHLETICS

A varied program of intramural sports for men and women offers competition and recreation for all students. The program is to be constantly expanded according to student interest and available facilities.

The program is sponsored by the Student Association and the Department of Physical and Health Education as represented by an Executive Committee made up of students and faculty. An Intramural Council for men and one for women, composed of student representatives from various participating organizations assist in planning and conducting the program.

INTERCOLLEGIATE 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.

OFFICIAL NON-ATHLETIC EXTRACURRICULAR ACTIVITIES

List of organizations.—It is the intention of the College of Mines to provide for its student population a group of non-athletic extracurricular organizations which will challenge the most diverse kinds of interest. Regardless of the field to which the student's specific interests run, he is likely to find one or more of the following organizations designed to stimulate those interests, and in which his participation is invited:

General Organizations

1. Academic Association
2. Camera Club
3. Co-Ed Association
4. Co-Ed League
5. Independent Men's Association
6. Independent Women's Association
7. International Relations Club
8. Latin-American Club
9. Orange Shirts
10. Round-Table Conference
11. Scientific Club
12. Students' Association

Departmental Organizations

13. Association for Childhood Education
14. Band
15. Le Cercle Francais
16. College Players
17. Forensic Society
18. Gold Diggers

19. Mining Club
20. Pre-Law Club
21. Pre-Med Club
22. Press Club
23. *The Prospector*
24. *The Flowsheet*
25. Varsitonians
26. Varsity Singers

Religious Organizations

27. Baptist Student Union
28. Newman Club
29. Religious Forum

Honorary Organizations

30. Alpha Chi
31. Alpha Psi Omega
32. Sigma Delta Pi
33. Sigma Gamma Epsilon
34. Theta Chi Omicron

Greek Letter Social Organizations

35. Alpha Phi Omega
36. Chi Omega
37. Delta Delta Delta
38. Kappa Sigma Kappa
39. Phi Kappa Tau
40. Rho Sigma Tau
41. Zeta Tau Alpha

General Regulations.—Each organization listed above is supervised by a faculty sponsor, who acts in capacity of counselor. The sponsor receives his appointment in accordance with the provisions of the constitution of his organization, which constitution also provides means whereby students may gain membership, provides means for the election of organization officers, and furnishes the framework for a continuing body. Rules and regulations governing the conduct of the affairs of all organizations listed above arise with the Faculty Committee on Student Activities.

Any question regarding the existence or the interpretation of regulations should be referred to the office of the Director of Student Activities. The rules printed herein and those which, because of necessary flexibility, are annually printed in a Students' Handbook, published by the Students' Association, are so easily available (either in published form or through reference to the office of the Director of Student Activities) that each student is charged with knowledge and notice thereof.

Rules for Participation.—For enforcement of the following rules the faculty sponsors and the officers of the organizations are held responsible.

I. For Greek Letter Social Organizations: (to preserve the flexibility which the Faculty Committee on Student Activities feels is necessary in the case of

these organizations, rules referring here are published annually in a Students' Handbook, and otherwise are available at the office of the Director of Student Activities.)

II. For Honorary Organizations: (regulations governing the gaining of membership and the continuing of participation are available at the office of the Director of Student Activities.)

III. For General Organizations, Departmental Organizations, and Religious Organizations:

1. To become a member, a student must
 - a. Gain admittance in accordance with the constitution of the organization applied to,
 - b. At the time, be subject to no phase of disciplinary action (this rule does not apply to organizations above numbers 12, 27, 28, and 29),
 - c. At the time be taking at least twelve semester hours in residence for credit (this rule does not apply to organizations above numbers 12, 27, 28, and 29),
 - d. Be able to show that during his last semester in attendance he passed a minimum of nine semester hours for credit, two consecutive summer terms to count as one semester (this rule does not apply to organizations above numbers 12, 27, 28, and 29),
 - e. Not be on Final Trial (this rule does not apply to organizations above numbers 12, 27, 28, and 29), and
 - f. Have paid his Student Association fee, if the organization to which he is applying for membership receives funds from the treasury of the Students' Association.
2. To retain membership:
 - a. Eligibility at the beginning of a semester holds good throughout the semester unless the student becomes ineligible under the above provisions. A student ineligible at the beginning of a semester by reason of the foregoing rules, becomes eligible upon removal of his disability. First year students are eligible immediately upon entering, provided they otherwise can qualify.

CONDUCT

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

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

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

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

DISCIPLINE

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

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

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

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

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

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

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

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

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

Probation.—Disciplinary probation will be for a definite period and carries with it the following condition during the period of such probation: any further violation of College regulations during the time of probation

will cause such student to be suspended for a period to be determined by the Faculty Committee on Discipline.

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

A student on probation who absents himself from any class exercise or neglects any class work, except for reasons considered imperative by his Dean, will thereby drop his name from the College rolls for the remainder of the session.

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

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

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

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

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

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

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

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

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

SCHOLASTIC REGULATIONS

ADDING, DROPPING, AND CHANGING 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.

A change from one course to another course may be made only with the approval of the student's Dean. A change from one section of a course to another section of the same course must be approved by both the head of the department in which the change is being made and by the student's Dean. No course may be changed after the dates specified in the Calendar.

For a weighty cause, a student may drop a course with the consent of his Dean. If the student is passing the course at the time that he drops it, the grade in the course will be entered as *Dr*. However, if the student is failing the course at the time he drops it, his grade will be entered as *Dr F*.

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, excessive absences, or lack of effort. In such case the grade is entered on the student's record as *F* and is counted as such in computing his grade points.

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.

ATTENDANCE AND ABSENCES

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

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

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

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

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

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

Absence from quiz.—A student absent from an intra-semester examination or quiz is graded zero on that quiz, unless for urgent reason he is given

by the instructor the privilege of taking a postponed examination at a time to be set by the latter.

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

AMOUNT OF WORK

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

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

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

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

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 full official force and effect. Students are held responsible for knowledge of and compliance with such notices.

CLASSIFICATION OF STUDENTS

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

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

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

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

EXAMINATIONS

All of the written work handed in by students is considered to be their own product, prepared without unauthorized assistance. Students are invited to cooperate with their instructors in maintaining the integrity of examinations and are strongly urged to inform them, without specifying the offenders, if cheating goes on in their classes.

Students are expected (a) to remain in the examination room during the examination or quiz period; (b) to refrain from talking or smoking; and (c) to leave all notes and books where they will not be accessible during the examination or quiz, unless otherwise directed by the instructor.

Semester examinations.—The Faculty has ruled that exemptions from examinations may not be given. To encourage preparation for examinations, the Faculty has further ruled that during the last seven days of each semester before examinations no written examination or review shall be given; and all essays, theses, synopses, and the like must be handed in before this period begins.

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

Examinations are three hours in length and at the end of three hours all papers are taken up.

Absence from 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. 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 at a date fixed by the Calendar, and in any event, not later than twelve months after the examination was postponed. The student is required to file notice thereof with the Registrar not later than seven days before the beginning of the examination period concerned. During the period of postponement the student is given a grade of *PX*.

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.

Absence from a postponed, condition, or advanced standing examination, after a permit has been granted, will have the same effect as failure unless the student presents to his Dean within a week after the date set for the examination a satisfactory excuse for his absence.

Postponed examinations.—An examination officially postponed may be taken within a year of the date from which the examination was postponed. Regular dates are fixed by the Calendar for such examinations. 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. At 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 postponed examination will be given a grade of *F* in the course.

Postponed classwork.—See *Incomplete Work-Inc.*

Removal-of-condition examinations.—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 the course and only with the permission of his Dean. Application for this examination must be filed with the Registrar at least seven days before the examination is to be given.

Removal-of-condition examinations may not be taken more than twelve months after the condition was received. A student who passes a removal-of-condition examination will be given a grade of *D* in the course. A student who fails the examination will be given a grade of *F* in the course and must take that semester's work over to secure credit for the course.

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 periods as fixed by the Calendar. Credit has rarely been given for courses by examination. In fact, advanced standing examinations 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.

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 upper division 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, English 1 (freshman English) is a course running through the entire long session and carrying six semester hours of credit. English 1*as* is the first half of English 1 given in the second semester and carrying three semester hours of credit which, however, cannot be counted for graduation until English 1*b*, the second half of English 1, has been completed.

In any course requiring two semesters for completion, the first semester is prerequisite for the second semester of the course.

GRADES OF SCHOLARSHIP

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

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* (failure, and, if a semester grade, without further current privileges in the course).

In the case of students who drop courses or who withdraw from school, the following grades apply:

1. A student who is passing a course at the time he drops it receives a grade of *Dr* in the course. A student who is failing a course at the time he drops it, receives a grade of *DrF* in the course.
2. A student who is passing a course at the time he withdraws from school receives a grade of *Wd* in the course. A student who is failing a course at the time of his withdrawal receives a grade of *WdF* in the course.

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.

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

1. At any intra-semester grade period, if the student has not completed his work for any particular course, the instructor may give a grade of *Incomplete* in the course.
2. At the end of any semester a student may be given a grade of *PX* if he unavoidably is absent from the semester final examination in a course, and such absence is approved by the respective Dean. This procedure obligates the student to take a *Postponed Examination* in the course as part of the removal-of-*PX* grade.
3. At the end of a semester a grade of *Incomplete* may be given in exceptional circumstances and with the permission of the instructor and the proper Dean. When the grade of *Incomplete* is given at the end of the first semester, the work missed must be completed before grades are reported at the end of the second semester. If the *Incomplete* is given at the end of the second semester, it must be removed before grades are recorded for the fall semester following.

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

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

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

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

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

HONORS

At the end of each semester, the Registrar will publish an honor list. To be eligible for this honor list, 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 at least 15 semester hours of the work taken for credit during that semester. The grade point system (described under *Standard of Work Required*, page 43) shall be used in determining the average number of points per semester hour attained by the student.

REGISTRATION

For the Long Session of 1942-43 the registration days are as follows:

First semester: September 15 and 16.

Second semester: January 29 and 30.

Late registration.—Students will be permitted to register late under the following conditions:

1. Each day missed will be counted as an absence.
2. The student's class schedule will be made up only from the sections which are open at the time of his registration.
3. Work missed because of late registration will be counted as zero unless the student definitely arranges to make it up.
4. The student will be required to enroll for a reduced program of classes depending upon the lateness of registration.

REPORTS

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.

Intra-semester reports.—On November 16 and March 24 reports are due in the Registrar's office for the following students:

1. All students on the freshman advisory lists.
2. All students on special observation-final trial list.
3. All other students making less than a grade of *C* in a course.

Students may receive these grades from the Registrar if all grades for that mid-semester are *D* or better. If there are any failures among the student's grades for that mid-semester the entire set of grades will be mailed to his parents or guardians.

STANDARD OF WORK REQUIRED

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

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

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

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

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

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

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

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

In interpreting this section, a student taking twelve or more credit hours with an included course of four or more credit hours shall not be placed on Special Observation or Final Trial, or be dropped from the rolls for scholastic reasons if he makes, in the courses taken, not less than the following grade point count: 117 points for first-year students, 135 points for second-year students, or 162 points for upper-division students, provided he does not have a grade of *F* in more than one course.

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

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

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

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

Final Trial.—A student on Special Observation who withdraws from the College before the end of the semester and who reenters within four semesters is put on Final Trial. A student on Special Observation whose score cannot be determined because of postponed or incomplete grades will be put on Final Trial.

A student on Special Observation who fails to pass in the required minimum of work is put on Final Trial. This is a last and final warning to student and parent.

Final Trial will last for a consecutive period of enrollment equivalent to two semesters, after which the student will be restored to good scholastic standing.

Fail Out.—A student on Final Trial who fails in the required minimum of work will be dropped from the College.

A student on Final Trial who withdraws from the College may not register again before the beginning of the corresponding semester in the next long session unless he shall remove his deficiencies in an intervening summer session as prescribed hereafter.

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

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

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

In case of illness or any other imperative reason for absence, the student should so notify his Dean.

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.

WITHDRAWAL FROM SCHOOL

Official.—A student who wishes to withdraw from school may do so with the consent of his Dean. In any course in which the student is passing at the time of withdrawal, he will receive a grade of *Wd*. In any course which the student is failing at the time of withdrawal, he will receive a grade of *WdF*.

Unofficial.—Withdrawal from school without consent of the student's Dean constitutes an unofficial withdrawal. In such cases the student will receive a grade of *F* in each of the courses for which he was registered during that semester.

Effect of withdrawal on scholastic standing.—

Effect on student in good standing: loss of time.

Effect on student on special observation: student is placed on final trial.

Effect on student on final trial: a student who withdraws while on final trial is subject to the same rules governing students who fail out.

Effect of an unofficial withdrawal: a student who unofficially withdraws must satisfy the requirements of *Return After Failure* (see page 45).

REQUIREMENTS FOR DEGREES AND CERTIFICATES

STUDY OF CONSTITUTIONS OF UNITED STATES AND TEXAS REQUIRED

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

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.

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

All candidates must take at least twenty-four hours in advanced courses, in class at the College, out of the last thirty semester hours offered.

In order to become a candidate for a degree a student must have satisfied all admission requirements, and have completed one-hundred-four semester hours of work prescribed in the chosen option with an average grade of *C* or better. He will then petition the Faculty through the Registrar to become a candidate for a degree.

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, metallurgy, or geology, subsequent to receiving the Bachelor's degree, upon the presentation and acceptance of a satisfactory thesis.

UNIFORM CURRICULUM FOR THE FIRST AND SECOND YEARS

First Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 801a	General Chemistry	3	3	4
Drawing 301	Engineering Drawing	0	9	3
English 1a	Rhetoric and Composition	3	0	3
Geology 301	Principles of General Geology	3	3	3
Mathematics 803a	Elementary Mathematical Analysis	4	0	4
Physical Education	Service Course (no credit)	3	0	0
				17
Second Semester				
Chemistry 801b	General Chemistry	3	3	4
Drawing 302	Descriptive Geometry	0	9	3
English 1b	Rhetoric and Composition	3	0	3
Geology 302	Principles of General Geology	3	3	3
Mathematics 803b	Elementary Mathematical Analysis	4	0	4
Physical Education	Service Course (no credit)	3	0	0
				17
Second Year				
First Semester				
Chemistry 311	Qualitative Analysis	1	6	3
English 310	Technical Writing	3	0	3
Geology 316	Mineralogy	1	6	3
Government 10a	American Government	3	0	3
Mathematics 13a	Calculus	3	0	3
Physics 812a	Mechanics, Heat	3	3	4
Physical Education	Service Course (no credit)	3	0	0
				19
Second Semester				
Chemistry 413	Quantitative Analysis	1	8	4
Engineering 313	Plane Surveying	3	0	3
Geology 217	Mineralogy	0	6	2
Government 10b	American Government	3	0	3
Mathematics 13b	Calculus	3	0	3
Physics 812b	Electricity and Magnetism	3	3	4
Physical Education	Service Course (no credit)	3	0	0
				19
Summer School				
Engineering 414	Field Surveying:—Summer Work	192		4

MINING OPTION
Third Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 323	Quantitative Analysis	1	6	3
Geology 421	Advanced General Geology	3	3	4
Mathematics 325	Calculus	3	0	3
Metallurgy 423	Ore Dressing and Milling	3	3	4
Mining 521	Mining Methods	5	0	5
				19
Second Semester				
Engineering 322	Mine and Route Surveying	2	3	3
Engineering 533	Applied Mechanics and Graphic Statics	3	6	5
Geology 322	General Economic Geology	3	0	3
Metallurgy 321	General Metallurgy	3	0	3
Metallurgy 324	Assaying	1	6	3
Physics 222	Sound and Light	1	3	2
				19
Summer School				
Engineering 224	Mine Surveying:—Field Work; 8 hours a day for two weeks.		96	2
Fourth Year				
First Semester				
Economics 312	Principles of Economics	3	0	3
Engineering 434	Strength of Materials	3	3	4
Engineering 354	Hydraulics	3	0	3
Geology 264	Field Geology	1	3	2
Metallurgy 261	Metallurgy of Iron, Copper and Lead	2	0	2
Mining 260	Mine Plant	2	0	2
Mining 267	Management	2	0	2
				18
Second Semester				
Engineering 431	Electrical Circuits and Machines	3	3	4
Engineering 335	Masonry and Reinforced Concrete	3	0	3
Engineering 350	Steam Power Plants	3	0	3
Mining 231	Mine Hygiene	2	0	2
Mining 261	Mine Plant	1	3	2
Mining 262	Mine Plant Design	0	6	2
Mining 269	Management	2	0	2
Mining 074	Senior Trip			0
				18

MINING GEOLOGY OPTION
Third Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 323	Quantitative Analysis	1	6	3
Geology 421	Advanced General Geology	3	3	4
Mathematics 325	Calculus	3	0	3
Metallurgy 423	Ore Dressing and Milling	3	3	4
Mining 521	Mining Methods	5	0	5
				19
Second Semester				
Engineering 322	Mine and Route Surveying	2	3	3
Engineering 533	Applied Mechanics and Graphic Statics	3	6	5
Geology 322	General Economic Geology	3	0	3
Geology 427	Petrology and Petrography	2	6	4
(or)				
Geology 463	Geology of Petroleum, the Fuels and the Non-Metallics	3	3	4
Elective		2	0	2
Physics 222	Sound and Light	1	3	2
				19
Summer School				
Engineering 224	Mine Surveying:—Field Work: 8 hours a day for two weeks		96	2
Fourth Year				
First Semester				
Economics 312	Principles of Economics	3	0	3
Engineering 434	Strength of Materials	3	3	4
Engineering 354	Hydraulics	3	0	3
Geology 418	Invertebrate Paleontology	2	6	4
Geology 264	Field Geology	1	3	2
Mining 267	Management	2	0	2
				18
Second Semester				
Engineering 335	Masonry and Reinforced Concrete	3	0	3
Engineering 350	Steam Power Plants	3	0	3
Geology 427	Petrology and Petrography	2	6	4
or				
Geology 463	Geology and Petroleum, the Fuels and the Non-Metallics	3	3	4
Geology 361	Advanced Economic Geology	2	3	3
Metallurgy 324	Assaying	1	6	3
Mining 269	Management	2	0	2
Geology 074	Senior Trip			0
				18

METALLURGY OPTION

Third Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 323	Quantitative Analysis	1	6	3
Chemistry 460	Physical Chemistry	3	3	4
Mathematics 325	Calculus	3	0	3
Metallurgy 423	Ore Dressing and Milling	3	3	4
Mining 521	Mining Methods	5	0	5
				—
				19
Second Semester				
Chemistry 261	Physical Chemistry	2	0	2
Engineering 533	Applied Mechanics and Graphic Statics	2	6	5
Geology 322	General Economic Geology	3	0	3
Metallurgy 321	General Metallurgy	3	0	3
Metallurgy 324	Assaying	1	6	3
Physics 222	Sound and Light	1	3	2
				—
				18

Fourth Year

First Semester				
Economics 312	Principles of Economics	3	0	3
Engineering 434	Strength of Materials	3	3	4
Metallurgy 361	Metallurgy of Iron, Copper and Lead	3	0	3
Metallurgy 362	Metallurgy of Leaching Processes	2	3	3
Metallurgy 263	Advanced Ore Dressing	2	0	2
Metallurgy 265	Ore Dressing Laboratory	0	6	2
Mining 267	Management	2	0	2
				—
				19
Second Semester				
Engineering 350	Steam Power Plants	3	0	3
Engineering 431	Electrical Circuits and Machines	3	3	4
Engineering 335	Masonry and Reinforced Concrete	3	0	3
Metallurgy 364	Metallurgical Laboratory	0	9	3
Metallurgy 473	Metallography	3	3	4
Mining 269	Management	2	0	2
Metallurgy 074	Senior Trip			0
				—
				19

BACHELOR OF ARTS

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

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

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

At least 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 ninety semester hours of work as set forth in the outline for the chosen major, the student will 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.

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

in certain courses when they are important as prerequisites or as parts of majors or minors.

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

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

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

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

Group A

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

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

Group B

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

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

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

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

2. Not less than eighteen semester hours, at least six of which must be of advanced courses, in another subject chosen as a minor, in accordance with the limitations indicated in the concentration groups.

3. Twelve semester hours in English (English 1 and 12).

4. Completion of Course 12 or 13 in one foreign language, either modern or ancient.

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

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

5. Six semester hours in each of any two of the natural (laboratory) sciences.*
6. Six semester hours in Mathematics or numbered courses of German. Any hours in numbered courses of German offered in satisfaction of the Mathematics requirement may not be used to satisfy Requirement 4 or as a part of a major or minor.
7. Six semester hours in American and Texas Government (Government 10).
8. Three semester hours in philosophy or psychology.
9. Six semester hours in social science† in addition to requirements 7 and 8.
10. Not less than a total of thirty semester hours of advanced courses‡ and not more than a total of sixty-six semester hours in the major and minor subjects.
11. Enough other courses to make at least one hundred and twenty semester hours.
12. Physical Education without credit as prescribed in the Freshman and Sophomore years.

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

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

Sophomore Year.—English 12; foreign language 12; another science, six semester hours; major subject, six semester hours; minor subject, six semester hours, physical education, no credit.

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

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

Curriculum 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.

*Botany, biology, chemistry, geology, zoology.

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

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

**CURRICULUM IN
BUSINESS ADMINISTRATION MAJOR**

Minor—See Group B under "Concentrations"

Requirements

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

*See Number 6 under Basic Requirements.

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

**CURRICULUM IN
ECONOMICS MAJOR**

Minor—See Group B under "Concentrations"

Requirements

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

*See Number 6 under Basic Requirements.

tEconomics, government, history, philosophy, psychology, sociology or combination.

**CURRICULUM IN
EDUCATION MAJOR**

Minor—See Group B under "Concentrations"

PLAN I

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

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

*See Number 6 under Basic Requirements.

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

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

CURRICULUM IN
EDUCATION

PLAN II

FOR HIGH-SCHOOL TEACHERS

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

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

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

**CURRICULUM IN
EDUCATION**

PLAN III

FOR ELEMENTARY SCHOOL TEACHERS

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

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

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

**CURRICULUM IN
ENGLISH MAJOR**

Minor—See Group B under "Concentrations"

Requirements

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

*See Number 6 under Basic Requirements.

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

CURRICULUM IN
HISTORY MAJOR

Minor—See Group B under "Concentrations"

Requirements

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

*See Number 6 under Basic Requirements.

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

**CURRICULUM IN
JOURNALISM MAJOR**

Minor—See Group B under “Concentrations”

Requirements

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

*See Number 6 under Basic Requirements.

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

CURRICULUM IN
MODERN LANGUAGE MAJOR

Minor—See Group B under "Concentrations"

Requirements

	HOURS
1. Major language—courses 1 and 12 and twelve additional semester hours of advanced courses*_____	24
2. Minor—eighteen semester hours, six of which must be advanced _____	18
3. English 1 and 12 or 12Q_____	12
4. *Second Foreign language—the completion of a course numbered 12 or 13_____	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology_____	12
6. Mathematics or numbered courses of German*_____	6
7. Government 10 _____	6
8. Philosophy or psychology_____	3
9. Social Sciencet_____	6
10. Electives, twelve semester hours of which must be advanced_____	21
11. Physical Education—two years of service courses—(no credit) _____	0
	120

*See Number 6 under Basic Requirements.

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

**CURRICULUM IN
MUSIC THEORY MAJOR**

Minor—Applied Music

Requirements

	HOURS
1. Music 301 and 302, 10, 30, and 20 or 40 or 50.....	24
2. Applied Music (in addition to Freshman non-credit course)— eighteen semester hours, six of which must be advanced....	18
3. English 1 and 12 or 12Q.....	12
4. *Foreign language—the completion of a course numbered 12 or 13.....	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology.....	12
6. Mathematics or numbered courses of German*.....	6
7. Government 10.....	6
8. Philosophy or psychology.....	3
9. Social Science†.....	6
10. Electives,‡ twelve semester hours of which must be advanced.....	21
11. Physical Education—two years of service courses—(no credit).....	0
	120

*See Number 6 under Basic Requirements.

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

‡Those students who desire a music teacher's certificate should confer with the Head of the Music Department concerning the necessary courses in education, music, piano, and methods.

**CURRICULUM IN
PHYSICAL EDUCATION MAJOR**

Minor†—See Group B under "Concentrations"

Requirements

	HOURS
1. Physical Education (Theory)—twenty-four semester hours, twelve of which must be advanced.....	24
2. Minor—eighteen semester hours, six of which must be advanced	18
3. English 1 and 12.....	12
4. *Foreign language—the completion of a course numbered 12 or 13	12
5. Science (laboratory)—Zoology 301 and 302, and Biology 310 and 311	12
6. Mathematics or numbered courses of German*.....	6
7. Government 10	6
8. Philosophy or psychology.....	3
9. History 307, and 315 or 316.....	6
10. †Electives, twelve semester hours of which must be advanced..	21
11. Physical Education—two years of service courses—(no credit)	0
	120

*See Number 6 under Basic Requirements.

†Those students who desire a teacher's certificate should be careful to include the necessary courses in education as electives.

CURRICULUM IN
SCIENCE MAJOR*

Minor†—See Group A under "Concentrations"

Requirements

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

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

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

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

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

MASTER OF ARTS

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

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

Applications for admission are to be made in the office of the Registrar. Transcripts of all work, undergraduate and graduate, done elsewhere must be furnished the Registrar.

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

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

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

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

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

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

PRELIMINARY WORK FOR OTHER DEGREES

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

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

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

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

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

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

WORK PRELIMINARY TO OTHER ENGINEERING DEGREES

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

STATE TEACHERS' CERTIFICATES

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

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

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

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

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

COURSES OF INSTRUCTION

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

BIOLOGICAL SCIENCES

PROFESSOR BERKMAN; ASSISTANT PROFESSOR JENNESS

Biology

Courses 316 and 317 may not be used to satisfy the science requirement for the B.A. degree.

310. Biology of the Human Body.—A survey of the anatomy of the human body with emphasis on the skeletal system and skeletal muscles. Prerequisite: Zoology 302. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

311. Introduction to Human Physiology.—A survey of human physiology, emphasizing the relation of functions to physical exercise. Prerequisite: Biology 310. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

316f. Heredity.—Fundamental principles of heredity in their application to animals, plants, and mankind. Prerequisite: Sophomore standing or six semester hours in a laboratory science. Credit value: Three semester hours.

317s. Evolution.—Evidence and methods of evolution; trends evolution has taken, and the influence of the doctrine of evolution on man's life. Prerequisite: Sophomore standing or six semester hours in a laboratory science. Credit value: Three semester hours.

330s. Technique in Histology and Cytology.—Fixing, imbedding, sectioning, staining, and mounting cells and tissues for critical analysis. Prerequisite: Chemistry 821, or Bacteriology 29, or 12 semester hours of zoology, or botany. Two lectures and three laboratory hours or the equivalent. Laboratory fee, \$2. Credit value: Three semester hours.

Bacteriology

29. General Bacteriology.—Principles of bacteriology; study and isolation of nonpathogenic and pathogenic forms; immunology and bacterial investigation of water, milk, and sewage. Prerequisite: Twelve semester hours in any one of the natural sciences, or a combination of twelve semester hours in natural sciences and junior standing. Two lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

Botany

301f. *General Botany*.—Structure and physiology of the plant cell; survey of the algae and fungi coupled with their position in the environment of man. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

302s. *General Botany*.—A survey of the mosses, ferns, and seed plants, and the Mendelian Law. Prerequisite: Botany 301. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

Zoology

No credit will be given for any advanced course in zoology taken concurrently with Zoology 14 until Zoology 14 has been completed.

301f. *General Zoology*.—Theoretical biology, followed by a survey of the invertebrates. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

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

14. *Vertebrate Zoology*.—Detailed study of the structure of a representative of each class of the vertebrates. Prerequisite: Zoology 302. Two lectures and four laboratory hours. Laboratory fee, \$4. Credit value: Six semester hours.

320s. *Animal Cytology and Histology*.—Structure, differentiation, and functions of cells. Prerequisite: Zoology 14; for juniors and seniors, Zoology 302 completed with a grade of C, and Zoology 14 concurrently. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

321. *Vertebrate Embryology*.—Detailed study of development of chick and mammalian embryos. Prerequisite: Zoology 14; for juniors and seniors, Zoology 302 completed with a grade of C, and Zoology 14 concurrently. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

CHEMISTRY

PROFESSOR LAKE; ASSISTANT PROFESSOR BALL; INSTRUCTORS MERS,
HANCOCK; ASSISTANT WILLIAMSON

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

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

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

311f. *Qualitative Analysis*.—Analytical reactions from the point of view of the laws of chemical equilibrium applied to solutions of electrolytes. Analysis of the common ions using the semi-micro technique. Prerequisite: Chemistry 801a and 801b with a grade of not less than C in each. One lecture and six laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

413s. *Quantitative Analysis*.—The quantitative analysis of salts, minerals, 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 413. Three lectures and three laboratory hours per week for 821. Students registering for 21 will receive the equivalent of two lectures and three laboratory hours. Laboratory fee, \$4. Credit value for 21: Six semester hours; for 821: Eight semester hours.

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

460f. *Physical Chemistry*.—Properties of substances in the gaseous, liquid, and solid state; solutions; thermochemistry. Prerequisite: Chemistry 413, Mathematics 13, and Physics 1 or 812. Three lectures and three laboratory hours per week. Laboratory fee, \$4. Credit value: Four semester hours.

461s. *Physical Chemistry*.—Homogeneous and heterogeneous equilibria; kinetics of reaction, electrochemistry, and chemical thermodynamics. Prerequisite: Chemistry 460. Three lectures and three laboratory hours per week. Laboratory fee, \$4. Credit value: Four semester hours.

261s. *Physical Chemistry*.—This course covers part of the work covered by Chemistry 461 and is intended for students who elect the option in metallurgical engineering. Prerequisite: Chemistry 460. Two lectures per week. Credit value: Two semester hours.

DESIGN

ASSISTANT PROFESSOR WISE

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

302s. *Elementary Design*.—Continued study of fundamental principles of design with emphasis upon composition, and application in various fields of art. Organization of material gained in outdoor sketching and research into design elements. Consideration will be given to the technique of handling media, pencil, charcoal, water color, etc. Three lectures and three laboratory hours per week. Laboratory fee, \$2. Prerequisite: Design 301. Credit value: Three semester hours.

306. *Sketching*.—The principles of freehand drawing and sketching, including a consideration of mass, form and composition. Perspective, light, shadow, shade and reflections will be studied. Media used are pencil, charcoal, water color and oil. Outdoor sketch trips will be planned. Flower studies, landscapes, buildings, etc., will be drawn. Ten hours per week, two hour periods. Laboratory fee, \$2. Credit value: Three semester hours. (Given in Summer Session, 1941.)

315f. *Modern Design*.—Design dealing with decorative elements, such as industrial design, costume design, furniture, glass, china, pottery, lighting fixtures, etc. Development of good taste and sense of proportion and values in study of design for modern living. Three lectures and three laboratory hours per week. Prerequisite: Design 301 and 302. Laboratory fee, \$2. Credit value: Three semester hours.

316s. *Modern Design*.—Continuation of study of design for modern living. Line, structure, function emphasized. Study of materials, and how to make the most of them in design. Color and its most effective use. Three lecture and three laboratory hours per week. Prerequisite: Design 315. Laboratory fee, \$2. Credit value: Three semester hours.

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

321s. *Public School Art*.—A course in materials and methods for those preparing to teach art in the public schools. Actual work in materials involved, crayon, opaque water color, linoleum blocks, making of marionettes, notebook covers, etc. Study of methods of developing creative ability of the

child. Prerequisite: Junior standing including Design 301. Credit value: Three semester hours.

322*f*. *Pictorial Design*.—The development of visual structure in painting. Direct study of outdoor objects. Landscape composition in black and white and color. Portrait and life drawing and painting. Media, oil, tempera, water color. Students may specialize. Three lecture and three laboratory hours per week. Prerequisite: Design 315 and 316. Laboratory fee, \$2. Credit value: Three semester hours.

323*s*. *Pictorial Design*.—Advanced study of visual structure in painting. Organization of materials for various uses: landscape painting, murals, etc. Study of anatomy and figure drawing. Continued stress on technique and expressive form. Three lectures and three laboratory hours per week. Prerequisite: Design 322. Laboratory fee, \$2. Credit value: Three semester hours.

ECONOMICS AND BUSINESS ADMINISTRATION

PROFESSOR MORRIS; ASSISTANT PROFESSORS HARGREAVES AND SMITH

In majoring or minoring in the Department of Economics and Business Administration, the student may elect any one of four channels of preparation; namely, (a) general economics, (b) general business training, (c) accounting, or (d) secretarial science. Because of the relationship which each departmental course bears to others in the fields of economic and business administration, there is necessarily some overlapping in the courses suggested for these four channels of concentration; but experience has taught that particular courses are fundamental for the concentrations. For example, the secretarial science student would benefit most from such courses as shorthand, typewriting, office management, office practice, business letter writing, etc. Students majoring or minoring (or both) in this department, then, would do well to consider carefully the following suggestions of course. (a) For persons interested in General Economics: among others, Economics 321, 322, 332, 337, and 358, and Business Administration 311-314. (b) For students interested in General Business Training: among others, Business Administration 1, 20, 357, 331, 338, 337, and 23, and Economics 312-313. (c) For students concentrating in Accounting: among others, Business Administration 326, 327, 330, 338, 20, and 23, and Economics 322 and 349. (d) For students interested in Secretarial Science: among others, Business Administration 1, 20, 21, 334, 335, 311, 314, and 23, and Economics 312, 313, and 322.

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

Economics

312s. *Principles of Economics.*—A general survey of the principles and facts in production and exchange of goods in a capitalistic society. Factors of production, the American monetary system, banking organization, markets, elucidation of value and price. Prerequisite: Sophomore standing. Credit value: Three semester hours.

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

321f. *Public Finance and Taxation.*—A general treatment of financial administration by agencies of the Government of the United States. Principles of taxation; the sales tax; the property tax; income taxes; inheritance taxes. Analysis of government expenditures and public credit. Prerequisite: Economics 313. Credit value: Three semester hours. (Omitted in 1941-1942, to be offered in 1942-1943.)

322f. *Money and Banking.*—Studies of the principles of money and banking, the existing money and banking systems of the United States and selected foreign countries, important underlying theories. History of the precious metals, bimetallism, banking development, relation of money and credit to prices, foreign exchange. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.)

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

332f. *Corporation Finance.*—The promotion of corporations, sources of capital, capital structures, internal financial management, receiverships, reorganizations, relation of corporation finance to banking, social consequences of over-promotion. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.)

336. *Agricultural Economics.*—Development of financial needs of agriculture. Application of the principles of economics to the problems of agricultural production, agricultural prices, standards of living on the farm, coöperative farming projects, management problems. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in the Summer Session of 1941.)

337s. *Marketing.*—The place of marketing in our domestic business system. Functions of marketing, the place of the middleman in the system, brief consideration of the wholesaler and the retailer. Prerequisite: Economics 313.

Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.) May not be counted for credit in addition to Business Administration 337.

341s. Advanced Banking Theory and Practice.—A study of banking in its relation to the economic world, promotion and incorporation, banking organization and powers, the directors, stockholders, clearing and collection systems, credit analysis, banking departments, the Federal Reserve System, open market operations, specialized financing houses for short-term credit. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.) May not be counted for credit in addition to Business Administration 341.

343f. Comparative Economic Systems.—A consideration of the economic foundations of the capitalistic and other systems. An objective study of the economic construction of Facism, Nazism, Socialism, Communism, and Capitalism. Prerequisite: Economics 313. Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.)

344f. Modern Transportation and Communication.—A survey of peculiar problems and related public policies with emphasis upon the modern era of promotion and regulation of transportation and telephone and radio communication. Development of water, railroad, motor and air transportation. Problems of monopoly, service, safety, rates, and costs. Development of regulatory policies. Private and governmental promotion. F.C.C. control of telephone and broadcasting services. Prerequisite: Economics 313. Credit value: Three semester hours. May not be counted for credit in addition to Business Administration 344. (Offered in 1942-1943 for the first time.)

349s. Labor Problems.—Problems of the State and Federal Government in relation to labor in selected fields, child labor, minimum wages, hours of labor, social insurance, retirement programs. The American Federation of Labor, the Congress for Industrial Organization, strikes, lockouts, current issues. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.)

350s. Introduction to Foreign Trade.—Principles of international movements of economic goods, the protective tariff and free trade controversy, the control of raw materials, techniques in shipments of physical commodities, financing transactions. Prerequisite: Economics 313. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.) May not be counted for credit in addition to Business Administration 350.

358s. International Economic Relations.—Mercantilism as a background, English commercial development. American colonial development as related to internationalism, tariff history, problems of free trade, international movements of the factors of production, international commercial entanglements. International economic relations and the Second World War. Prerequisite: Economics 313 and three semester hours of advanced economics. Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.)

Business Administration

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

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

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

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

21. *Advanced Stenography.*—Training in advanced secretarial practice. Development of speed and accuracy in shorthand and typewriting. Character study and practice dictation of medical, legal, and engineering phraseology. Technique in letter layouts. Practice in receiving messages and transcribing from the Dictaphone. Three lectures and six laboratory hours per week. Laboratory fee, \$4. Prerequisite: Business Administration 1 and 314. Credit value: Six semester hours. (Given in 1941-1942, to be omitted in 1942-1943.)

23. *Business Law.*—Textbook and case method, cases on law of contracts, agency, bailments, sales, mortgages, negotiable instruments. Special emphasis on Texas interpretation of these legal principles. Prerequisite: Business Administration 314 or Economics 313. Credit value: Six semester hours. (Given in 1941-1942, to be omitted in 1942-1943.)

326f. *Intermediate Accounting, First Course.*—Classification and codification of accounts, forms, and contents of financial statements, theory involved in corporation accounting, actuarial accounting, accounting for consignments and installment sales, evaluation of investments, analysis of working capital. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.)

327s. *Intermediate Accounting, Second Course.*—Theory involved in partnership accounting, venture accounts, accounting for receiverships, parent and subsidiary accounting, consolidated balance sheets, foreign exchange accounting, estates and trusts, budgets, public accounts, bank accounting. Prerequisite: Business Administration 326. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.)

330s. *Auditing.*—Auditing procedure, reports, and working papers used in financial investigations, balance sheet and detailed audits. Verification of assets, liabilities, and nominal accounts. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.)

331f. *Business and Government.*—Government in a regulatory capacity and in a coöperative capacity, theories of constitutional protection, anti-trust laws, the control of unfair trade practices, regulation of security issues and security exchanges, railway regulation, the government as a credit granting institution. Settlement of labor disputes, social security. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.)

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

334s. *Office Organization and Practice.*—Practice in the use of the mimeograph machine, dictaphone, bookkeeping machines, and other types of office equipment. Demonstrational work in the use of and operation of a telephone switchboard. Filing practice. Advanced dictation and transcription practice. Designed for students intending to go into office work. Laboratory fee, \$2. Prerequisite: Business Administration 1 (or 10) and 314. Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.)

335f. *Office Management.*—The location, equipment, organization and general routine practice within the modern business office. Two viewpoints are presented in this course; that of the office manager and that of the office worker. Designed primarily for students intending to go into office work. Prerequisite: Business Administration 1 (or 10) and 314. Credit value: Three semester hours. (To be given in 1942-1943.)

337s. *Marketing.*—The place of marketing in our domestic business system. Functions of marketing, the place of the middleman in the system, brief consideration of the wholesaler and the retailer. (Formerly Business Administration 437.) Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.) May not be counted for credit in addition to Economics 337.

338j. *Federal Tax Accounting*.—The accountant's viewpoint of Federal taxes. Theory and problems in income taxation for the individual, the partnership, and the corporation. Accounting for taxes of estates and trusts, capital stock taxes, excess profits taxes, gift taxes, personal holding companies. Preparation of income tax forms and a study of the most recent Federal revenue acts. Prerequisite: Business Administration 314. Credit value: Three semester hours. (To be offered in 1942-1943.)

341s. *Advanced Banking Theory and Practice*.—A study of banking in its relation to the economic world, promotion and incorporation, banking organization and powers, the directors, stockholders, clearing and collection system, credit analysis, banking departments, the Federal Reserve system, open market operations, specialized finance houses. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.) May not be counted for credit in addition to Economics 341.

344j. *Modern Transportation and Communication*.—A survey of peculiar problems and related public policies with emphasis upon the modern era of promotion and regulation of transportation and telephone and radio communication. Development of water, railroad, motor and air transportation. Problems of monopoly, service, safety, rates, and costs. Development of regulatory policies. Private and governmental promotion. F.C.C. control of telephone and broadcasting services. Prerequisite: Business Administration 314. Credit value: Three semester hours. May not be counted for credit in addition to Economics 344. (Offered in 1942-1943 for the first time.)

348s. *Latin-American Resources and Trade*.—A study of the economic resources of the Latin-American nations, geographic resources, relations of topography to business enterprises, trade relations of the United States with the Latin-American nations. Productive conditions past and present in Mexico, Central America, Caribbean Lands, and South America. The future of trade relations between the United States and the Southern Hemisphere republics. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.)

350s. *Introduction to Foreign Trade*.—Principles of international movements of economic goods, the protective tariff and free trade controversy, the control of raw materials, techniques in shipments of physical commodities, financing transactions. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Given in 1941-1942, to be omitted in 1942-1943.) May not be counted for credit in addition to Economics 350.

356s. *Securities Markets of the United States*.—Study of flotation of new securities, the New York Stock Market and other markets, relationship of an issuing corporation and the investment banker, services performed by brokers, techniques in market trading, the Securities and Exchange Act. Prerequisite: Business Administration 314. Credit value: Three semester hours. (To be offered in 1942-1943.)

357f. *Investments*.—Investment principles, investment banking, security analysis, security classification including rails, industrials, utilities, governments and

others. The investor's viewpoint. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.)

358f. Life Insurance.—A study of the principles underlying group risk taking, rate making, "loading," types of carriers, term insurance, the endowment policy, annuities, disability and accidental death benefits. Organization and administration of risk carriers. Prerequisite: Business Administration 314. Credit value: Three semester hours. (Omitted in 1941-1942, to be given in 1942-1943.)

EDUCATION

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

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

General

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.

332f. Problems in Modern Education.—A unit course dealing intensively with needed educational readjustments and with the possible applications of current research and experimentation. The units to be studied will be determined by the needs of the class. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

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

335Tf. Audio-Visual Aids to Education.—This course will include the selection and use of varied audio-visual aids to learning, as well as consideration of the in-school and out-of-school use of the radio and motion picture in relation to major school subjects. Prerequisite: Twelve semester hours of Education. Credit value: Three semester hours. (Given in Summer Session, 1941.)

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

341Kf. *Seminar in Guidance.*—Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours.

341Ts. *Counseling.*—The principles, methods, and organization of student counseling as a part of the guidance program. Prerequisite: Twelve semester hours in Education. Credit value: Three semester hours. (Given in Summer Session, 1941.)

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

345Tf. *Sociological Foundation of the Secondary School.*—The sociological factors which have been important to the development of the secondary school in America will be surveyed. The parallel between the type of secondary school in existence and the sociological conditions from time to time in American educational growth will be made. Prerequisite: Twelve semester hours in Education. Credit value: Three semester hours. (Given in Summer Session, 1941.)

350Ts. *Psychology of Individual Differences.*—Basic psychological factors in individual differences, with special emphasis upon such topics as grouping, special abilities and disabilities, and the psychology of gifted and subnormal children. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours. (Given in 1941-1942.)

355s. *Mental and Educational Measurement.*—Introduction to measurement in education. Typical methods of measuring intelligence, character, and achievement. Elementary statistical terms and processes. Preparation for use of mental and educational tests. Prerequisite: Education 314 and 318, or 316 and 317. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

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

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

Elementary

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

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

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

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

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

331Tf. *Methods and Materials of Instruction in the Elementary School*.—This will be an intensive study of methods for the elementary schools, with emphasis centered upon reading, social studies, arithmetic, and science. It will include observations, as well as a survey of the literature in each field. Two lectures and three laboratory hours per week. Prerequisite: Education 314 and 318. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

360K. *Work Shop in Arithmetic in Upper Elementary Grades*.—Lectures, discussions, and intensive laboratory work in curriculum production with emphasis upon the selection and the organization of content and of materials in arithmetic for grades five, six, seven, and eight; and related teaching techniques. Prerequisite: Twelve semester hours in Education for undergraduate and graduate (minor) students; 24 semester hours for graduate (major) students. Credit value: Three semester hours.

High School

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

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

322f. *Organization and Teaching of Mathematics and Science in the Secondary School*.—Prerequisite: Six semester hours of Science; six semester hours of Mathematics; and Education 316 and 317. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

323f. *Teachers' Course in Modern Languages*.—Methods of teaching modern languages in secondary schools. Prerequisite: Course 12 in a language; and Education 316 and 317. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

326s. *Teachers' Course in English*.—Methods of teaching English in secondary schools. Prerequisite: English 12; and Education 316 and 317. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

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

329f. *Teachers' Course in the Social Studies*.—Methods of teaching the social studies in the secondary schools. Prerequisite: Twelve semester hours in History; and Education 316 and 317. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

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

ENGINEERING, DRAWING AND AVIATION

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

Engineering

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

412f. Elements of Mechanism.—A study of the laws which govern the motion of machine parts; graphic analyses are made of various mechanisms, the motions produced, and the velocities and accelerations of the parts; a study of linkages, sliding and rolling contact, gears, and gear teeth, wheels in trains, cams, belts, ropes and chains, differential motion, and pulley blocks. Prerequisite: Mathematics 803, Drawing 302, and Physics 1. Two lectures and six laboratory hours a week. Laboratory fee, \$4. Credit value: Four semester hours.

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

414. Field Surveying.—Summer work; practical field course covering the topics outlined in Engineering 313. Accurate and rapid work will be insisted upon. Prerequisite: Engineering 313. 192 hours. *Students must begin work on the day the field work opens.* Laboratory fee, \$4. Credit value: Four semester hours.

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

322s. Mine and Route Surveying.—Mapping of underground connections; surface surveying in connection with mineral claims; and all ordinary operations and calculations that the mine surveyor is called upon to perform. Theory and practical application of simple, reverse, and compound curves; rights-of-way; cross sections; and estimates. Prerequisite: Engineering 414,

and Mining 521. Two lectures and three laboratory hours a week. Laboratory fee, \$2. Credit value: Three semester hours.

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

226. *Economic Problems for Engineers*.—Application of economic analysis to engineering and industrial problems which require a knowledge of engineering for their solution. Prerequisite: Economics 312 in advance or concurrently and senior standing in any engineering course. Credit value: Two semester hours.

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

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

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

335s. *Masonry and Reinforced Concrete*.—Lectures on natural stone, building stone, brick, mortars, and cements. Lectures, recitations, and problems pertaining to reinforced concrete construction, including strength of concrete in compression; reinforcing steel in tension; percentage of steel required; bond required in reinforcing bars; diagonal tension; designing of columns, beams, and slabs; and discussions relating to eccentric loading. Prerequisite: Engineering 434. Three lectures a week. Credit value: Three semester hours.

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

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

Drawing

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

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

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

Aviation

411. *Aeronautics*.—This course conforms with the outline given by the Civil Aeronautics Administration for the Elementary (Private) Civilian Pilot Training Program. Not less than eighteen hours are devoted to Civil Air Regulations, twenty-four hours each to Air Navigation and Aeronautical Meteorology, and six hours to General Servicing and Operation of Aircraft. Prerequisite: Sophomore standing, or permission of the Coördinator of Civilian

Pilot Training. Six lectures a week throughout both terms. Laboratory fee, \$4. Credit value: Four semester hours. Completion of this course satisfies the aeronautical knowledge required for a Private Pilot certificate. (Offered in Summer of 1941; both semesters, 1941-1942.)

621. *Aeronautics*.—This course conforms with the outline given by the Civil Aeronautics Administration for the Secondary (Restricted Commercial), Civilian Pilot Training Program. Lectures, problems, demonstrations, and quizzes will be given in the following subjects: Aerodynamics; Aircraft; Aircraft Power Plants; and Air Navigation. Prerequisite: Aeronautics 411, a valid Private Pilot Certificate, and permission of the Coördinator of the Civilian Pilot Training. A total of 108 lectures. Credit value: Six semester hours. (Offered Summer of 1941 and Spring 1942.)

ENGLISH AND PUBLIC SPEAKING

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

English

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

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

1. *English Composition*.—A basic course designed to build the student's vocabulary, teach him to find and use sources of information, assist him in learning to organize his ideas, and give him correctness and facility in written expression. Collateral reading, theme writing, and conferences with the instructor are given chief emphasis. Prescribed for freshmen. Credit value: Six semester hours.

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

310fs. *Technical Writing*.—For engineering students and others specializing in technical subjects. Training in assembling and evaluating technical information, outlining, preparing reports and specifications, and expressing effectively the student's own ideas. Prerequisite: English 1. Credit value: Three semester hours.

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

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

12Q. *English and American Literature*.—A course designed to replace English 12 for students not expecting to specialize in English. Study of significant specimens of prose and poetry with the object of helping the student to orient himself in the world of today through a study of its literature. A good deal of supplementary reading, frequent conferences with the instructor, and several written reports will be required. The work will include the study of significant specimens of prose and poetry from the sixteenth, seventeenth, eighteenth, and nineteenth centuries with emphasis on the social values of the material and its importance in leading up to the literature of the present day. Prerequisite: English 1. Credit value: Six semester hours. Not recommended for English majors.

320f. *Shakespeare: The Earlier Plays*.—Detailed study of a few of the plays composed before 1601, with a rapid reading of others belonging to the same period. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

321s. *Shakespeare: The Later Plays*.—Detailed study of some of the great tragedies, followed by a rapid reading of other plays written after 1600. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

322f. *Victorian Poetry*.—Consideration of the poetic works of Browning primarily, and study of such noteworthy minor poets as Arnold, Clough, James Thompson, and others. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

323s. *Victorian Poetry*.—Consideration of the poetic works of Tennyson primarily, and study of such noteworthy minor poets as Swinburne, Morris, D. G. Rossetti, Christina Rossetti, and others. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

325f. *Creative Writing*.—Prerequisite: English 12 or 12Q with a grade of at least B, or consent of the instructor. Credit value: Three semester hours. May be taken a second time for credit. (To be offered in 1942-1943.)

327f. *An Outline History of the English Novel*.—Brief history of the novel from the romances of the sixteenth century through the eighteenth and the first quarter of the nineteenth century, with study of typical works of Richardson, Fielding, Smollett, Burney, Jane Austen, and Scott. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

328s. *An Outline History of the English Novel*.—A continuation of English 327 with study of typical works of Dickens, Thackeray, George Eliot, Hardy, and Meredith. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Omitted in 1940-1941; to be omitted in Long Session, 1941-1942.)

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, Galsworthy, Maugham, Dane, etc. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in 1942-1943.)

332s. *The Development of the American Drama*.—A study of the drama of the Colonial and the Revolutionary Periods. Study of the development of the drama to modern times including such modern playwrights as the Mackayes, Thomas, Sheldon, Kaufman and Connelly, Crothers, Hughes, Davis, Anderson, Rice, Hellman, Howard, Behrman, and O'Neill. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in 1942-1943.)

334f. *Contemporary Poetry*.—A consideration of the social and intellectual movements which arose in England and America between late Victorian times and the immediate past and the expression of these movements in verse. Prerequisite: English 12 or 12Q. Credit value. Three semester hours. (To be omitted in 1942-1943.)

335s. *Contemporary Prose*.—Prose of the late Victorians, Georgians, and post-war writers in England; parallel work by American writers during the same period. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in the summer of 1942.)

336f. *American Literature*.—A study of the chief American poets and prose writers of the Revolutionary period and the early nineteenth century. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in 1942-1943.)

337s. *American Literature*.—A study of the most important American poets and prose writers from the Civil War to the present. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in 1942-1943.)

339f. *Early Eighteenth-Century Prose and Poetry*.—The background of the English Classical Period in the writers of the Restoration will be sketched. Defoe, Addison and Steele, Swift, Pope, and their contemporaries will be studied in detail. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in 1942-1943.)

340s. *Later Eighteenth-Century Prose and Poetry*.—Johnson, Boswell, Goldsmith, Burke, and other writers of the decline of Neo-Classicism will be considered together with those who prepared the way for the Romantic Movement. Thomson, Gray, Collins, Young, Chatterton, Cowper, Blake, and Burns will be given special study. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in 1942-1943.)

341s. *The Short Story*.—The literature and technique of the short story; the rise and nature of its form; an intensive study of its structure, together with an examination of short story types and masterpieces from various countries. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

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

353f. *Prose of the Renaissance and Reformation*.—A study of the beginnings of modern English literature in its relation to the political, social, and cultural ideals of the Renaissance. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

354s. *Poetry of the Renaissance and Reformation*.—A study of the beginnings of modern English literature in its relation to the political, social, and cultural ideals of the Renaissance. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be omitted in 1942-1943.)

355f. *The American Novel*.—A careful study of representative American novels and novelists from 1850 to the present. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

358f. *The English Language*.—A course designed to give an understanding of the growth, structure, and relationships of the English language with special emphasis on the development of modern English. Attention will be given to the theory of language and its function in human life and progress; the great language groups; developments from the Anglo-Saxon period to modern times. Prerequisite: English 12 or 12Q. Credit value: Three semester hours. (To be offered in 1942-1943.)

359s. *A Continuation of English 358*.—English in recent times. Dialects; usage; influence of scientific developments, war, radio, etc.; foreign elements; word building; other topics leading to an understanding and appreciation of the students' native tongue. Prerequisite: English 358. Credit value: Three semester hours. (To be offered in 1942-1943.)

98. *Thesis Course for Master's Degree*.—Prerequisite: Twelve semester hours of advanced courses in English; graduate standing. Confer with the chairman of the department immediately after registration. 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.

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

312j. *Play Production*.—Elementary principles of play production, including acting, staging, lighting, and make-up; practice in producing radio and stage plays. A study of the emotional basis of acting; the body as an expressive agent. Lectures, reports, and assigned readings in the literature of the drama and the theatre. A practical course to prepare students to produce plays in schools and communities. Prerequisite: Sophomore standing or six semester hours of Public Speaking. Credit value: Three semester hours.

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

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

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

GEOLOGY

PROFESSOR QUINN; ASSOCIATE PROFESSOR NELSON; INSTRUCTOR STRAIN

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

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

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

317s and 217s. *Mineralogy*.—Determinative mineralogy; a continuation of 316f. Largely devoted to the identification of minerals by physical characteristics. Prerequisite: Geology 316. One lecture and six hours of laboratory

work per week for 317. 217s is open only to engineering students who will receive six hours of laboratory work. Laboratory fee, \$2. Credit value: Two semester hours, for 217; three semester hours for 317.

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

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

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

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

427s. Petrology and Petrography.—The determination, origin, and subsequent history of minerals and rocks as revealed in mineral grains and thin sections by the petrographic microscope. Prerequisite: Geology 421 in advance or concurrently. Two lectures and six laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours. (Given in Long Session, 1941–1942; to be omitted in 1942–1943.)

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

463s. Geology of Petroleum, the Fuels and the Non-Metallics.—Study of the origin, migration and accumulation of petroleum and natural gas; the origin and occurrence of fuels with emphasis on coals; and the study of the important economic occurrences of the non-metallic mineral deposits, stressing those occurring in Texas and the Southwest. Prerequisite: Geology 421. Three lectures and three laboratory hours. Laboratory fee, \$4. Credit value: Four semester hours. (Omitted in 1941–1942; to be offered in Long Session, 1942–1943.)

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

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

Geography

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

HISTORY, GOVERNMENT, AND SOCIOLOGY

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

History

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

307f. *A General Survey of the History of Texas*.—Credit value: Three semester hours. (Given in summer of 1942; to be omitted in 1942-1943.)

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.

320. *History of Texas: Colonization and the Republic, 1821-1845*.—A critical study of the social, economic, and political factors involved in the Anglo-American settlement of Texas; the establishment of the Republic and its history until annexation to the United States. Prerequisite: Twelve semester hours of history. Credit value: Three semester hours. Mr. Strickland. (Given in summer of 1941.)

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. (Given in 1941-1942; to be omitted in 1942-1943.)

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. (Given in 1941-1942; to be omitted in 1942-1943.)

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. (Omitted in 1941-1942; to be offered in 1942-1943.)

326s. *History of the United States, 1787-1829*.—Confederation and Constitution; formulation of foreign policy, culminating in classic expression in the Monroe Doctrine; Jeffersonian Democracy and Hamiltonian Federalism; expansion and development of Jacksonian Democracy; rise of nationalism and conflict over states' rights. Prerequisite: Twelve semester hours in history. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

330f. *History of the Far East.*—Modernization of the nations of the Far East with particular attention given to China and Japan. The social, political, economic, and intellectual aspects of this transformation are considered in the sight of the impact of Western influences. Prerequisite: Twelve semester hours in history. 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. (Given in 1941-1942; to be omitted in 1942-1943.)

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. (Given in 1941-1942; to be omitted in 1942-1943.)

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.

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.

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. (Omitted in 1941-1942; to be given in 1942-1943.)

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. (Omitted in 1941-1942; to be given in 1942-1943.)

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. (To be offered in 1942-1943.)

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. (To be offered in 1942-1943.)

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

Government

310*js* and 10. *American Government.*—The government of the United States—national, state, and local—with special emphasis upon the Constitution of the United States and of Texas. Fulfills the legislative requirement of a course on the Constitutions of the United States and of Texas. Prerequisite: Sophomore standing. Credit value: For 310, or 10a, three semester hours; for 10, six semester hours. (Government 310 satisfies the requirement of three semester hours of Texas constitution.)

330*f*. *International Politics.*—The principles and political problems involved in foreign policies and international relations of the states of the world with particular emphasis on nationalism and imperialism. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in 1941–1942; to be omitted in 1942–1943.)

331*s*. *International Organization and Administration.*—The development of the machinery and procedure of international government for the peaceful settlement of international disputes. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in 1941–1942; to be omitted in 1942–1943.)

334*f*. *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 National Court System. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in Summer Session of 1941; to be offered in 1942–1943.)

335*s*. *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, or 10. Credit value: Three semester hours. (Given in Summer Session of 1941; to be offered in 1942–1943.)

343*f*. *The Foreign Policies of the United States.*—The historical development and present organization of the Department of State and of the Foreign Service; the nature of the foreign relations power and the conduct and control of American foreign relations. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in 1940–1941; to be omitted in 1942–1943.)

344*s*. *The Conduct of American Foreign Affairs.*—The origin and development of fundamental principles of American diplomacy concerning neutrality,

recognition, naturalization and expatriation, and promotion of trade and commerce with special attention devoted to post-war problems. Prerequisite: Government 310 and 311, or 10. Credit value: Three semester hours. (Given in 1940-1941; to be omitted in 1942-1943.)

Sociology

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

311fs. Social Pathology.—Physical and mental defectiveness considered from the sociological viewpoint; defects in social organization; poverty and dependency; pathology of personality. Social controls applied to social problems. Prerequisite: Sophomore standing. Credit value: Three semester hours.

320f. Fields of Social Work.—A survey of the various fields of social work now operating, both Federal and private in sponsorship, with particular attention to those organized on regional and national bases; and an examination of the methods used in the various fields considered. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

321s. Public Welfare.—An examination of the subject of public welfare, including its historical and philosophical development up to the present time, a survey of recent trends as embodied in the Social Security Board program, and a brief study in selected case work methods. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

330f. Development of Democracy in the United States.—A detailed study of the growth of democratic ideas in America as evidenced by the changing social scene from colonial times until today. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (To be offered in 1942-1943.)

331s. Changing Mexican Mores.—A survey of the changing ideas and practices of Mexico. Attention given to the contrasting mores of Spanish, Mestizo, and Indian Mexico. Emphasis upon the democracy of the modern Republic. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (To be offered in 1942-1943.)

345f. The Community.—Methods of studying the community; social anatomy; a comparative study of communities; analysis of the underlying forces and social successes which make for natural groups and institutions to meet industrial, religious, educational, governmental, and leisure-time needs; disorganization and reorganization in modern communities. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

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. (Omitted in 1941-1942; to be offered in 1942-1943.)

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. (Omitted in 1941-1942; to be offered in 1942-1943.)

349s. *The Family.*—A study of the development of the family as a social institution. Emphasis is placed upon the American family and the problems which confront it today. Prerequisite: Sociology 310 and 311. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

JOURNALISM

ASSISTANT PROFESSOR WILLIAMS; INSTRUCTOR GROSS

307. *Elementary Photography.*—Learning of the normal order of the photographic process. Discussion of lenses and cameras along with the actual photographic process: exposure, development, fixing, and contact printing. Faults and corrective processes and certain special types of work (photography of colored objects, photography of moving objects, and photography by artificial light) are treated. Credit value: Three semester hours.

12. *News Gathering and Reporting.*—Instruction and practice in interviewing and writing; discussion of news sources, news values, and various types of news stories; study of the organization of newspaper staffs and news gathering associations. Prerequisite: Sophomore standing including English 1. Credit value: Six semester hours.

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

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

316j. *Comparative Journalism*.—Study of foreign and American publications. Prerequisite: English 1 and Sophomore standing. Credit value: Three semester hours.

316ks. *Current Events*.—A study of current events in the daily newspaper and interpretation of these current events in regard to the social welfare, future, and progress of the world. Emphasis will be placed on events pertaining to governments and governmental leaders. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Given in Summer Session of 1941.)

319s. *Radio News Processing*.—The preparation of local and wire service news for radio news broadcasting and interpretation. Prerequisite: English 1 and Sophomore standing. Credit value: Three semester hours.

322j. *The Special Article*.—Methods of gathering material for newspapers and magazine feature stories through interviews, research, and observation; study of feature story form and style; discussion of markets for literary material; practice in writing feature stories. Prerequisite: Journalism 12 or English 12. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

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

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

326s. *Advertising, Copywriting and Special Layouts*.—Study of technique of copy writing and layout, direct mail advertising, circulars and department store layouts. Study of marketing and media. Prerequisite: Journalism 12 and Journalism 315. Credit value: Three semester hours.

327s. *Promotion and Public Relations*.—Detailed study of propaganda methods and technique, exploitation, and marketing via news channels. Radio publicity methods. Special emphasis on public relations, direction in industrial, commercial and retailing fields. Prerequisite: Journalism 12 and Journalism 315. Credit value: Three semester hours. (Omitted in 1941-1942; to be given in 1942-1943.)

329s. *Principles of Typography*.—Study of type, printing technique and methods, and history of printing, with emphasis on practical problems in typography that confront the newspaper editor and advertising manager. Lectures and laboratory practice. Prerequisite: Journalism 12. Credit value: Three semester hours.

340s. Editorial Writing and Direction.—Development and importance of the editorial; subject matter, policies, purposes, structure, and style; the editorial page, features, and makeup; editorial training, responsibility, and opportunity. Lectures, class discussions, written work, and written and oral criticism of individual work. Prerequisite: Journalism 12. Credit value: Three semester hours. (Omitted in 1941-1942; to be given in 1942-1943.)

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

MATHEMATICS AND PHYSICS

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

Mathematics

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

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

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

305fs. Algebra.—A review of secondary-school and intermediate algebra for engineering students whose background in this subject is deficient. Credit value: Three semester hours. This course may not be used to satisfy the mathematics requirement for the B.A. degree.

307fs. 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. Credit earned may be applied toward the mathematics require-

ment or elective hours for the B.A. degree. Prerequisite: Mathematics 304. Credit value: Three semester hours.

208s. *Solid Geometry*.—Required of candidates for engineering degrees who do not present solid geometry for entrance. This course or high-school solid geometry is required of all students beginning calculus. Counts toward academic degrees but not toward engineering degrees. Credit value: Two semester hours.

309fs. *Mathematical Analysis*.—A continuation of Mathematics 304 and designed for students who do not plan to take other courses in mathematics. 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 integral calculus drills the student in the integration of forms occurring in mechanics and physics; in evaluating areas, and volumes, in finding the center of gravity, 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.

325f. *Calculus*.—The topics of Mathematics 13 will be extended to include the differentiation and integration of a wider class of functions and the applications of these processes to the solution of a wider range of problems: moments of inertia, series, approximations of definite integrals, partial differentiation, complex variables, elementary Fourier expansions, and an introduction to the differential equations. Prerequisite: Mathematics 13. Credit value: Three semester hours.

326s. *Differential Equations*.—A study of the common types of ordinary and partial differential equations of geometry, mathematics, and electricity. Prerequisite: Mathematics 13. Credit value: Three semester hours.

333f. *Theory of Equations*.—Theory of polynomials, cubic and quartic equations, approximate methods, determinants, symmetric functions, and other topics. Prerequisite: Mathematics 13. Credit value: Three semester hours. (Omitted in 1941-1942; to be given in 1942-1943.)

337s. *Modern College Geometry*.—A course in modern plane geometry involving an extension of some of the material of elementary geometry, together with an introduction to projective geometry. Properties of the triangle, properties of the circle, similitude, inversion, cross ratio, and principle of quality. Prerequisite: Mathematics 13. Credit value: Three semester hours. (Given in alternate years; to be given in 1942-1943.)

41. *Analytical Mechanics*.—Equilibrium and motion of a particle and rigid body in two and 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.

Physics

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

801. *General Physics*.—Mechanics, heat, electricity, magnetism, sound, and light. Physics 801 and 1 may not both be counted for credit by the same student. Designed primarily for pre-medical students. Three lectures, two laboratory hours, and one additional hour per week. Laboratory fee, \$4. Credit value: Eight semester hours.

12. *Second-Year Physics*.—First semester: light and heat; second semester: mechanics, electricity, magnetism, and sound. Prerequisite: 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, and 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. Prerequisite: Mathematics 13 concurrently. Three recitations and three laboratory hours. Laboratory fee, \$4. Credit value: Eight semester hours.

222s. *Sound and Light*.—Prerequisite: Physics 812. One lecture or recitation and three laboratory hours. Laboratory fee, \$2. Credit value: Two semester hours.

34. *Electricity and Magnetism*.—Advanced theory and laboratory work. Prerequisite: Physics 12 or 812, and Mathematics 13. Two lectures and three laboratory hours. Credit value: Six semester hours. Laboratory fee, \$4. (Omitted in Long Session, 1941-1942; to be given in Long Session, 1942-1943.)

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 Long Session, 1941-1942; to be omitted in Long Session, 1942-1943.)

MINING AND METALLURGY

PROFESSOR GRAHAM; ASSOCIATE PROFESSOR THOMAS;
ASSISTANT PROFESSOR JENNESS; INSTRUCTOR BALL

Mining

521f. *Mining Methods*.—A comprehensive study of mining methods, including prospecting, development, exploitation, earth and rock excavation,

explosives, tunneling, shaft sinking, timbering, boring, underground transport, and hoisting. Prerequisite: Geology 316, Drawing 302, and Physics 812. Five lectures. Credit value. Five 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 521. Two lectures. Credit value: Two semester hours.

231s. *Mining Hygiene*.—Lectures and recitations. Prevention of communicable diseases, personal hygiene, public health, food, air, water, soil, ventilation, and heating, sewage disposal, garbage disposal, disinfection, camp sanitation, mine sanitation, prevention of industrial diseases. The course is supplemented by field work in sanitary surveys, and drawing of apparatus. The course also includes work in first aid and rescue work. Prerequisite: Junior standing. Two lectures. Credit value: Two semester hours.

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

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

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

367f. *Management*.—Mine examination, sampling, reporting, welfare, organization, financing, and other interesting management problems are considered in a lecture course given only to students who will complete the requirements for the Bachelor of Science degree by the end of the following fall semester. Three lectures. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

267f. *Management*.—Same as Mining 367f with the exception that only two lecture hours will be given. Credit value: Two semester hours. (To be offered in 1942-1943.)

269s. *Management*.—A continuation of the work given in Mining 367. Prerequisite: Mining 267. Two lectures. Credit value. Two semester hours.

074s. *Mining Trip*.—At the end of the Senior year, graduating Seniors spend the last two weeks of the second semester on a trip of inspection which will include visits to the mining and metallurgical departments of companies within the scope of the planned itinerary. In 1941 the class

visited properties in New Mexico, Colorado, and Arizona, but the route selected will be governed by conditions existing at the time of the trip. Although this trip is not a credit course, it will be required for graduation. Prerequisite: Completion of the requirements for the Bachelor of Science degree by the end of the following fall semester. No credit, but required for graduation.

Metallurgy

321s. *General Metallurgy*.—Introductory course covering a description of the various processes for treating all the ordinary metals, with a calculation of slags and furnace charges. Prerequisite: Chemistry 413, Physics 812, and Geology 316 and 217. Three lectures. Credit value: Three semester hours.

423f. *Ore Dressing and Milling*.—A student of the principles governing the processes employed in the liberation and separation of the minerals, including crushing and grinding, screening, classification, amalgamation, gravity concentration, magnetic separation, and flotation. In the laboratory the student becomes familiar with milling machinery and methods of separation. Prerequisite: Geology 217, Drawing 302, and Physics 812. Three lectures and three 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 323. One lecture and six laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

325f. *Non-metallics*.—A survey course of the non-metallic and ceramic industries, not including coal, oil or sulphur. Emphasis is placed upon the present economic utilization of, and possible future demands for, those minerals which are classed as non-metallic. Prerequisite: Metallurgy 423 must have been completed, or if not, must be taken concurrently. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours. (To be offered in Long Session, 1942-1943.)

252f. *Principles of Copper Smelting*.—In this course little attempt is made to study the mechanical features of copper smelting. The place of roasting, smelting, and refining in the pyrometallurgical reduction of a copper ore is given the primary attention, coupled with the calculation of furnace charges and slags. Offered subject to demand. Two lectures. Credit value: Two semester hours. (To be offered in 1942-1943.)

253s. *Electric Furnaces*.—A foundation course in electric smelting and the commercial applications of the electric furnace. Offered subject to demand. Two lectures. Credit value: Two semester hours. (To be offered in 1942-1943.)

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

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

362f. *Metallurgy of Leaching Processes.*—Study of the chemical and physical properties of the metals and such of their compounds as are of importance in connection with the leaching processes; the cyanide process, and leaching methods employed in the metallurgy of copper, lead and zinc. Prerequisite: Metallurgy 321. Two lectures and three laboratory hours. Laboratory fee, \$2. Credit value: Three semester hours.

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

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

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

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

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

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

MODERN LANGUAGES

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

The admission requirement of two units is represented by Course A, which will not count toward a degree for students presenting two admission units

in a modern language. Those with two units will enter Course 1a in the same language. For those presenting three units neither Course A nor Course 1a will count. Such students will enter Course 1b. Students entering with less than two years of high-school language are required to begin with Language Aa.

French, German, Spanish

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

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

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

French

326f. History of French Literature: Early Period.—An outline survey of French Literature from Rabelais to Chénier. Collateral reading and reports. Prerequisite: French 12. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

328s. History of French Literature: Later Period.—An outline survey of French Literature from Chateaubriand to Anatole France. Prerequisite: French 12. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

336f. Modern Drama: Early Period.—From Molière to Musset, including representative plays by outstanding classical and romantic dramatists, such as Corneille, Racine, Dumas, Hugo and de Vigny. Prerequisite: French 12. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

340s. Modern Drama: Later Period.—Representative plays from Dumas Fils to Claudel, including the outstanding works of Augier, Becque, Brieux, Rostand, Bernstein, Lenormand. Prerequisite: French 12. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

Spanish

301f. Conversational Spanish.—A practical course designed for non-Spanish students who wish to acquire a fluent ability to express themselves in the language. Open to all students. Not counted toward fulfillment of requirements for the modern language majors. Credit value: Three semester hours. (To be omitted in 1942-1943.)

13. *Social and Business Usage.*—Translation, composition, and conversational practice in the language of business and everyday life. Reading of texts, building up of practical vocabulary, and grammatical drill in essential constructions. This course is not intended for Spanish majors but is recommended for students who will not continue into courses in the literature, and may be substituted by such students for Spanish 12. Prerequisite: Spanish 1. Credit value: Six semester hours.

326f. *History of Spanish Literature: Early Period.*—An outline survey of Spanish literature from its beginnings through the Golden Age. Selected class readings; outside readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

327s. *History of Spanish Literature: Later Period.*—An outline survey of Spanish literature from the seventeenth century to the contemporary period. Selected class readings; outside readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

328s. *Golden Age Drama.*—A study of the leading dramatists, such as: Lope de Vega, Tirso de Molina, Calderon de la Barca, Ruiz de Alarcon, Moreto, and others. Readings of selected masterpieces; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

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. (Given in 1941-1942; to be omitted in 1942-1943.)

334f. *Early Epics and Ballads.*—A study of the field of ballads and epics. Special emphasis on the epic heroes in the ancient ballads. Readings of special selections; outside readings and reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Offered in 1941-1942; to be omitted in 1942-1943.)

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, Fernan Caballero, Pedro Antonio de Alarcon, Juan Valera, Jose Maria de Pereda, Perez Galdos, Pardo Bazan, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

337s. *Modern Novel: Later Period.*—A study of the trends in the development of the novel from the latter part of the nineteenth century to the present. Selected readings from such authors as: Palacio Vales, Blasco Ibanez, Pio Baroja, Ricardo Leon, Perez de Ayala, etc.; outside reading reports. Prerequisite: Spanish 12. Credit value: Three semester hours. (Omitted in 1941-1942; to be given in 1942-1943.)

338. *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, Jose de Larra, Duque de Rivas, Garcia Gutierrez, Hartzenbusch, Jose Zorilla, etc.; outside readings. Prerequisite: Spanish 12. Credit value: Three semester hours. (Offered during summer session of 1941.)

357j. *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. (Given in 1941-1942; to be omitted in 1942-1943.)

358. *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. (Given during summer session of 1941.)

MUSIC

ASSISTANT PROFESSOR JOHNSON; INSTRUCTOR HEMMLE

The Department of Music has as its chief aim not only to give ample opportunity for musical expression to the students on the campus, but also to give a full, rounded, and practical course of training to the students planning to enter the field of instrumental or choral direction.

Any student having completed the course of study as outlined will have fulfilled all the requirements of the State Board of Education for full-time teaching in the Public Schools of Texas, either primary or secondary.

Theory and Literature

301f. *Sight Singing and Elementary Theory*.—This course includes elementary theory and its application, i.e., scale building, music notation applied in singing of melodies at sight and melody dictation. This course is a prerequisite for any student interested in voice for credit. Credit value: Three semester hours. (Formerly Music 1a.)

302s. *Beginner's Harmony*.—The study of scales, intervals, elementary chord formation, primary and secondary triads, dominant and secondary sevenths, melody writing, harmonization of melodies, study of cadential combinations including many of the important chord forms throughout the major and minor keys. Prerequisite: Music 301 or consent of instructor. Credit value: Six semester hours. (Given in 1942-1943.)

18. *Second Course in Harmony*.—This course includes the study of ninth, eleventh, and thirteenth chords; altered chords derived from the interchange of mode, and the Neopolitan sixth; and augmented harmonies, transition, modulation, and further work in keyboard harmony. Prerequisite: Music 301 and 302, or 10. Credit value: Six semester hours. (To be given in 1942-1943.)

30. *History and Appreciation of Music.*—A general course covering the entire field of music beginning with the ancient tribes and tracing its development through to the contemporary composers. Prerequisite: Music 1 and Junior standing. Credit value: Six semester hours.

40. *Counterpoint.*—This course is a study of the melodic tones; melody formation; two, three, and four-part counterpoint in all species; invertible counterpoint; canonic initiation; and original writing in the contrapuntal forms. Prerequisite: Music 1 or 301 and 302, and Junior standing. Credit value: Six semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

50. *Analysis and Conducting.*—A course meant primarily for individuals interested in the direction of either instrumental or choral organizations. It consists of detailed study and analysis of instrumental and vocal scores besides practical application of laws governing the baton. Prerequisite: Twelve semester hours of music including Music 1. Credit value: Six semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

53. *Public School Music Methods.*—This course, offered in the training of teachers and supervisors of Public School Music, deals with various methods of teaching procedure. The practicability of each method is discussed as well as the manner of its presentation. The range of the course covers all grade levels within the course of a year. This course supplemented by specialized study in a chosen field, and with additional study in Education, should equip any teacher to meet any full time teaching requirement. Prerequisite: Education 317 or 318, and Music 301. Credit value: Six semester hours. (To be offered in 1942-1943.)

Applied Music

01. *Band Ensemble.*—Marching practice and maneuvers; exercise materials for large and small groups throughout both semesters. This course is required of all students expecting to study wind instruments for credit and is the laboratory for all instrumental classes. May be substituted for Physical Training 01 and 02. Five hours per week throughout the year. Non-credit.

02. *Chorus—Varsity Singers.*—The mixed choral ensemble on the campus made available to all students interested in choral singing. Five hours per week required. Non-credit.

03. *Orchestra Ensemble.*—Ensemble materials of concert type suitable for medium sized organization, the instrumentations chosen principally for radio program work. This course is required of all students expecting to study string instruments for credit.

11. *First Year of Brass Instrument Technique.*—The course is so designed as to permit each student to acquaint himself with all the brass family of instruments as well as to do specialized training on his major instrument. One hour per week is assigned to each student for private lessons. Nationally recognized studies for each instrument are used as the basis for study. Band

or orchestra laboratory (01 or 03) is required of each student. Prerequisite: Music 01 or 03. Credit value: Six semester hours.

12. *Class Voice*.—A course designed not only to develop the individual voice but also to acquaint the student with a cross section of the vast choral and solo repertoire. Repertoire study will be made two hours per week and instruction in voice one hour. Student is required to also take choral laboratory or chorus 02. Prerequisite: Chorus 02. Credit value: Six semester hours.

17. *First Year of Woodwind and Percussion Instrument Technique*.—As in the brass instrument class, students spend two hours per week in class study of all instruments of the woodwind family in addition to one hour set aside for private instruction which is based upon nationally recognized methods for the major instrument chosen. Band or orchestra laboratory (01 or 03) is required of each student. Prerequisite: Music 01 or 03. Credit value: Six semester hours.

21. *Second Year of Brass Instrument Technique*.—A continuation of Music 11 which is prerequisite. Credit value: Six semester hours.

24. *Second Year of Class Voice*.—A continuation of Music 12 which is prerequisite. Credit value: Six semester hours.

27. *Second Year of Woodwind and Percussion Instrument Technique*.—A continuation of Music 17 which is prerequisite. Credit value: Six semester hours.

229-239-249-259. *Class Piano*.—Courses designed to give students two years of concentrated study in piano. Two hours per week required in class with six additional hours of practice. Prerequisite: Permission of Head of Music Department. Credit value: Two semester hours each. (Can be three semester hours each if repertoire is studied.)

PHILOSOPHY AND PSYCHOLOGY

PROFESSOR ROTH

Philosophy

312f. *Logic*.—Introduction to essentials of correct thinking: deductive and inductive reasoning; fallacies and argumentation. Recommended for students majoring in science or preparing for the study of law. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

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. (Omitted in 1941-1942; to be given in 1942-1943.)

315s. *Ethics*.—Introductory survey of the evolution of moral codes and ideals; reflective morality; conduct and character; conflicts of interests; personal and social ethics. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

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. (Omitted in 1941-1942; to be offered in 1942-1943.)

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. (Given in 1941-1942; to be omitted in 1942-1943.)

321f. *Philosophy of American Civilization and Culture*.—A critical study of the political doctrines, social and economic theories, literary and artistic efforts that have contributed to the American ideology. Prerequisite: Six semester hours in philosophy, or three semester hours in philosophy and three semester hours in psychology. Credit value: Three semester hours. (To be offered in 1942-1943.)

322s. *Philosophy of Religion*.—A study of the meaning and function of religion; survey of primitive religious ideas and practices; comparative study of the great world religions; analysis of religious beliefs and values, and their relationship to modern life. Prerequisite: Six semester hours of philosophy, or three semester hours in philosophy and three semester hours in psychology. Credit value: Three semester hours. (To be offered in 1942-1943.)

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. (Not to be offered in 1942-1943.)

329s. *History of Modern Philosophy*.—Survey of the development of philosophic thought from Descartes to the present 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. (Not to be offered in 1942-1943.)

Psychology

310fs. *Introductory Psychology*.—A survey of the field of general psychology. Prerequisite: Sophomore standing. Credit value: Three semester hours.

311s. *Fields of Psychology*.—Survey of genetic, animal, abnormal, social and applied psychology; mental measurements and experimental methods. Prerequisite: Psychology 310. Credit value: Three semester hours. (Given in 1941-1942; to be omitted in 1942-1943.)

316s. *Business Psychology*.—A study of the psychological factors and principles involved in modern business, industry, marketing, advertising and salesmanship. Prerequisite: Psychology 310. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

320f. *The Psychology of Personality*.—A study of the fundamental traits of personality, their origin, development and control; maladjustments and disorders of the personality and their treatment. Prerequisite: Psychology 310, and three additional semester hours of either philosophy or psychology. Credit value: Three semester hours. Formerly psychology 319. (Omitted in 1941-1942; to be offered in 1942-1943.)

344s. *Mental Hygiene*.—Prerequisite: Six semester hours in psychology, or in philosophy, or in both. Credit value: Three semester hours. (Omitted in 1941-1942; to be offered in 1942-1943.)

351f. *Social Psychology*.—Social phenomena; psychological technique for the study of complexes, attitudes and social behavior; social control. Prerequisite: Six semester hours in psychology. (Given in 1941-1942; to be omitted in 1942-1943.)

352s. *Abnormal Psychology*.—Suggestibility and hypnotism; dreams; nervous and mental disorders; mental effect of drugs; normal and abnormal motivations; the concept of insanity; spiritistic phenomena. Lectures and demonstrations. Prerequisite: Six semester hours in psychology. (Given in 1941-1942; to be omitted in 1942-1943.)

PHYSICAL EDUCATION

PROFESSORS CURTICE, KNOX; INSTRUCTORS KANE, MOORE, DAVIS
SERVICE COURSES

The service courses (formerly called physical training courses) are provided (1) to further the education of the individual through physical activity; (2) to promote vigorous mental, emotional, social and physical health; (3) to develop motor skills; and (4) to prepare for leisure time activity. Definite instruction is given in class periods and students are graded on their accomplishments as determined by knowledge and skill tests. Class instruction is supplemented by a varied program of intramural sports for men and women which gives opportunity for additional participation and recreation. Juniors and seniors who have completed the physical education requirements are especially urged to participate in the intramural program.

Service courses for freshmen men and women are numbered 01 to 09. Sophomore courses are numbered 010 to 019.

COURSES FOR MEN	COURSES FOR WOMEN
01 Football, Speedball and Volleyball	02 Volleyball, Rhythmics, and Softball
03 Basketball, Tumbling and Baseball	04 Archery, Speedball, and Hockey
011 Boxing	010 Tennis
013 Tumbling and Gymnastics	012 Advanced Rhythmics
015 Handball	014 Horseback Riding
017 Tennis	

CO-EDUCATIONAL

016 Archery, Rhythmics

PROFESSIONAL COURSES

Those who wish to qualify as physical education teachers and/or coaches must meet the following requirements set up by the Texas State Department of Education:

1. "Full-time teachers must have 24 semester hours in physical and health education." (A person who coaches athletics and teaches one or more classes in physical education is considered a full-time teacher.)

2. "Part-time teachers must have 12 hours in physical and health education." (Any person who teaches as many as two classes of physical education per day in combination with other subjects or who coaches athletics and teaches some subject other than physical education is considered a part-time teacher.)

Those who wish to qualify as part-time teachers or to minor in physical education should register for the following courses: P.E. 320, 321, and two elective courses in physical and health education.

3. "All beginning classroom teachers who direct or teach any part of the physical or health education program must have at least 6 semester hours of college credit in professional teacher training courses in that field."

Elementary teachers should register for P.E. 321 and 320 or 360.

312s. Tumbling and Gymnastics.—Theory and practice in tumbling, apparatus, calisthenics, pyramids and stunts. Arranging the school program. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Open to men only.)

313f. Technique of Minor Sports.—Theory and practice, methods and materials for teaching; tag football, soccer, speedball, volleyball, playground baseball. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Open to men only.)

16. Technique of Major Sports.—Coaching methods in football, basketball, and track. Training, conditioning, practice schedules, and sport fundamentals. Prerequisite: Sophomore standing. Credit value: Six semester hours. (Open to men only.)

319f. *Principles of Health and Physical Education.*—Social, biological, and educational basis for health and physical education. Aims, objectives, content and standards. Selection and adaptation of activities to different ages and conditions. Prerequisite: Sophomore standing. Credit value: Three semester hours. (Open to men and women.)

320f. *Fundamentals of Health.*—The scientific basis for health instruction, basic health information for college students and health teachers; stress will be placed upon practical health problems and adequate health knowledge. Prerequisite: Six semester hours of science and junior standing. Credit value: Three semester hours. (Open to men and women.)

321s. *Physical Education for Elementary Schools.*—Philosophy of play, content, progression and organization of the play program for elementary and junior high schools. Prerequisite: Junior standing. Credit value: Three semester hours. (Open to men and women.)

322s. *Modern Trends in Physical Education.*—The activity program, interscholastic and intramural athletics; the physical education plant; student leaders; management of finances; testing in P. E. Prerequisite: Junior standing. Credit value: Three semester hours. (Open to men and women.)

350s. *Organization of Community Recreation.*—Methods of organizing and directing community recreation. The nature and scope of the program. Activities suitable for various age levels, leadership and use of community resources.

351j. *Care and Prevention of Injuries.*—Emergency treatment for injuries common to playground, gymnasium and athletic field. Safety measures for preventing injuries. Prerequisite: Physical Education 320 and junior standing. Credit value: Three semester hours. (Open to both men and women.)

352s. *Technique in Teaching Rhythmics.*—A general survey of the various rhythmical activities to be included in the physical education program with emphasis on methods of teaching in public schools. Prerequisite: Sophomore standing. Credit value: Three semester hours. (For women only.)

53. *Methods and Materials in Teaching Physical Education for Women.*—Theory and practice in the technique of sports and activities included in the physical education program. Prerequisite: Sophomore standing. Credit value: Six semester hours. (For women only.)

360s. *Methods and Materials in Health Education.*—The field of Health Education, problems in administering the program, teaching aids for the health teacher, the teacher's part in health protection of children. Prerequisite: P. E. 320 or its equivalent and junior standing. Credit value: Three semester hours. (Open to men and women.)

COLLEGE OF MINES AND METALLURGY

REGISTER OF STUDENTS

Summer Session, 1941

Abrego, Alfredo.....	El Paso	Britton, Jack.....	El Paso
Adkins, Charlotte.....	El Paso	Broadbuss, Marie.....	El Paso
Aguirre, Sallie.....	Strawn	Brock, Charles.....	El Paso
Akeroyd, Edward.....	El Paso	Brooks, Doyle T.....	El Paso
Alderete, Carlos.....	El Paso	Brown, Dan.....	El Paso
Alderete, Joe.....	El Paso	Brown, Marion.....	El Paso
Alexander, Ruth.....	Breckenridge	Broyles, Robert.....	El Paso
Alford, Elva Jane.....	El Paso	Brysson, Ralph.....	New Orleans, La.
Allen, Mary.....	El Paso	Bubb, Harry.....	El Paso
Alvillar, Ruben.....	El Paso	Bullard, Edwin.....	El Paso
Anderson, Mary Cynthia.....	El Paso	Burleson, John.....	El Paso
Antone, Charles.....	El Paso	Burleson, Neal.....	El Paso
Arant, James B.....	El Paso	Burrus, Constance.....	Ysleta
Armagnac, Martin.....	El Paso	Bustamente, Joaquin.....	El Paso
Armistead, Betty.....	El Paso	Calderhead, Bill.....	El Paso
Arnold, Joseph Charles.....	El Paso	Calisch, Charles A.....	El Paso
Arnold, Lloyd.....	Roscoe	Callan, Russell, Jr.....	El Paso
Ashby, Julian.....	Overton	Calvillo, Louis.....	El Paso
Ashley, Janet.....	Oberlin, Ohio	Cameron, Bruce.....	El Paso
Avvocato, Rodolf.....	El Paso	Camp, Fannie.....	El Paso
Ayoub, George.....	El Paso	Camp, Jennie.....	El Paso
Ayub, Romeo A.....	El Paso	Campbell, Mrs. Alice.....	El Paso
Azar, Sandra.....	El Paso	Cantrill, Jack.....	El Paso
Baker, Shirley.....	El Paso	Capps, Willie Jewel.....	El Paso
Ballentine, Kelly.....	Ysleta	Cargo, Robert.....	El Paso
Baltz, Don.....	El Paso	Carisen, Flora.....	El Paso
Bardwell, Esther.....	Anthony, N.M.	Carlson, Robert.....	El Paso
Barner, Orris.....	El Paso	Carrasco, David.....	El Paso
Barrios, Ignacio J.....	El Paso	Carrera, Philip.....	El Paso
Barry, John S.....	El Paso	Carruth, J. S.....	El Paso
Barto, Lewis.....	El Paso	Carson, Hugh.....	El Paso
Barton, Constance.....	El Paso	Carson, Mary Louise.....	El Paso
Barton, Mrs. May.....	El Paso	Cassidy, Frances T.....	El Paso
Barwise, Marjorie.....	El Paso	Casteel, Martha.....	El Paso
Bassett, Barbara.....	El Paso	Caster, Margaret.....	El Paso
Beard, Jack.....	El Paso	Cable, Frank.....	El Paso
Bennett, Mrs. Efa Lou.....	El Paso	Caver, Bill.....	Kilgore
Berg, Muriel.....	El Paso	Chaparro, Albert.....	El Paso
Bickley, Cliff.....	El Paso	Chaparro, Miguel.....	El Paso
Black, Ada Mae.....	El Paso	Chavez, Juan.....	El Paso
Blair, Anita.....	El Paso	Clark, Lotta Gass.....	El Paso
Bloodworth, Lloyd.....	El Paso	Clark, Victor.....	Pharr
Bluth, Veva K.....	Deming, N.M.	Claus, Rosabelle.....	El Paso
Bomback, Carlos.....	El Paso	Clausewitz, Erlwood.....	San Antonio
Boniface, Jack G.....	El Paso	Clifton, Minnie.....	El Paso
Boone, Isola.....	El Paso	Cobbe, Edythe.....	El Paso
Borunda, Carlota.....	El Paso	Coffin, Charles.....	El Paso
Boyd, Hershel.....	Crane	Coldwell, Colbert.....	El Paso
Breach, Hector.....	El Paso	Collins, Hamilton.....	El Paso
Brians, Howard H.....	El Paso	Collins, Spencer.....	Midland
Bridges, J. L.....	El Paso	Collins, William S.....	El Paso

Condon, Lozier.....	El Paso	Fiock, Leonard.....	El Paso
Cannolly, Agnes.....	El Paso	Fisher, Dorothy.....	Canutillo
Cordova, Luis.....	Juarez, Chih., Mex.	Fisher, Mrs. Kathleen.....	El Paso
Cotton, Betty Jo.....	El Paso	Fisher, Mrs. Lovella.....	El Paso
Cotton, George.....	El Paso	Fisher, Lucille M.....	Canutillo
Cowherd, Florence.....	El Paso	Fitzgerald, Dewey.....	El Paso
Cox, Mrs. Wilmoth.....	El Paso	Flores, Louis.....	Fabens
Crabtree, Margaret.....	El Paso	Floyd, Lee.....	El Paso
Cragin, George.....	El Paso	Fogle, Billie Marie.....	El Paso
Craven, Charles.....	El Paso	Follett, Bob.....	El Paso
Crawford, Charlotte.....	El Paso	Foote, Janet.....	El Paso
Crews, Thomas W.....	Freer	Ford, James.....	El Paso
Crombie, Ann.....	El Paso	Forwood, Amelia L.....	El Paso
Cronenberg, Jane.....	El Paso	Forwood, May M.....	El Paso
Crossett, Bob.....	La Union, N.M.	Franey, Jane.....	El Paso
Crossett, Pearl.....	La Union, N.M.	Franklin, Joanna.....	El Paso
Crowe, Edward.....	El Paso	Franklin, Susan E.....	El Paso
Crye, Mrs. Helen.....	El Paso	Freeman, Leola.....	El Paso
Cummins, William.....	El Paso	Fuentes, Charles.....	El Paso
Daniels, John N.....	El Paso	Fuller, Dora.....	Fabens
Daniels, Mary Helen.....	Anthony, N.M.	Fuller, Maysel.....	El Paso
Davalos, William.....	El Paso	Gaenzle, Jay.....	El Paso
Davis, Bertram.....	Hurley, N.M.	Galbraith, Mrs. Ada.....	El Paso
Davis, Edna.....	El Paso	Galbraith, Helen.....	El Paso
Davis, Mary Virginia.....	El Paso	Gallagher, Ann.....	El Paso
Davis, Mrs. Ruth.....	El Paso	Gantt, James.....	El Paso
Davis, Thelms L.....	Sierre Blanca	Garbrecht, Louis, Jr.....	El Paso
Davis, Mrs. Violet.....	Ysleta	Garcia, Frank.....	El Paso
Deane, Peyton.....	El Paso	Garcia, Jose.....	El Paso
Deathe, Helen.....	El Paso	Gardiner, Barbara.....	El Paso
De La Torre, Miguel.....	Mapimi, Dgo., Mex.	Gardiner, Mrs. Gertrude.....	El Paso
Del Valle, Salvador.....	El Paso	Garza-Pena, Lucia.....	El Paso
Denis, Beatrice.....	El Paso	Gatlin, Maurice.....	El Paso
Denton, George.....	Clint	Gehring, Alice.....	El Paso
Diaz, Oscar.....	Juarez, Chih., Mex.	Gerwels, Richard.....	Tacoma, Wash.
Diaz, Rene.....	El Paso	Gilbert, Bob.....	Canutillo
Dickerson, Lucile H.....	El Paso	Gilland, Lois.....	El Paso
Don, Rita L.....	El Paso	Gillis, Ralph.....	El Paso
Douglas, Stephan A.....	El Paso	Given, Mildred.....	El Paso
Drolesky, Mrs. Ada.....	Ysleta	Goldfarh, Bill.....	El Paso
Duke, Jack.....	El Paso	Gonzalez, Lucas.....	El Paso
Duncan, Jane.....	Ysleta	Gordon, Stanley.....	El Paso
Dwyer, Irene.....	El Paso	Grady, Annie.....	El Paso
Dyer, Mrs. M. C.....	El Paso	Graham, Betty.....	El Paso
Earnhart, Mrs. Glen.....	El Paso	Graves, Carroll.....	Texarkana
Echaniz, Eugene.....	El Paso	Graves, William.....	El Paso
Echlin, Robert.....	El Paso	Greening, Virginia.....	Plainview
Edwards, Lois.....	El Paso	Gruber, Doris.....	El Paso
Enloe, Curtis.....	El Paso	Gruber, Juanita.....	El Paso
Espinosa, Juan.....	El Paso	Gutierrez, Enrique.....	Juarez, Chih., Mex.
Espinosa, Lorenzo.....	El Paso	Hagquist, Bert G.....	El Paso
Evans, Ward.....	Ft. Smith, Ark.	Hammonds, Clyde.....	El Paso
Feinberg, Milton.....	El Paso	Hammonds, Howard.....	El Paso
Ferris, Mrs. Edna.....	El Paso	Hammonds, Nancy Lee.....	El Paso
Feuille, Edith.....	El Paso	Hamrah, Fadia.....	El Paso
Fields, Sarah.....	Clint	Hamrah, Joe.....	El Paso
Figueroa, William.....	El Paso	Hanley, Julia.....	El Paso
Fincher, Troy.....	El Paso	Hanson, Nellie.....	El Paso
		Hardaway, George.....	El Paso

Hardie, Francina.....	El Paso	Julien, Donald.....	El Paso
Hardy, Betty Jo.....	El Paso	Kaffer, Stephen.....	El Paso
Harper, Bertha Anne.....	Ysleta	Kahn, Sholom J.....	Bronx, N.Y.
Harrell, Christine.....	El Paso	Keeney, Mabel V.....	El Paso
Harris, Florence.....	El Paso	Kelley, Anna Marie.....	El Paso
Harvey, Paul.....	El Paso	Kennedy, Betty.....	El Paso
Harvill, Agnes C.....	El Paso	Kennedy, Dorothy.....	El Paso
Harvill, Katherine.....	El Paso	Kerley, Donald.....	Ysleta
Havins, Robert.....	Brownwood	Kerley, Robert V.....	Ysleta
Hayes, Neil E.....	El Paso	Kersey, Robert.....	El Paso
Haynes, John.....	Waco	Kilpatrick, Betty.....	El Paso
Heisel, Wanda.....	Canutillo	King, George.....	El Paso
Heller, Isaac.....	El Paso	King, Robert.....	Comales, Tamp., Mex.
Hemley, Allen.....	El Paso	Kitchens, William F.....	El Paso
Hemley, Barbara.....	El Paso	Klink, Mary Lee.....	El Paso
Henderson, C. M.....	El Paso	Klink, Sammie.....	El Paso
Hendon, Mrs. Louise.....	El Paso	Kriechbaum, James R.....	El Paso
Hernandez, Fred.....	El Paso	Kriechbaum, Philip.....	El Paso
Herr, Richard.....	El Paso	Lacey, Birda Mae.....	El Paso
Herrera, Alfred C.....	El Paso	Lafon, Luis.....	El Paso
Herring, Amelia L.....	Clint	Lane, George.....	El Paso
Hester, Henry.....	El Paso	Lanier, Betty Sue.....	El Paso
Hicks, John.....	El Paso	La Rock, T. Byron.....	El Paso
Higgins, Gertrude.....	El Paso	Lawrence, Claude.....	El Paso
Hill, Howard.....	El Paso	Lee, William C.....	El Paso
Hillin, John.....	El Paso	Lerner, Ruth.....	El Paso
Hillyer, Larry.....	Corpus Christi	Levenson, Sydney.....	El Paso
Hixenbaugh, Betty.....	El Paso	Levy, Harold.....	El Paso
Hoard, Claire.....	El Paso	Lewis, Charles.....	El Paso
Holloman, Helen Wynne.....	El Paso	Leyva, Robert.....	El Paso
Hooten, William P.....	El Paso	Lide, Henry.....	El Paso
Hoover, Robert.....	El Paso	Limon, Roberto.....	El Paso
Hope, Thomas.....	St. Paul, Minn.	Long, Maybelle.....	El Paso
Howe, Richard E.....	El Paso	Longnecker, Rose Ann.....	El Paso
Howell, Iris.....	El Paso	Longuemare, Marguerite.....	Ysleta
Huffman, Mrs. Helen.....	El Paso	Lord, Mrs. Clara.....	El Paso
Hughes, Sue.....	El Paso	Love, Mrs. Myrtle.....	El Paso
Hughes, Winifred.....	El Paso	Lowe, Howard R.....	El Paso
Hunt, Jack.....	El Paso	Lowrey, Bessie.....	Ysleta
Hunt, Leola.....	El Paso	Lyon, Bill.....	El Paso
Irvin, Hallie Ray.....	El Paso	Lyon, Robert.....	El Paso
Irving, W. C.....	Ft. Bliss	McCamant, Bill.....	El Paso
Iverson, Marguerite.....	El Paso	McCausland, Paul W.....	El Paso
Jackson, Lester.....	El Paso	McConnell, Mrs. Betty.....	El Paso
Jackson, Mary Deane.....	El Paso	McCormack, Ellen T.....	El Paso
Jackson, Sue.....	El Paso	McDow, Ishmael.....	El Paso
Jacobo, Carmen.....	El Paso	McGovern, Hugh.....	El Paso
Jameson, Margie.....	El Paso	McIntyre, Josephine.....	El Paso
Jewell, Fay.....	Forrest, N.M.	McKenzie, Pauline.....	Marfa
Johnson, Haskell.....	El Paso	McKinney, James W.....	El Paso
Johnson, Sammie.....	Ft. Stockton	McKnight, Frank G.....	El Paso
Jones, Brooks.....	Clint	McNeil, Guy.....	El Paso
Jones, Elsie B.....	El Paso	McTier, Frank.....	El Paso
Jones, Mrs. Louise.....	El Paso	Maddox, Jettie.....	El Paso
Jones, Richard.....	El Paso	Maddox, Maude.....	El Paso
Jones, V. Richard.....	Brady	Malone, James.....	El Paso
Joseph, George.....	El Paso	Mandell, Ida Rose.....	El Paso
Jourdan, Everitt.....	El Paso	Manker, Hazel Ann.....	El Paso

Maraman, William	El Paso	Oppenheimer, Birdie	El Paso
Marchbanks, John	Fabens	Oppenheimer, James	El Paso
Marston, Margaret	El Paso	O'Rourke, Helen	El Paso
Martin, James F.	El Paso	Ortiz, Arthur	El Paso
Martinez, Ambrosio	El Paso	Page, Ann	El Paso
Martinez, Luis	El Paso	Palm, J. D.	El Paso
Martinez, Maria	El Paso	Paredes, Felipe	El Paso
Masten, Frank	El Paso	Park, Ola D.	El Paso
Mayfield, Tom, Jr.	El Paso	Parsons, Aline	El Paso
Meadows, Francis	El Paso	Passmore, Agnes	El Paso
Meadows, Pierce Lamar	Harlingen	Paul, Edd	El Paso
Mena, Gloria	El Paso	Pearce, R. D.	El Paso
Mendoza, Joaquin		Perry, James A.	El Paso
	Chih. City, Chih., Mex.	Peterson, Wesley F.	El Paso
Metcalf, Juanita L.	El Paso	Pettijohn, Fern	El Paso
Meyers, Roberta	El Paso	Pickles, Florence	El Paso
Millard, Roy H.	El Paso	Pierson, Jewel	El Paso
Miller, Katherine	El Paso	Pillow, Mrs. Lucille	El Paso
Miller, Mary Beth	Fabens	Poole, Finis	Athens
Milner, Walter J.	El Paso	Poole, Mrs. James	El Paso
Milstead, Mrs. Nellie	El Paso	Poppell, James William	El Paso
Miskimins, Ruth F.	El Paso	Poske, Alma	El Paso
Mitchell, E. Ruth	El Paso	Prati, Joe	El Paso
Mitchell, Mary W.	El Paso	Preston, Eleanor	El Paso
Molloy, Grace T.	Ysleta	Prestwood, Hugh	El Paso
Montgomery, James W.	El Paso	Price, Hazel G.	Ysleta
Mooney, Patricia Ann	Ysleta	Price, Owen Francis	Chicago, Ill.
Moore, Jean	El Paso	Price, Ruth Dyer	El Paso
Moore, Richard	El Paso	Prigden, Mrs. Edith	El Paso
Morales, Antonio	El Paso	Pronger, Norman	Saratoga, Calif.
Morales, Concha	El Paso	Quintana, Lawrence	El Paso
Moran, Mary Sophia	El Paso	Rabell, Arthur	Mexico City, Mex.
More, Mrs. Hazel	El Paso	Raborn, Jimmy	El Paso
Moreno, Javier	El Paso	Raymond, Dorothy	El Paso
Morris, Dorothy Faye	El Paso	Ream, Melvie	El Paso
Morris, Winnie Fred	El Paso	Reavis, Mary Alice	El Paso
Morse, Mrs. Alberta	El Paso	Reid, Mary Lillian	El Paso
Mueller, E. J.	El Paso	Reid, Mrs. Lillian	El Paso
Mulcahy, Catherine	El Paso	Reynolds, George	El Paso
Mulry, Millard	El Paso	Rice, Robert	El Paso
Narrance, Dorothy	El Paso	Richards, Cliff	Canutillo
Navarro, Victor	El Paso	Richards, Jeanne	Silver City, N.M.
Naylor, Mary Frances	El Paso	Richards, Katherine	Rodeo, N.M.
Nelson, Jonell	El Paso	Richards, Lorena	El Paso
Nelson, Robert H.	El Paso	Rigdon, Dorothy	El Paso
Neugebauer, Edward R.	El Paso	Riggins, Lee	El Paso
Newell, Lee	Sierra Blanca	Rike, William	El Paso
Newman, Bob	El Paso	Rindom, Virgil	El Paso
Nichols, Peyton	El Paso	Robinson, Gene	El Paso
Niland, Mrs. Adella	El Paso	Robinson, John V.	El Paso
Oechsner, Kathleen	El Paso	Rogers, Bill	Clint
Ohlemeyer, Keith	El Paso	Rojas, Oralta	El Paso
Oliver, Joseph	El Paso	Roman, Jose	El Paso
Oliver, Mrs. Leila	El Paso	Romo, Estela	El Paso
Olson, John	El Paso	Romo, Lillian	El Paso
O'Marron, Martha	El Paso	Rosen, Henrietta	El Paso
Oppenheim, Charles	El Paso	Rosenberg, Norman	El Paso
Oppenheim, Clarence	El Paso	Ross, Nina	El Paso

Rowe, Sue F.	El Paso	Stranberg, Florence	El Paso
Roybal, Minerva	El Paso	Stringer, Joyce	El Paso
Rush, Mrs. Lucy	El Paso	Stringfellow, William	El Paso
Ryan, Mary Louise	El Paso	Sullivan, Carolyn	El Paso
Sadler, Frances	El Paso	Sullivan, Eugene	El Paso
Saffold, Marian	El Paso	Sweeney, Helen	El Paso
Saffold, Ray P.	El Paso	Sykes, Sybil	El Paso
Salem, Albert	El Paso	Talley, Marjorie	El Paso
Salem, Fred A.	El Paso	Tanner, Margery	El Paso
Sanchez, Frank	El Paso	Tappan, Bob	El Paso
Sanchez, Rafael	El Paso	Tatsch, Betty	El Paso
Sanders, Forest W.	El Paso	Taylor, Lamar	El Paso
Saxon, Thomas	El Paso	Teague, Keith	El Paso
Scaffe, Dorothy	El Paso	Telford, Jack	El Paso
Scarborough, Catherine	El Paso	Temple, Jack	El Paso
Schneider, Louis	Washington, D.C.	Terrazas, Nicholas	El Paso
Schreck, Robert	El Paso	Thomas, Dorothy E.	El Paso
Schroeder, Martha	El Paso	Thomas, Lilla	El Paso
Schwartz, Mayer	El Paso	Thomas, Paul F.	El Paso
Scott, Lillian	El Paso	Thompson, Dorothy	El Paso
Searight, Louise	El Paso	Thompson, Mrs. Mabry	El Paso
Seawell, Mrs. Mildred	El Paso	Threadgill, Mrs. Edythe	El Paso
Sewell, Ila Catherine	El Paso	Tigner, Lola	El Paso
Shadle, Charles	Ft. Bliss	Tillman, Juanice	El Paso
Shaffer, Jim	El Paso	Tompkins, Ruby W.	El Paso
Shamaley, John	El Paso	Torres, Jose	El Paso
Sharp, Howard B.	El Paso	Tuel, Houston	Grasse Tete, La.
Sheid, Wallace J.	El Paso	Twiss, Frances	El Paso
Shoopman, Billy	Eastland	Unsell, Virginia	El Paso
Silva, Mrs. Consuelo	El Paso	Van Trease, Mrs. Ruth	El Paso
Silva, Hector	El Paso	Vasquez, Miguel	El Paso
Silva, Roy	El Paso	Vaughan, Lewis	Denison
Simmons, Mrs. Artie	El Paso	Vela, William	Ft. Bliss
Sims, Mrs. Birdie	El Paso	Velasco, Jesus	El Paso
Sims, Claude	El Paso	Vermillion, John	El Paso
Sitton, Fred	Pyote	Villa, Rosalia	Ft. Hancock
Skiff, Mrs. Josephine	El Paso	Von Lehnoden, Mrs. Alice	El Paso
Slack, Betty	El Paso	Waggoner, David L.	El Paso
Smith, Gloria	El Paso	Walker, Rosemary	El Paso
Smith, Grace K.	El Paso	Wallace, W. B.	El Paso
Smith, Mrs. Marguerite	El Paso	Walser, Walter A.	El Paso
Smith, Maxine R.	El Paso	Warne, Betty	El Paso
Smith, Pauline	El Paso	Webb, C. W.	El Paso
Smythe, E. Frank	El Paso	Werley, Richard	El Paso
Snelson, Marshall	El Paso	West, Dorothy L.	El Paso
Solis, Guillermo	El Paso	West, Joseph V.	El Paso
Sorensen, Harry	El Paso	Whitaker, Mary E.	El Paso
Soucek, Effie	El Paso	White, Betty	El Paso
Soucek, Mae	El Paso	Whittaker, Lois Virginia	El Paso
Sparks, Betty Ann	El Paso	Whittington, Jess E.	El Paso
Sparks, E. Nellie	El Paso	Wiggs, Ethel	El Paso
Spencer, Trixy	El Paso	Wilkins, Alice	Tucson, Ariz.
Stacy, Mary	El Paso	Williams, Bervette	El Paso
Stanton, Lawrence	El Paso	Williams, George	Marfa
Stengele, Harvey	El Paso	Williams, Katherine B.	El Paso
Stenis, Tom	El Paso	Williams, Lelaroy	El Paso
Stewart, Concha	El Paso	Williams, Neva	El Paso
Stone, Mrs. Thelma	El Paso	Williams, Oliver	El Paso

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Williams, Robert R.	El Paso	Worsham, J. B.	Clint
Willie, Winifred	El Paso	Worthington, Mrs. Elizabeth	El Paso
Willis, Marshall	El Paso	Wray, Bennett C.	Crane
Willis, Mrs. P. M.	El Paso	Wright, Margaret	Terrell
Wilmarth, Ann	El Paso	Wright, Mary Etta	El Paso
Wilson, Mrs. Dorothy	El Paso	Wright, Stanley	Monahans
Womack, Laetitia	El Paso	Young, Mrs. Elmore	El Paso
Woodrow, Joanna	El Paso	Zemel, Bob	El Paso
Woods, I. L.	El Paso	Zork, Marian	El Paso
Woods, Margaret	El Paso	Zumwalt, Eva	El Paso

COLLEGE OF MINES AND METALLURGY

REGISTER OF STUDENTS

Long Session, 1941-1942

Abraham, Arthur.....	El Paso	Arroyo, Robert.....	El Paso
Abrego, Alfredo.....	El Paso	Ashby, Julian C.....	Overton
Acosta, Lorenza.....	El Paso	Atkinson, Ray.....	El Paso
Adair, James.....	El Paso	Austin, H. M.....	Faywood, N.M.
Adams, Robert Y.....	El Paso	Avila, Salvador.....	Santa Rita, N.M.
Adkins, Charlotte.....	El Paso	Avvocato, Rodolfo.....	El Paso
Adkins, Thomas.....	El Paso	Ayoub, George.....	El Paso
Aguirre, Angel Alex.....	El Paso	Ayoub, Moises.....	El Paso
Akers, Frank.....	El Paso	Ayub, Pablo.....	El Paso
Akers, M. J.....	Brownfield	Ayub, Romeo.....	El Paso
Alba, Miguel D.....	El Paso	Baca, Susie.....	El Paso
Alderete, Carlos.....	El Paso	Bacchi, Lorraine.....	El Paso
Alderete, Francisco.....	El Paso	Bainbridge, Marian.....	Mancos, Colo.
Alderete, Joe.....	El Paso	Baker, David Knight.....	Pharr
Alexander, Harold.....	El Paso	Baker, James Ralph.....	El Paso
Alexander, Kathryn.....	El Paso	Baker, Shirley.....	El Paso
Alford, J. Burney.....	El Paso	Ball, Flora.....	El Paso
Allen, Ethan S.....	Waco	Bamberger, Phyllis.....	El Paso
Allen, Frances Casselberry.....	El Paso	Bardwell, Esther.....	Anthony, N.M.
Allen, James.....	El Paso	Barger, Corie.....	El Paso
Allen, Mrs. Jayne.....	El Paso	Barlow, Emily.....	El Paso
Allen, John B.....	Austin	Barner, E. Orris.....	El Paso
Allen, Lena.....	El Paso	Barnes, Edgar L.....	Tulsa, Okla.
Allen, Mary.....	El Paso	Barnhill, Bill.....	Dania, Fla.
Allsman, Jeanne.....	Hominy, Okla.	Barrios, Ignacio.....	El Paso
Altus, Frank.....	El Paso	Barry, John.....	El Paso
Alvarez, Lucy.....	El Paso	Bartley, Samuel.....	
Alvillar, Ruben.....	El Paso		Ft. Richardson, Alaska
Anderson, Mrs. Amelia.....	El Paso	Barto, Lewis.....	El Paso
Anderson, Bertram R.....	El Paso	Barton, Constance.....	El Paso
Anderson, Eugene Milton.....	El Paso	Battle, William.....	El Paso
Anderson, Sheldon.....	El Paso	Bauman, Martin.....	El Paso
Andre, Edward.....	El Paso	Beahler, Maybelle.....	El Paso
Angell, C. Elizabeth.....	Millett	Beard, Jack.....	El Paso
Antenc, Charles.....	El Paso	Beckett, Betty.....	El Paso
Aranda, Daniel G.....	El Paso	Reeman, Hattie Frances.....	El Paso
Ardoin, Viola.....	El Paso	Belding, Mrs. Betty.....	El Paso
Armendariz, Victor.....	El Paso	Belding, Mardee.....	El Paso
Armijo, Arcelita.....	El Paso	Belitz, Franz.....	Winters
Armistead, Betty.....	El Paso	Bell, Elnora D.....	El Paso
Armstrong, Cole.....	Pecos	Bencomo, Jose.....	El Paso
Arnold, Floyd.....	Roscoe	Benjamin, Ruth.....	El Paso
Arnold, Inez.....	El Paso	Bennett, Mrs. Efa Lou.....	El Paso
Arnold, Jack.....	El Paso	Bernard, Molly.....	El Paso
Arnold, Joseph Charles.....	El Paso	Berry, Paul.....	El Paso
Arnold, Lafe.....	El Paso	Bethany, John.....	El Paso
Arnold, Lloyd.....	Roscoe	Bickel, Marietta.....	El Paso
Arnold, Tommy.....	El Paso	Bickley, Cliff.....	El Paso
Arnold, Walter.....	El Paso	Bidwell, Allison E.....	El Paso
Arguelles, Eduardo.....	El Paso	Bilodeau, Joe.....	El Paso
Arrington, Margaret Reed.....	Sanderson	Binion, F. J.....	El Paso

Bischoff, Richard.....	El Paso	Brown, Ruth Dorothy.....	El Paso
Black, Ada Mae.....	El Paso	Brown, William E.....	El Paso
Black, Harold Reed.....	La Tuna	Bruce, Mary Duncan.....	El Paso
Black, Rey D.....	La Tuna	Bryan, Betty Lou.....	El Paso
Black, Thomas A.....	El Paso	Bryant, Marjorie.....	El Paso
Black, Wallace.....	El Paso	Brysson, Ralph.....	New Orleans, La.
Blair, Anita.....	El Paso	Buchanan, Mildred.....	El Paso
Blakely, Mary C.....	El Paso	Buck, Mrs. Susan.....	El Paso
Blakemore, Elizabeth.....	El Paso	Bullard, Edwin R.....	El Paso
Blalock, Clovis.....	El Paso	Bulos, Jesus.....	El Paso
Blanco, Hector.....	El Paso	Burchell, Ann.....	El Paso
Blaugrund, Celentha.....	El Paso	Burchell, Margo.....	El Paso
Bloodworth, Lloyd.....	El Paso	Burciaga, Estela.....	El Paso
Bluemel, Edward.....	El Paso	Burciaga, Hector.....	El Paso
Bluth, Veva.....	El Paso	Burgie, Amie.....	El Paso
Bogardus, Mrs. Louise.....	El Paso	Burkholder, Joe.....	El Paso
Bogart, Virginia Ann.....	El Paso	Burleson, John.....	El Paso
.....	La Union, N.M.	Burleson, Lewis.....	El Paso
Bohmfolk, Erwin.....	El Paso	Burnam, Mrs. Fannie.....	El Paso
Boland, Beth.....	El Paso	Burnett, Jack Henry.....	El Paso
Boling, Dixie May.....	El Paso	Busby, Ida Marie.....	El Paso
Bomback, Carlos.....	El Paso	Bush, Mary Jane.....	El Paso
Bonaguidi, Loraine.....	El Paso	Bustamente, Delia.....	El Paso
Bond, Hiram.....	Pecos	Buttrey, Helen.....	El Paso
Booker, Mary Jane.....	Del Rio	Byles, Beulah.....	El Paso
Borrego, William.....	El Paso	Bynum, Cornelia.....	El Paso
Borschow, Julian.....	El Paso	Calamia, Joe.....	El Paso
Bowman, Elford.....	Cherokee	Calderhead, Elva Jane.....	El Paso
Boyd, Dan.....	El Paso	Calderon, Pablo.....	El Paso
Boyd, Hershel.....	Crane	Calisch, Hattie Belle.....	El Paso
Boykin, Charlotte.....	Wash., D.C.	Callon, Jack.....	Odessa
Boylan, Natalie.....	El Paso	Calvert, Mrs. H. W.....	El Paso
Bradbury, Anne.....	El Paso	Camp, Glen.....	El Paso
Braden, Mrs. Barbara.....	El Paso	Campbell, Kathryn.....	El Paso
Braem, Minnie Mae.....	El Paso	Campos, Jose.....	El Paso
Bremer, Frank Anthony.....	El Paso	Cantrell, James Wesley.....	Mexia
.....	Chih., Chih., Mex.	Cantrell, Louis.....	El Paso
Brennan, Ann.....	El Paso	Cantrill, Jack.....	El Paso
Bridgers, Carolyn.....	El Paso	Cantu, Luis.....	Juarez, Chih., Mex.
Bridges, Kenneth.....	El Paso	Capps, Willie Jewel.....	Carter, Okla.
Briesh, Mrs. Hugo.....	El Paso	Carameros, Alex H.....	El Paso
Briggs, Laurence.....	Canadian	Carameros, George.....	El Paso
Brinkmann, Dolores.....	San Elizario	Carbajal, O. Henry.....	Fabens
Briones, Amelia.....	El Paso	Carlson, Robert.....	El Paso
Britton, Jack.....	El Paso	Carpenter, Willis T.....	Globe, Ariz.
Broadus, Francis C.....	El Paso	Carrasco, David.....	El Paso
Brock, Charles.....	El Paso	Carrera, Philip.....	El Paso
Brooks, Bruce W.....	El Paso	Carson, David C.....	Grandfalls
Brooks, Doyle.....	El Paso	Carson, Hugh.....	Texarkana
Broom, Alvin.....	El Paso	Carter, Charles.....	El Paso
Brown, Beverly Jane.....	El Paso	Casey, Doyle.....	El Paso
Brown, Clarence.....	El Paso	Casey, Edwin S.....	El Paso
Brown, Dan M.....	El Paso	Casner, Edward H.....	El Paso
Brown, John Patrick.....	El Paso	Cason, Carroll.....	El Paso
Brown, Lyle.....	El Paso	Cason, Mary Jane.....	El Paso
Brown, Marion.....	El Paso	Caster, Margaret.....	El Paso
Brown, Mary Georgia.....	El Paso	Cauble, Frank.....	El Paso
Brown, Mrs. Naomi.....	El Paso	Cauble, Lawrence.....	El Paso

Caver, Billie.....	Kilgore	Corral, Ruben.....	El Paso
Chaffee, William.....	El Paso	Cotterell, Leroy.....	El Paso
Champie, Channing K.....	El Paso	Cottingham, Quillen.....	El Paso
Champie, Ellmore.....	El Paso	Cotton, Betty Jo.....	El Paso
Chaparro, Miguel.....	El Paso	Cotton, George.....	Palestine
Chapman, Ophelia.....	El Paso	Cowart, Virgil.....	El Paso
Chapman, Jack.....	El Paso	Cox, Grace.....	El Paso
Chapman, Lydia Marie.....	El Paso	Craven, Charles.....	El Paso
Chapman, Mrs. Maggie.....	El Paso	Crews, Thomas.....	Freer
Charlesworth, Vivian.....	Kermit	Crimen, John.....	El Paso
Cheney, Barbara.....	Corodon, Ky.	Crockett, Don.....	El Paso
Chernin, G. Maurice.....	El Paso	Crowe, Edward.....	El Paso
Chew, Ju-nam.....	El Paso	Crump, Robert.....	El Paso
Chinn, Jack L.....	El Paso	Crye, Helen.....	El Paso
Christman, Theodore.....	El Paso	Cuellar, Ramiro.....	Juarez, Chih., Mex.
Clark, Doris.....	El Paso	Cuellar, Raul.....	Saltillo, Coah., Mex.
Clark, Mary Young.....	El Paso	Cuen, Gloria E.....	El Paso
Clark, Victor.....	Pharr	Culbreath, Annette.....	El Paso
Clausewitz, Erlwood.....	San Antonio	Culligan, Frances.....	El Paso
Clements, Caroline.....	El Paso	Cummins, Robert.....	El Paso
Cobbe, Edythe.....	El Paso	Cunningham, Effie.....	El Paso
Cobos, Victor.....	El Paso	Daito, May.....	Ysleta
Cobbs, Ellen.....	El Paso	Darnall, Anne.....	El Paso
Cockrell, Forrest.....	El Paso	Davis, Arthur B.....	El Paso
Cockrell, Milton Dean.....	El Paso	Davis, Bert B.....	El Paso
Coffin, Charles.....	El Paso	Davis, Bertram E.....	El Paso
Coffin, Rebekah.....	El Paso	Davis, Edna.....	El Paso
Cofty, Thomas V.....	Ft. Bliss	Davis, Frank E.....	Matador
Cole, Lena.....	El Paso	Davis, Mary Virginia.....	El Paso
Cole, Lena Ruth.....	El Paso	Dawson, Margaret.....	El Paso
Cole, Ruby.....	El Paso	Deane, Peyton.....	El Paso
Coleman, Jack W.....	Grandview, Mo.	Deathe, Helen.....	El Paso
Coleman, Leslie.....	Grandview, Mo.	Decker, Virginia F.....	El Paso
Coleman, Ralph.....	El Paso	Dehlinger, Pearl.....	El Paso
Collier, Raymond.....	El Paso	De la Garza, Edmundo.....	Juarez, Chih., Mex.
Collins, Kathryn.....	Midland	Delaney, Lora Lee.....	El Paso
Collins, Spencer.....	Midland	De la Torre, Miguel.....	Mapimi, Dgo., Mex.
Collins, William.....	El Paso	Delgado, Pablo A.....	El Paso
Collingsworth, Bobbie Lee.....	Canutillo	Denis, Beatrice.....	El Paso
Condon, Lozier.....	El Paso	Des Saulles, Margarette.....	Anthony
Congdon, Jean.....	El Paso	Devlin, Michael J.....	El Paso
Connally, Julia Mary.....	El Paso	Devlin, Thomas F.....	El Paso
Connolly, Agnes.....	El Paso	Diaz, Oscar H.....	Juarez, Chih., Mex.
Connolly, Dorothy M.....	El Paso	Diaz, Rene.....	El Paso
Connolly, Mary Barbara.....	Deming, N.M.	Dickerson, Lucile.....	El Paso
Cook, Ellen F.....	El Paso	Dickey, V. June.....	El Paso
Cook, Glenn.....	El Paso	Dillard, Joe.....	Midland
Cook, Jean D.....	El Paso	Don, Rita Louise.....	El Paso
Cook, Joan.....	Nevada, Mo.	Donaldson, Thomas.....	Anthony, N.M.
Cooke, William S.....	El Paso	Douglas, Maude W.....	El Paso
Cooley, Milton.....	El Paso	Douglas, Rosemary.....	El Paso
Cooper, Hazel.....	El Salto, Dgo., Mex.	Douglas, William K.....	El Paso
Coppinger, Thomas E.....	El Paso	Douglass, Mary Carol.....	El Paso
Cordero, Francisco.....	El Paso	Dow, Tony.....	El Paso
Cordova, Gabriel.....	El Paso	Dowell, Mary M.....	El Paso
Cordova, Luis.....	Juarez, Chih., Mex.	Downey, Caryl.....	Buffalo, N.Y.
Corona, Aurora.....	El Paso		

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Downey, Jane	El Paso	Flournoy, Eldridge	El Paso
Downey, Marshall	El Paso	Floyd, Lee P.	El Paso
Drugan, George	Ysleta	Foester, Annette E.	El Paso
Duke, Mary Eleanor	El Paso	Fogle, Billie Marie	El Paso
Duncan, Jane	Ysleta	Fogle, Katie Sue	El Paso
Duncan, Jerry	Pecos	Folk, Lady Rosemary	El Paso
Duncanson, David C.	El Paso	Foote, Charles	El Paso
Dunn, Frank L.	El Paso	Force, Charlotte	El Paso
Durgin, Edmund	El Paso	Ford, Betty Ann	El Paso
Durrill, Mrs. Ila R.	El Paso	Ford, John	Abilene
Duty, Eddie Mae	El Paso	Forrest, Frances C.	El Paso
Duty, Lucile	El Paso	Foster, Jack	El Paso
Dyer, Betty	El Paso	Francis, Frank	El Paso
Eason, Exie	El Paso	Franco, Jesus	El Paso
Echaniz, Eugene	El Paso	Frank, Betty Ann	Houston
Eckford, Ellen	El Paso	Franks, Winnilee P.	El Paso
Edens, Russell	El Paso	Fraser, Marilynn	El Paso
Edge, Mary Jane	El Paso	Fraser, Mary Lee	El Paso
Edwards, William M.	El Paso	Fraser, Roderick	El Paso
Ehrlich, Eugene	Ft. Bliss	Frazier, Virginia	Roswell, N.M.
Eidson, Marguerite	Houston	Freeman, Leola	El Paso
Elliott, Martha	El Paso	Friar, Henry	El Paso
Emerson, David C.	El Paso	Friedman, Mary	El Paso
Emerson, Richard J.	El Paso	Fruit, Jeanette	El Paso
Emig, Dorothy	El Paso	Fryer, Austin	El Paso
Enriquez, Ignacio		Fryer, Marguret	El Paso
	Chih. City, Chih., Mex.	Fuentes, Charles	El Paso
Escudero, Enrique	El Paso	Fuentes, Frank	El Paso
Esparza, Alejandro	El Paso	Fuller, Dora	El Paso
Esparza, Angel F.	El Paso	Gaddy, Corrie	Douglas, Ariz.
Evans, Clarence	El Paso	Gaddy, James	El Paso
Evans, Emma L.	Ysleta	Gaddy, Rachel	El Paso
Evans, Ward	El Paso	Gaenzle, Jay	El Paso
Ezquerria, Baldomero	El Paso	Gallagher, Charles	El Paso
Ewin, Martha	El Paso	Gallagher, Joy	El Paso
Ewing, Helen	El Paso	Gallup, Edward	Clint
Fager, Edward	El Paso	Galvan, Robert	El Paso
Fatuch, Emilio	El Paso	Gantt, James	El Paso
Fayman, Stanley	Springfield, Mo.	Garbrecht, Louis	El Paso
Feeback, Virginia	El Paso	Garcia, Bertha	El Paso
Feinberg, Doris	El Paso	Garcia-Nunez, Ana	El Paso
Ferguson, Betty Jule	El Paso	Garcia-Nunez, Manuel	El Paso
Fernandez, Carlos	El Paso	Garcia-Nunez, Margarita	El Paso
Fernandez, Elena	El Paso	Gardea, Joe	El Paso
Fernandez, Ernesto M.	Mercedes	Gardiner, Barbara Louise	El Paso
Ferris, Mrs. Edna	El Paso	Gardiner, Mrs. Gertrude	El Paso
Feuille, Edith	El Paso	Garner, Elbert	Spur
Feuille, Edmond	El Paso	Garren, Wanda	Odessa
Figueroa, William	El Paso	Garza-Pena, Lucia	El Paso
Finalle, Leone M.	El Paso	Gatlin, Eula	El Paso
Fish, Irene	El Paso	Gault, Helen	El Paso
Fisher, Dorothy	Canutillo	Gerwels, Richard	Tacoma, Wash.
Fisher, Lucile	Canutillo	Gibson, Jane	El Paso
Fitzgerald, Charles	El Paso	Gilbert, Bob	Canutillo
Fitzgerald, Dewey	El Paso	Gill, Jack	El Paso
Fletcher, Mrs. Mildred	El Paso	Gilland, Lois	El Paso
Flores, Jose	El Paso	Gilland, William D.	El Paso
Flores, S. Louis	Fabens	Glasscock, Homer	Big Lake

Goldberg, Abe	El Paso	Harrington, Constance	El Paso
Goldberg, Octavio C.	El Paso	Harris, Mrs. Esther	El Paso
Goldfarb, Irvin	El Paso	Harris, Helen	El Paso
Gomez, Ofelia	El Paso	Harris, Mrs. John	El Paso
Gomillion, Jess	El Paso	Harrison, Jo Ann	El Paso
Gonzalez, Oscar	El Paso	Harrison, Joe E.	El Paso
Gonzales, William	El Paso	Harshbarger, John	El Paso
Goodell, Albert	El Paso	Hartford, Mary Ann	El Paso
Goodman, Amelia	El Paso	Hartwell, Ann	Houston
Gossett, Mollie	El Paso	Harvey, Eldon Phillips	El Paso
Gough, Alfred A.		Havins, Bob	Brownwood
	San Luis Potosi, Mex.	Harwell, Anne	El Paso
Gould, Edward	El Paso	Hatchett, Alicia	El Paso
Graf, Kenneth	El Paso	Hausmann, Arthur	El Paso
Graham, Betty C.	El Paso	Hausmann, Harvey	El Paso
Gravem, Florence E.	El Paso	Hawkins, John	El Paso
Graves, Charles E.	El Paso	Hayes, Neil	El Paso
Graves, William	Texarkana	Haynes, John F.	Waco
Green, Sam	El Paso	Hays, Alice	El Paso
Greening, Virginia	El Paso	Hayter, Elvera	Ft. Stockton
Greggerson, Vernon	El Paso	Hayword, Mary Carol	Miami, Fla.
Griffin, Jack C.	El Paso	Healy, Jack	El Paso
Griffin, Peggy Lou	El Paso	Healy, William	El Paso
Grounds, Elmer	Crane	Hearn, Martha Jane	El Paso
Guerca, Ross Antonio	El Paso	Heath, Mrs. Maurine	El Paso
Guerra, Gloria	Sierra Blanca	Hedrick, Allen	El Paso
Gutierrez, Enrique Juarez, Chih., Mex.		Heil, Bertram	El Paso
Gutierrez, Jose A.	El Paso	Henderson, Don	Amarillo
Haas, Herbert	El Paso	Henderson, Lucille	El Paso
Habberstead, Mrs. Dorothy	El Paso	Hendon, Juanita	El Paso
Hadlock, Viola Mary	El Paso	Hendricks, Charlee	El Paso
Hague, James	El Paso	Henning, Dorothy Jean	El Paso
Hahn, Dorothy	El Paso	Henry, Cecile	El Paso
Hale, Dorothy D.	El Paso	Heppe, Jack C.	Hartford, Wis.
Hale, Howard A.	El Paso	Herlin, Peter	El Paso
Hale, Phyllis	El Paso	Hernandez, Fred	El Paso
Hall, Frances D.	Lohn	Hernandez, Louis	El Paso
Hall, Lena Pearl	El Paso	Hernandez, Mario C.	El Paso
Halpern, Beulah	El Paso	Herr, Richard	El Paso
Hamilton, Ruth E.	El Paso	Herrell, Carolyn	El Paso
Hammond, Lena	El Paso	Herrell, Donna	El Paso
Hammond, Margaret	El Paso	Herring, Amelia	Clint
Hammond, Nancy	El Paso	Hester, Henry	El Paso
Hammonds, Clyde	El Paso	Hignett, Mary Alice	El Paso
Hammonds, Howard	El Paso	Hillyer, Larry	Corpus Christi
Hamrah, Joe	El Paso	Himel, Mary Alice	El Paso
Haninger, Katherine	El Paso	Hines, Janet	El Paso
Hanna, Mary Jane	El Paso	Hintze, Otto	El Paso
Hannay, Louise J.	El Paso	Hixenbaugh, Betty	El Paso
Hanrahan, Peggy	El Paso	Hoadley, Lloyd	El Paso
Hanson, Nellie	El Paso	Hodges, Colleen	El Paso
Harbey, Marie	Ft. Bliss	Hofmann, Carl	El Paso
Harden, Dan	El Paso	Holbrook, Elizabeth Mae	El Paso
Hardy, Betty Jo	El Paso	Holley, Marie E.	El Paso
Hargett, Emmett	El Paso	Holloman, Helen W.	El Paso
Harman, Edgar G.	El Paso	Holloway, Thomas A.	El Paso
Harrell, Martha	El Paso	Hooten, William P.	El Paso
Harrell, Neva Frances	Van Horn	Hoover, John W.	El Paso

Hope, Thomas W.	St. Paul, Minn.	Kersey, Alfred	El Paso
Horwitz, Robert	El Paso	Kersey, Robert Lee	El Paso
Houser, Winifred	El Paso	Keton, Frank	Waco
Howard, Arthur	Palestine	Keymeyer, Elaine	El Paso
Howard, Preston	Palestine	Kiely, Ruth	El Paso
Howell, Alfred	El Paso	King, Erwin	El Paso
Hoy, Lucille	El Paso	King, George	El Paso
Hudson, Bill	El Paso	King, Nancy H.	Leaksville, N.C.
Hudson, Lois	El Paso	King, Robert	McAllen
Hughes, Winifred	El Paso	Kirkpatrick, Zazle	El Paso
Humphris, Helen	El Paso	Kissel, Marianne	El Paso
Hungerford, John	El Paso	Kitchens, Ben F.	El Paso
Hunt, Jack	El Paso	Kitchens, William F.	El Paso
Hunt, Kelso	El Paso	Kitterman, Lace	El Paso
Huntress, Shirley	El Paso	Klink, Mary Lee	El Paso
Ibarra, Rafael	El Paso	Klink, Sammie	El Paso
Jackson, Lester P.	Fabens	Kluger, Jerry	El Paso
Jackson, Lucile P.	El Paso	Knight, Doris	El Paso
Jackson, Mary Deane	El Paso	Knight, Patterson J.	Widener, Ark.
Jacobo, Carmen	El Paso	Knight, Russell	El Paso
Jacobs, Carolyn Elizabeth	El Paso	Knoblauch, Edward	El Paso
Jameson, Marjorie	El Paso	Knox, Betty Frances	El Paso
Jameson, Mrs. Naomi	El Paso	Kobold, Beatrice	El Paso
Jarvis, William	Willoughby, Ohio	Koortz, Bertha	El Paso
Jenkins, Frank	El Paso	Kowalewski, Alfinia May	El Paso
Jenson, Mary Pearl	El Paso	Lafferty, Dorothy	El Paso
Johnson, Betty	El Paso	Lafon, Luis R.	Chih. City, Chih., Mex.
Johnson, Margaret	El Paso	Lama, Carmen	El Paso
Johnson, Mary K.	El Paso	Lamb, George A.	El Paso
Johnson, Phyllis	El Paso	Lance, Donald	El Paso
Johnson, Rosemary	El Paso	Lance, O. Paul	El Paso
Johnston, Betty Ruth	El Paso	Lane, George	El Paso
Johnstone, William	El Paso	Lanier, Betty Sue	El Paso
Jolly, Andrew John	El Paso	Lara, Ernest A.	El Paso
Jones, Barbara Nelle	El Paso	La Rock, Thomas Byron	El Paso
Jones, James Edward	El Paso	Lassiter, Newton	El Paso
Jones, Louise H.	El Paso	Lauterbach, Bernard S.	New York, N.Y.
Jones, Sunny	El Paso	Lawrence, Claude J.	El Paso
Jonz, Joyce	El Paso	Lawrence, Joseph C.	El Paso
Jorgenson, Alla-Lee	El Paso	Lazanas, George H.	El Paso
Joseph, George	El Paso	Leavitt, Leslie V.	El Paso
Jourdan, Everitt	El Paso	Ledbetter, Buford	El Paso
Julien, Donald	San Carlos, Calif.	Lee, Carolyn D.	El Paso
Jurado, Luis	El Paso	Lee, William C.	El Paso
Kannady, Jack	Temple	Leeser, David	Chih., Mex.
Karstendick, Terrell	El Paso	Leininger, Daniel M.	Ft. Ord, Calif.
Kash, Goldie	El Paso	Lerner, Ruth	El Paso
Keating, Mrs. Mary Alice	El Paso	Lester, Bob	El Paso
Kelley, Anna Marie	El Paso	Levenson, Leah	El Paso
Kempler, Walter	El Paso	Levenson, Sydney	El Paso
Kennedy, Betty	El Paso	Lewis, Betty	El Paso
Kennedy, Dorothy Mae	El Paso	Lewis, Charles	El Paso
Kennedy, Mary C.	El Paso	Leyva, Roberto	El Paso
Kennedy, Ruth	Corpus Christi	Lide, Henry	El Paso
Kenney, Thomas	Houston	Liebreich, Florence	El Paso
Kerley, Donald	Ysleta	Lilley, Frances A.	El Paso
Kerley, Robert	Ysleta		
Kerr, Mary Edythe	Ysleta		

Limon, Roberto F.	El Paso	Marston, Margaret	El Paso
Line, Juanita S.	Ysleta	Martin, Betty	El Paso
Link, Mrs. Virginia	El Paso	Martin, Harry	El Paso
Lockhart, Charles	El Paso	Martin, James F.	El Paso
Lomax, Sue	El Paso	Martin, John S. A.	El Paso
Long, Grace	El Paso	Martin, Robert	El Paso
Long, Betty Barbara	El Paso	Martinez, Luis	El Paso
Longnecker, Dorothy	El Paso	Martinez, Maria	El Paso
Longnecker, Rose Ann	El Paso	Martinez, Tony	El Paso
Longuemare, Marguerite	Ysleta	Masten, Frank	El Paso
Look, George	El Paso	Maveety, Mary Edna	El Paso
Lopez, Alfredo S. Juarez, Chih., Mex.		Maxon, Betty	El Paso
Lopez, Gilbert L.	El Paso	Maya, Manuel	El Paso
Love, Mrs. Myrtle	El Paso	Mayfield, Carolyn	El Paso
Lovell, Harvey L.	El Paso	Mayhew, Mina Lou	El Paso
Lozano, Henry X.	San Antonio	Meadows, Francis	Harlingen
Lynch, Jehanne	El Paso	Meadows, Pierce Lamar	Harlingen
Lyon, Bill	El Paso	Means, Alfred C.	Valentine
Lyons, Peggy	El Paso	Medrano, Joe	El Paso
McAuliffe, Irene	El Paso	Mellen, Barbara C.	El Paso
McBride, Mercedes	El Paso	Melton, Jack	El Paso
McCabe, Robert	El Paso	Mena, Gloria M.	El Paso
McCann, Leo	El Paso	Mendoza, Eliza	El Paso
McCarthy, Catherine	El Paso	Mendoza, Joaquin R.	El Paso
McCarthy, Myrtle	El Paso	Mengel, Cora L.	El Paso
McClain, Louise	Midland	Meyer, Wilma Mae	El Paso
McClure, Jim	El Paso	Meyers, Leanell	Lamesa
McConnell, Mrs. Betty	El Paso	Meyers, Roberta	El Paso
McCormac, Marion	El Paso	Michael, Mrs. Vera	El Paso
McCormick, Robert	El Paso	Mier, Rosa Marie	El Paso
McCutchan, Nell	El Paso	Millard, Roy H.	El Paso
McDonnell, Ada	El Paso	Miller, Harry L.	Huntsville
McGovern, Hugh	El Paso	Miller, Johnny B.	El Paso
McGurk, Jack	El Paso	Miller, Louis F.	El Paso
McHargue, Lucille	Midland	Mills, Julian	El Paso
McIntosh, Peggy	El Paso	Milner, Emma Jean	Fabens
McIntyre, Josephine	El Paso	Milstead, Mrs. Nellie	El Paso
McKee, Frances E.	El Paso	Miskimins, Ruth F.	El Paso
McKinney, Jack	El Paso	Mitchell, Ellis Ruth	El Paso
McKinney, Doris	El Paso	Mitchell, Mary	El Paso
McLaughlin, Rita	El Paso	Mithoff, Marjorie	El Paso
McMahan, Lanier	El Paso	Mithoff, Richard	El Paso
McMath, Shelton	El Paso	Moffett, Jed	El Paso
McNail, Lerose	El Paso	Monk, Norman	El Paso
McNeil, Guy	El Paso	Monroe, John N.	Waco
MacDonald, Barbara	Marfa	Mooney, Patricia	Ft. Bliss
MacDonald, James	El Paso	Moore, Bernice	El Paso
Macias, Julian	El Paso	Moore, Imogene	El Paso
MacQueen, Charles	Waco	Moore, Lillian	El Paso
Malone, James	El Paso	Moore, Richard L.	El Paso
Malooly, Rosaleen	El Paso	Moore, Robert	El Paso
Mandeville, Katherine	El Paso	Moore, Robert C.	Doniphan, Mo.
Manker, Charles	El Paso	Moore, Ross	El Paso
Manker, Hazel Ann	El Paso	Mora, Francisco J.	El Paso
Mann, Ruth Elizabeth	El Paso	Morales, Antonio	El Paso
Mapel, Grace M.	El Paso	Morales, Concha I.	El Paso
Ma-aman, William	El Paso	Morales, Victor M.	Chih., Mex.
Marston, Aileen	El Paso	Moran, Mary S.	El Paso

Moreno, Javier.....	El Paso	Osborne, J. D., Jr.....	El Paso
Morgan, Jean.....	El Paso	Ostertag, Carl J.....	El Paso
Morkin, Mary Alice.....	El Paso	Owen, Albert.....	El Paso
Morrel, Mrs. Elaine.....	El Paso	Owen, David.....	El Paso
Morris, Winnie Fred.....	El Paso	Owen, John.....	El Paso
Morse, Alberta.....	El Paso	Page, Annie.....	El Paso
Morton, Amelia.....	El Paso	Palafox, Olivia.....	El Paso
Moskow, Joseph.....	Brooklyn, N.Y.	Palm, G. B.....	El Paso
Mosley, Burke.....	El Paso	Palm, Irene.....	El Paso
Mowad, Matilde.....	El Paso	Paredes, Peter.....	El Paso
Mowrey, Beulah.....	El Paso	Park, Mary Jane.....	El Paso
Mueller, Emil James.....	El Paso	Park, Mrs. Ola.....	El Paso
Mueller, Jerry.....	El Paso	Park, William G.....	Waco
Mullen, J. Harold.....	El Paso	Parker, John M.....	Waco
Mullins, James.....	Brownfield	Parker, Mary O.....	El Paso
Mulry, Millard.....	Royse City	Parker, Muriel J.....	El Paso
Mumford, Varva.....	El Paso	Parmelee, Mary Alyce.....	El Paso
Munoz, F. Nicholas.....	El Paso	Patterson, Ernest C.....	Waco
Musgrave, Ray.....	Seminole	Paul, Edd.....	El Paso
Mustain, Paul.....	El Paso	Paul, Imogene.....	El Paso
Myll, Peggy Ann.....	Ft. Bliss	Pearson, Mrs. Virginia.....	El Paso
Napoles, Cecilia.....	El Paso	Peden, Jowell.....	El Paso
Narrance, Dorothy.....	El Paso	Pemberton, Jane M.....	El Paso
Navarro, Victor.....	El Paso	Pena, Mario.....	Laredo
Naylor, Mary Frances.....	El Paso	Penley, Howard.....	El Paso
Neeson, Dick.....	El Paso	Penley, P. A.....	El Paso
Nelson, Eunice.....	El Paso	Perches, Albert.....	El Paso
Nelson, Jack R.....	El Paso	Perez, Maria T.....	El Paso
Nelson, Jean.....	El Paso	Perrin, Mildred.....	El Paso
Nelson, Jonell.....	El Paso	Peterson, Martha P.....	El Paso
Nelson, Robert A.....	El Paso	Pettijohn, Fern.....	El Paso
Nelson, Robert H.....	El Paso	Pharr, Viola.....	El Paso
Neugebauer, Edward R.....	El Paso	Pillow, D. L.....	El Paso
Newell, Lee, Jr.....	Sierra Blanca	Pillow, Mrs. Lucille.....	El Paso
Newland, Jo Lynn.....	El Paso	Pittman, Walter C.....	El Paso
Newman, Charles.....	El Paso	Pitts, Richard.....	El Paso
Newman, Robert.....	El Paso	Plumbley, Harry Lee.....	El Paso
Nickey, Jennie M.....	El Paso	Polster, Arnim.....	El Paso
Niland, Mrs. Ada.....	El Paso	Ponsford, Marian.....	El Paso
Nordin, Windsor.....	El Paso	Poole, Finis.....	Athens
North, Mary Lou.....	El Paso	Poppell, James William.....	El Paso
Oberg, Maxine.....	El Paso	Porter, Mrs. John.....	El Paso
Oberlander, Alvin J.....	Waco	Porter, Winifred.....	El Paso
Oden, Altanell.....	El Paso	Potter, Nancy Jane.....	El Paso
Oechsner, Kathleen.....	El Paso	Power, Ellis.....	Spur
O'Haver, Hubert.....	Tornillo	Pradde, Frank.....	El Paso
Ohlemeyer, Keith.....	El Paso	Prati, Joe.....	El Paso
O'Leary, Albert.....	El Paso	Preston, Katherine.....	Muskogee, Okla.
Oliver, Joseph.....	El Paso	Prewit, John.....	El Paso
Olsen, Edward.....	El Paso	Prewit, J. T.....	Pecos
Olson, William A.....	El Paso	Price, John.....	El Paso
O'Marron, Martha.....	El Paso	Price, Owen.....	Chicago, Ill.
O'Neal, Addie H.....	El Paso	Priest, Mary Grace.....	El Paso
Oppenheim, Clarence.....	El Paso	Pritchard, Maude.....	El Paso
Oppenheim, Charles.....	El Paso	Procter, Eugene.....	El Paso
Orr, Rosalie.....	El Paso	Pronger, Norman.....	Saratoga, Calif.
Ortiz, Arthur F.....	El Paso	Puente, Victor.....	El Paso
Ortiz, Robert.....	El Paso	Purdy, Bernard.....	Endwell, N.Y.

Purnell, Jack.....	Angleton	Root, Bruce.....	Minneapolis, Minn.
Putnam, Ky.....	El Paso	Rose, Grace.....	El Paso
Pytcher, Jack.....	El Paso	Rosen, Henrietta.....	El Paso
Quijada, George.....	El Paso	Rosenwasser, Joe.....	El Paso
Quintana, Lawrence.....	El Paso	Roslyn, Mrs. Margaret.....	El Paso
Rabell, Arthur.....	Mexico City, Mex.	Rosser, Robert F.....	El Paso
Rallis, Helen.....	El Paso	Rowden, Louise Ellen.....	El Paso
Ramke, Elise.....	El Paso	Rowe, Sue F.....	El Paso
Ramsey, Douglas.....	El Paso	Rudolph, Jane.....	El Paso
Rand, Herbert.....	El Paso	Rush, Paul J.....	El Paso
Rand, William J.....	El Paso	Russell, James W.....	Kermit
Randall, Maggie.....	El Paso	Ruth, Earl H.....	El Paso
Rapp, John.....	El Paso	Rutherford, Sammy.....	El Paso
Rasberry, Charles R.....	Willetka, Okla.	Ryals, Andrew.....	Waco
Rasmussen, Evelyn.....	El Paso	Sadler, Mary Frances.....	El Paso
Rathbun, Donald.....	El Paso	Saffold, Barbara.....	El Paso
Ravel, William.....	El Paso	Saffold, Marian.....	El Paso
Raymond, Dorothy.....	El Paso	Salas, Rosendo.....	Juarez, Chih., Mex.
Raymond, William.....	El Paso	Salem, A. Fred.....	El Paso
Reavis, Mary Alice.....	El Paso	Samaniego, Robert.....	El Paso
Rees, James.....	Alamogordo, N.M.	Sammer, Mary.....	El Paso
Reid, Mary Lillian.....	El Paso	Sanche, Barbara.....	El Paso
Reid, Patricia.....	El Paso	Sanchez, Rafael.....	El Paso
Reid, Robert.....	El Paso	Sandoval, Irene.....	El Paso
Reisman, A. Joseph.....	Ennis	Sauer, Margery.....	El Paso
Reissner, Alberta.....	Wilmington, N.C.	Saunders, Lee.....	El Paso
Remy, Mrs. Edith.....	El Paso	Saxon, Thomas J.....	El Paso
Reynolds, Charles.....	El Paso	Sayles, Edward M.....	El Paso
Reynolds, George.....	El Paso	Schaer, Bertha.....	El Paso
Reynolds, Mrs. Helen.....	El Paso	Scherotter, Norma L.....	El Paso
Rheinheimer, Mary Elizabeth.....	El Paso	Schiemenz, Albert.....	Waco
Rhodes, Thomas C.....	El Paso	Schneider, Louis.....	El Paso
Rhorer, Harry Lee.....	El Paso	Schreck, Robert.....	El Paso
Rice, Robert J.....	El Paso	Schuhmann, Hazel Claire.....	El Paso
Richards, Betty Sue.....	Canutillo	Schumaker, Robert L.....	El Paso
Richardson, Robert B.....	El Paso	Schwartz, Mayer.....	Miskolc, Hungary
Richter, Robert.....	Merrick, N.Y.	Scott, Lillian.....	El Paso
Riggins, Lee.....	El Paso	Seamon, Cathryn Patricia.....	El Paso
Riordan, Margaret.....	El Paso	Seawell, Betty.....	El Paso
Rios, Louise.....	El Paso	Seawell, Virginia L.....	El Paso
Rister, S. Fred.....	El Paso	Segulia, Annie.....	Tornillo
Roberts, Azelie A.....	El Paso	Segulia, Joseph.....	Tornillo
Roberts, Clodine.....	El Paso	Segulia, Mary J.....	Tornillo
Roberts, Florine.....	El Paso	Shadle, Charles.....	Washington, D.C.
Roberts, Reida.....	El Paso	Shaffer, James R.....	El Paso
Robinson, Andy.....	El Paso	Shaffer, Oliver J.....	El Paso
Robinson, Betsy.....	Lordsburg, N.M.	Shamaley, Lee.....	El Paso
Robinson, Gene.....	El Paso	Shannon, Jennie.....	El Paso
Robinson, John.....	El Paso	Shapleigh, Eliot.....	El Paso
Robinson, Madden.....	El Paso	Sharp, Howard B.....	El Paso
Rodgers, Nellie.....	El Paso	Shaw, Lois Virginia.....	El Paso
Rodriguez, Bertha.....	El Paso	Shearn, Gertrude.....	El Paso
Rodriguez, Eleuterio.....	El Paso	Shindo, Albert.....	El Paso
Rodriguez, Jesus.....	El Paso	Shoopman, Billy.....	Odessa
Rodriguez, Mildred.....	El Paso	Shoppach, Charles.....	El Paso
Rojas, Oralia.....	El Paso	Sigrist, Gloria.....	El Paso
Romero, Ralph.....	Denver, Colo.	Silva, Hector.....	El Paso
Romo, Lillian.....	El Paso	Silva, Henry.....	El Paso

Silva, Joe.....	Juarez, Chih., Mex.	Sundquist, Elouise.....	El Paso
Silva, Jose.....	El Paso	Swan, William.....	El Paso
Silva, Roy.....	El Paso	Sweeney, Helen.....	El Paso
Simmons, Alice K.....	El Paso	Swegler, John A.....	El Paso
Sims, Claude.....	El Paso	Talley, Marjorie W.....	El Paso
Sitton, Fred.....	Pyote	Tanner, Margery.....	Balsas, Gro., Mex.
Sitton, Virginia.....	Pyote	Tappan, Bob.....	El Paso
Sivalier, Patty.....	El Paso	Tapper, Joyce.....	El Paso
Sizer, Samuel A.....	El Paso	Tatsch, Betty.....	El Paso
Skiff, Josephine.....	El Paso	Tatum, Betty Jeanne.....	El Paso
Stack, Betty.....	El Paso	Taylor, Faith Virginia.....	Ft. Bliss
Stauter, J. David.....	El Paso	Taylor, Kittie Louise.....	El Paso
Small, Susanna.....	El Paso	Telford, Jack.....	El Paso
Small, Theodore.....	El Paso	Templer, Dorothy Lee.....	El Paso
Smith, Charles.....	El Paso	Terrack, John.....	El Paso
Smith, Clarence.....	El Paso	Threadgill, Edythe.....	El Paso
Smith, Edwin O.....	Ft. Bliss	Thurber, Jean.....	El Paso
Smith, Elizabeth.....	Ft. Worth	Thurston, Annjeanne.....	El Paso
Smith, Gloria V.....	El Paso	Thurston, Marjorie.....	El Paso
Smith, Grace K.....	El Paso	Tiernan, Richard.....	El Paso
Smith, I. Van.....	Slaton	Tiernan, Rita.....	El Paso
Smith, June.....	El Paso	Tigner, Lola.....	El Paso
Smith, Reba Nelle.....	El Paso	Tillery, Carol Ann.....	El Paso
Smith, Thomas B.....	El Paso	Tilley, Kathleen.....	El Paso
Smythe, Earl Frank.....	Ft. Bliss	Tinkler, Coles.....	Edinburg
Snelson, Ray M.....	El Paso	Toone, Herbert.....	Esperanza
Snelson, Wallace.....	Grandfalls	Toone, James.....	Esperanza
Snider, Irving Lee.....	El Paso	Torres, Gustavo.....	El Paso
Snyder, Edythe George.....	El Paso	Torres, Hector.....	El Paso
Sorensen, Harry.....	El Paso	Tracht, Betty Ann.....	El Paso
Soto, Alberto.....	El Paso	Trevino, Adelina.....	El Paso
Soucek, Effie.....	El Paso	Trevino, Alicia.....	El Paso
Sparks, Edith Nellie.....	El Paso	Trowell, Marianna.....	El Paso
Sparks, Ruth.....	El Paso	Trujillo, Martha.....	El Paso
Sproul, Alice I.....	Ft. Davis	Tucker, Elizabeth Ann.....	El Paso
Spurrier, Joe.....	El Paso	Tucker, Helen K.....	El Paso
Stafford, Graham.....	Clarksville	Valentino, Alfred.....	El Paso
Stallings, Gladys Kathleen.....	Clint	Vanderpool, Marion G.....	El Paso
Stallings, Helen.....	Clint	Van Doren, Donald.....	El Paso
Stallings, Joe.....	El Paso	Van Hoff, Joseph.....	El Paso
Stark, Mayo.....	El Paso	Vasquez, David.....	Fabens
Starkey, Jack.....	El Paso	Vasquez, Edmundo.....	El Paso
Steen, Charles.....	El Paso	Vasquez, Jose.....	El Paso
Steinmann, Ralph H.....	El Paso	Vasquez, Miguel.....	El Paso
Stembridge, Vernie.....	El Paso	Vaughan, Lewis.....	Denison
Stenis, Byron.....	El Paso	Valasquez, Heriberto.....	El Paso
Stevens, Carlton.....	El Paso	Vickers, Carrie Lee.....	El Paso
Stevens, Marie Louise.....	El Paso	Villa, Rosalia.....	Ft. Hancock
Stevens, Myrle H.....	El Paso	Villanueva, Alberto.....	Brady
Stevens, Sara E.....	El Paso	Wadley, Patricia.....	El Paso
Stewart, Carol.....	Ft. Davis	Waggoner, David Lee.....	El Paso
Stewart, Charles.....	El Paso	Walker, Dorothy L.....	El Paso
Stotts, Thomas M.....	El Paso	Walker, Rosemary.....	El Paso
Stowe, Robert.....	El Paso	Walker, Thomas.....	El Paso
Stringer, Joyce.....	El Paso	Waller, Ann.....	El Paso
Stuart, Thomas.....	Pueblo, Colo.	Waller, Robert.....	El Paso
Stueber, Josephine.....	El Paso	Ward, Oscar.....	El Paso
Stulce, Virginia Ann.....	El Paso	Ward, Jim.....	El Paso

Warne, Betty.....	El Paso	Williamson, Thurmond.....	Canutillo
Warren, Hosea.....	Hico	Willie, Winifred.....	El Paso
Weber, Lester.....	El Paso	Willingham, Drew.....	El Paso
Weber, Charles.....	Auburndale, Fla.	Willis, Marshall.....	El Paso
Wechter, Marcus.....	El Paso	Wilson, Mrs. Dorothy.....	El Paso
Weisman, Ethel.....	Brooklyn, N.Y.	Winans, Newton.....	El Paso
Werley, Richard.....	El Paso	Wing, Betty.....	El Paso
Werner, F. A.....	Hermleigh	Wingo, Ivis.....	El Paso
West, Betty Jeanne.....	El Paso	Winkler, Myra.....	El Paso
West, Ethel.....	El Paso	Wischart, Tommy.....	El Paso
West, Margaret.....	El Paso	Woldert, Marian.....	El Paso
Whealey, Roger D.....	El Paso	Wolfe, Ruth.....	El Paso
Wheelock, Richard.....	El Paso	Womack, Carmen.....	El Paso
Whitaker, Mary E.....	El Paso	Woodrow, Joanna.....	El Paso
White, Richard.....	El Paso	Woods, Margaret.....	El Paso
White, Mrs. T. B.....	La Tuna	Woodul, Hal B.....	El Paso
Willbern, York.....	El Paso	Worman, Rebecca.....	El Paso
Wiley, Gloria Fay.....	El Paso	Wotipka, William.....	El Paso
Williams, Bervette.....	El Paso	Wray, Bennett C.....	Crane
Williams, Betty Frances.....	El Paso	Wright, Mary Etta.....	El Paso
Williams, Betty Jean.....	El Paso	Wright, Stanley.....	Monahans
Williams, C. Louise.....	El Paso	Wynn, A. O.....	El Paso
Williams, Edna.....	El Paso	Yapor, Mike.....	El Paso
Williams, Everett.....	El Paso	Yarbrough, Regina.....	Fabens
Williams, George.....	Deming, N.M.	Yearwood, Francis.....	El Paso
Williams, Gertrude.....	El Paso	Young, Helen Mae.....	El Paso
Williams, Lelaroy.....	El Paso	Young, Jeanette H. (Jr).....	El Paso
Williams, Marjorie.....	El Paso	Young, Mrs. Mike.....	El Paso
Williams, Oliver.....	El Paso	Young, Philip W.....	El Paso
Williams, Mrs. Rena.....	El Paso	Zlabovsky, Esther.....	El Paso
Williams, Robert Ray.....	El Paso	Zlabovsky, Vera.....	El Paso
Williams, Vernon.....	El Paso	Zozaya, Oscar.....	El Paso
Williamson, Byron.....	Canutillo		

STATISTICAL SUMMARIES

Students

	Long Session, 1940-1941			Long Session, 1941-1942		
	Men	Women	Total	Men	Women	Total
Engineering						
Postgraduates	2	0	2	0	0	0
Seniors	30	0	30	26	0	26
Juniors	33	0	33	21	0	21
Sophomores	84	0	84	66	0	66
Freshmen	143	0	143	147	0	147
Non-credits	3	0	3	3	0	3
Total	295	0	295	263	0	263
Academic						
Postgraduates	15	49	64	17	66	83
Seniors	52	91	143	34	81	115
Juniors	63	86	149	52	102	154
Sophomores	114	112	226	91	102	193
Freshmen	197	189	386	178	197	375
Non-credits	8	15	23	4	17	21
Total	449	542	991	376	565	941
Total Individual Students.....	744	542	1,286	639	565	1,204
Summer Session, 1941						
	Men	Women	Total			
Students registered in the first term.....	247	214	461			
Students registered in the second term.....	173	166	339			
Total	420	380	800			
Total Individual Students in the Summer Session.....	295	291	586			

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