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1943-1944
No. 4403

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COLLEGE of MINES and METALLURGY
(A Branch of The University of Texas)

EL PASO, TEXAS

Volume XXVIII

April 15, 1944

Number 4403

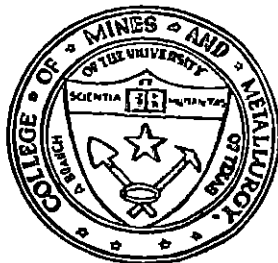
**CATALOGUE
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for

1943-1944

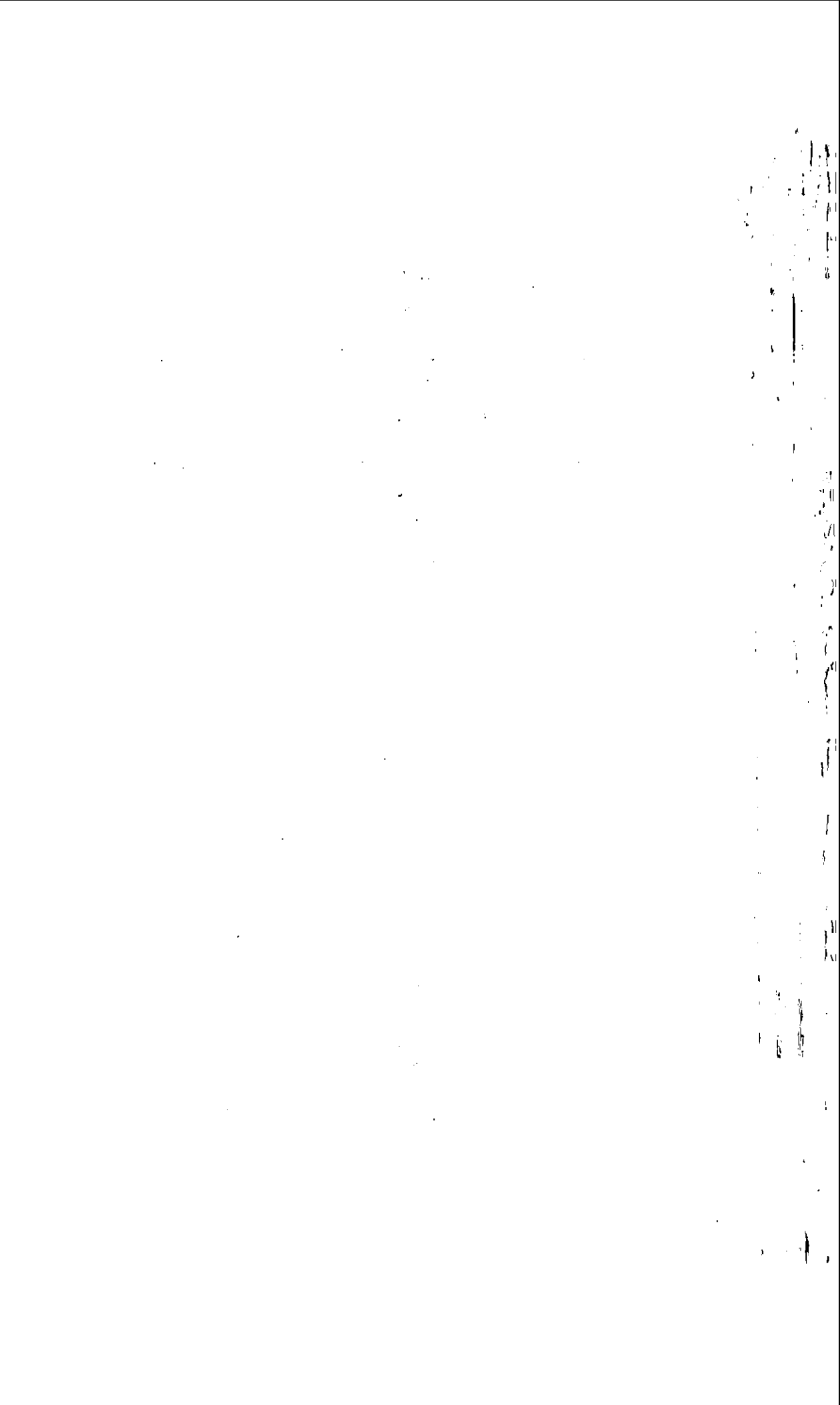
With Announcements for

1944-1945



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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

JOHN H. BICKETT, JR., *Chairman*

H. H. WEINERT, *Vice-Chairman*

LEO C. HAYNES, *Secretary*

MEMBERS

Terms Expire January, 1945

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

Terms Expire January, 1947

ORVILLE BULLINGTON _____ Wichita Falls
DAN J. HARRISON _____ Houston
W. SCOTT SCHREINER _____ Kerrville

Terms Expire January, 1949

JOHN H. BICKETT, JR. _____ Dallas
D. F. STRICKLAND _____ Mission
H. H. WEINERT _____ Seguin

STANDING COMMITTEES

ATHLETICS: Stark, Schreiner, Weinert.

AUDITING: Aynesworth, Fairchild, Strickland.

BUILDINGS AND GROUNDS: Fairchild, Aynesworth, Stark.

COLLEGE OF MINES AND METALLURGY: Schreiner, Bullington, Weinert.

COMPLAINTS AND GRIEVANCES: Fairchild, Schreiner, Strickland.

EXECUTIVE: Bickett, Stark, Schreiner.

FINANCE: Harrison, Schreiner, Weinert.

LAND: Bullington, Harrison, Weinert.

LEGISLATIVE: Strickland, Bullington, Harrison.

LIBRARY: Aynesworth, Fairchild, Stark.

MCDONALD OBSERVATORY VISITING: Stark, Harrison, Schreiner.

MEDICAL BRANCH: Weinert, Bullington, Strickland.

MUSEUM: Bullington, Aynesworth, Fairchild.

PUBLIC RELATIONS: Strickland, Bullington, Harrison.

CALENDAR FOR 1944-1945

1944														1945													
January							July							January							July						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
2	3	4	5	6	7	1	2	3	4	5	6	7	1	7	8	9	10	11	12	13	1	2	3	4	5	6	7
9	10	11	12	13	14	15	9	10	11	12	13	14	15	14	15	16	17	18	19	20	8	9	10	11	12	13	14
16	17	18	19	20	21	22	16	17	18	19	20	21	22	21	22	23	24	25	26	27	15	16	17	18	19	20	21
23	24	25	26	27	28	29	23	24	25	26	27	28	29	28	29	30	31				22	23	24	25	26	27	28
30	31						30	31													29	30	31				
February							August							February							August						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
6	7	8	1	2	3	4	6	7	8	1	2	3	4	4	5	6	7	1	2	3	5	6	7	8	1	2	3
13	14	15	16	17	18	19	13	14	15	16	17	18	19	11	12	13	14	15	16	17	12	13	14	15	16	17	18
20	21	22	23	24	25	26	20	21	22	23	24	25	26	18	19	20	21	22	23	24	19	20	21	22	23	24	25
27	28	29					27	28	29	30	31			25	26	27	28				26	27	28	29	30	31	
March							September							March							September						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
5	6	7	8	1	2	3	5	6	7	8	1	2	3	4	5	6	7	1	2	3	2	3	4	5	6	7	1
12	13	14	15	16	17	18	12	13	14	15	16	17	18	11	12	13	14	15	16	17	9	10	11	12	13	14	15
19	20	21	22	23	24	25	19	20	21	22	23	24	25	18	19	20	21	22	23	24	16	17	18	19	20	21	22
26	27	28	29	30	31		24	25	26	27	28	29	30	25	26	27	28	29	30	31	23	24	25	26	27	28	29
April							October							April							October						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
2	3	4	5	6	7	1	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
9	10	11	12	13	14	15	8	9	10	11	12	13	14	8	9	10	11	12	13	14	7	8	9	10	11	12	13
16	17	18	19	20	21	22	15	16	17	18	19	20	21	15	16	17	18	19	20	21	14	15	16	17	18	19	20
23	24	25	26	27	28	29	22	23	24	25	26	27	28	22	23	24	25	26	27	28	21	22	23	24	25	26	27
30							29	30	31					29	30						28	29	30	31			
May							November							May							November						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
7	8	9	10	11	12	13	5	6	7	8	9	10	11	6	7	8	9	10	11	12	4	5	6	7	8	9	10
14	15	16	17	18	19	20	12	13	14	15	16	17	18	13	14	15	16	17	18	19	11	12	13	14	15	16	17
21	22	23	24	25	26	27	19	20	21	22	23	24	25	20	21	22	23	24	25	26	18	19	20	21	22	23	24
28	29	30	31				26	27	28	29	30			27	28	29	30	31			25	26	27	28	29	30	
June							December							June							December						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
4	5	6	7	8	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	2	3	4	5	6	7	1
11	12	13	14	15	16	17	10	11	12	13	14	15	16	10	11	12	13	14	15	16	9	10	11	12	13	14	15
18	19	20	21	22	23	24	17	18	19	20	21	22	23	17	18	19	20	21	22	23	16	17	18	19	20	21	22
25	26	27	28	29	30		24	25	26	27	28	29	30	24	25	26	27	28	29	30	23	24	25	26	27	28	29

CALENDAR
of the
COLLEGE OF MINES AND METALLURGY

1944

SEPTEMBER 8, FRIDAY. Admission, condition, advanced standing, and postponed examinations. Requests must be in the office of the Registrar four days in advance.

SEPTEMBER 11, MONDAY. Freshman convocation at 9 A.M. in Holliday Hall, followed by compulsory freshman examinations in the Museum.

SEPTEMBER 12, TUESDAY. Compulsory freshman examinations continued in the Museum beginning at 9 A.M.

SEPTEMBER 12, TUESDAY. Faculty registration conference at 2 P.M.

SEPTEMBER 13-14, WEDNESDAY-THURSDAY. Registration.

SEPTEMBER 15, FRIDAY. Classes begin.

SEPTEMBER 23, SATURDAY. Last day students may add courses.

SEPTEMBER 23, SATURDAY. Last day of registration for the first semester.

NOVEMBER 11, SATURDAY. Armistice Day, holiday.

NOVEMBER 13, MONDAY. Mid-semester reports.

NOVEMBER 30, THURSDAY. Thanksgiving Day, holiday.

DECEMBER 16, SATURDAY. Christmas recess begins at the close of the last class on Saturday.

1945

JANUARY 3, WEDNESDAY. Classes resumed.

JANUARY 3-10, WEDNESDAY-WEDNESDAY. Preregistration for second semester.

JANUARY 17-22, WEDNESDAY-MONDAY. Final examinations for the first semester.

JANUARY 19, FRIDAY. Examinations for admission.

JANUARY 22, MONDAY. Freshman convocation at 9 A.M. in Holliday Hall and compulsory freshman examinations immediately thereafter in the Museum.

JANUARY 23, TUESDAY. Compulsory freshman examinations continued in the Museum.

JANUARY 23, TUESDAY. Grade day.

JANUARY 25, THURSDAY. Registration.

JANUARY 26, FRIDAY. Classes begin.

JANUARY 31, WEDNESDAY. Condition, postponed, and advanced standing examinations. Requests must be in the office of the Registrar four days in advance.

FEBRUARY 3, SATURDAY. Last day students may add courses.

FEBRUARY 3, SATURDAY. Last day of registration for the second semester.

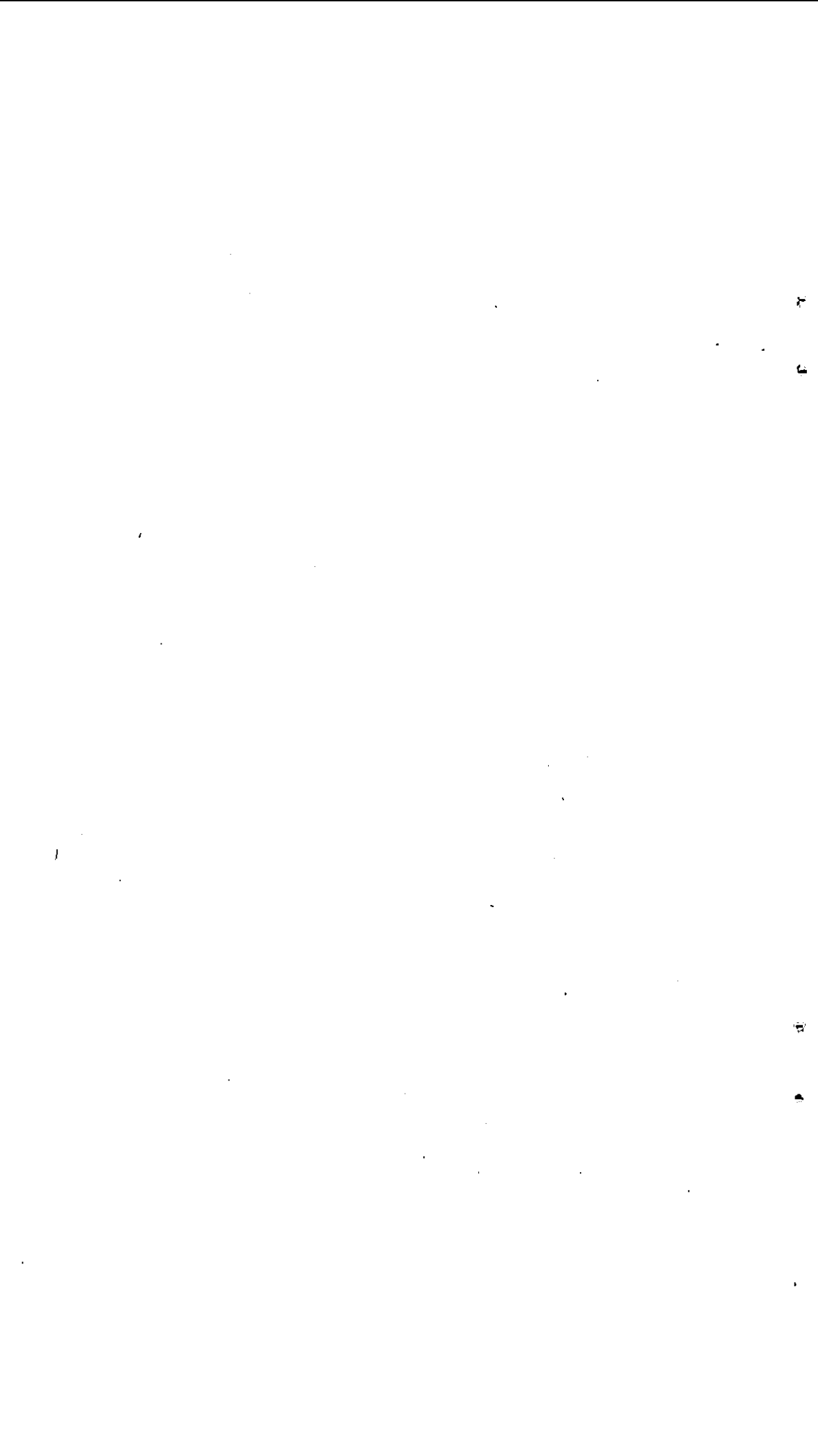
MARCH 20, TUESDAY. Mid-semester reports.

APRIL 28, SATURDAY. Major examinations.

MAY 15-19, TUESDAY-SATURDAY. Final examinations for the second semester.

MAY 21, MONDAY. Grade Day.

MAY 22, TUESDAY. 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; LL.D., Hardin-Simmons, 1943.
- Charles Alexander Puckett, M.A., *Dean of Arts and Sciences*.
- Eugene McRae Thomas, M.S., *Dean of Engineering*.
- Judson F. Williams, M.A., *Dean of Student Life*.
- John Thomas Haney, B.A., *Registrar*.
B.A., Hardin-Simmons University, 1931.
- Marshall Lee Pennington, B.B.A., *Business Manager*.¹
B.B.A., Texas, 1935.
- Charles P. Sanders, M.B.A., *Acting Business Manager*.²
- Baxter Polk, B.S., *Librarian*.³
B.A., Hardin-Simmons, 1935; B.S. (Library Science), Oklahoma, 1936.
- Hilda Virginia Cole, B.S., *Acting Librarian*.
B.A., Texas College of Mines, 1935; B.S. (Library Science), University of Southern California, 1941.
- Burt Franklin Jenness, M.D., *Health Officer*.
- Helen Norwood Deathe, B.S., *Director of Dormitories*.
B.S., Texas State College for Women, 1932.
- William S. Strain, M.S., *Curator of Museum*.

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*.⁴
B.A., Transylvania, 1930; M.A., Columbia, 1938.
- Floyd Emmett Farquear, *Professor of Education*.
B.S., Miami, 1920; M.A., Chicago, 1921; D.Ed., Texas, 1942.
- John Fraser Graham, *Professor of Mining and Metallurgy*.
B.S., Michigan College of Mining and Technology, 1905; E.M., 1924.
- Wade James Hartrick, *Professor of Economics and Business Administration*.⁵
B.A., Texas Technological College, 1929; M.B.A., Texas, 1941.
- Edwin John Knapp, *Professor of Mathematics and Physics*.
Ph.B., Wisconsin, 1921; Ph.D., 1931.
- William Walter Lake, *Professor of Chemistry*.
B.S., Ohio State, 1913; M.S., 1921; Ph.D., Chicago, 1941.
- Clarence Edward McCarver, *Professor of Physical Education*.
B.A., Howard Payne College, 1931; B.S., M.A., George Washington, 1934; D.Ed., Texas, 1942.
- Thomas Erl Morris, *Professor of Economics and Business Administration*.⁶
B.B.A., Texas, 1931; M.B.A., 1932.

¹Absent on leave, second semester, 1943-1944.

²Appointment effective March 1, 1944.

³Absent on leave, 1943-1944.

⁴Absent on leave, 1943-1944.

⁵Appointment for second semester, 1943-1944, only.

⁶Resigned January 1, 1944.

- 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.
- Charles Leland Sonnichsen, *Professor of English*.
B.A., Minnesota, 1924; M.A., Harvard, 1927; Ph.D., 1931.
- Eugene McRae Thomas, *Professor of Mining Engineering*.
B.S. (Mining Engineering), Texas College of Mines, 1926; M.S., Massachusetts Institute of Technology, 1939; E.M., Texas College of Mines, 1940.
- 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.
- John Hubbard Kimes, Jr., *Associate Professor of Engineering*.⁷
B.S. (Mining Engineering), Texas College of Mines, 1933.
- Walter Jackson Milner, *Associate Professor of Physical Education*.
B.A., Texas College of Mines, 1934.
- Lloyd Alvino Nelson, *Associate Professor of Geology*.
E.M., Texas College of Mines, 1916; M.S. (Geology), Colorado, 1929; Ph.D., 1937.
- 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.
- Mrs. Isabella Corbett Zimmerman, *Associate Professor of English*.
B.A., Occidental College, 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.
- 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*.⁸
B.A., Nevada, 1935; M.A., Clark, 1936; Ph.D., Duke, 1941.
- Harry C. Harmsworth, *Assistant Professor of Sociology*.
B.A., Colorado State College, 1928; M.A., 1932; Ph.D., University of Southern California, 1943.
- Burt Franklin Jenness, *Assistant Professor of Biological Sciences*.
M.D., Dartmouth, 1899; Lt. Comdr. M.C., U.S. Navy, Rid.
- Glen R. Johnson, *Assistant Professor of Music; Director of Band*.
B.A., Baylor University, 1936.
- A. D. Beach Langston, *Assistant Professor of English*.
B.A., The Citadel, 1933; M.A., Clacmont, 1935; Ph.D., North Carolina, 1940.

⁷Appointment for Long Session, 1943-1944, only.

⁸Absent on leave, 1943-1944.

- Oscar Harry McMahan, *Assistant Professor of Physics*.⁹
B.S., Oklahoma Agricultural and Mechanical College, 1928; M.S., 1937.
- Dorothy McCuskey, *Assistant Professor of Education*.¹⁰
B.A., College of Wooster, 1929; M.A., Radcliffe, 1930; Ph.D., Yale, 1936.
- Robert George Mers, *Assistant Professor of Chemistry*.
B.A., Austin College, 1934; M.A., Texas, 1936; Ph.D., 1940.
- Leon Denny Moses, *Assistant Professor of English*.
B.A., Columbia, 1923; M.A., 1924.
- Eugene O. Porter, *Assistant Professor of History*.¹¹
B.A., Ohio Wesleyan, 1920; M.A., Ohio State, 1936; Ph.D., 1939.
- Mrs. Mary Kelly Quinn, *Assistant Professor of History*.
B.A., Wellesley, 1922; M.A., Boston University, 1930.
- Roy Clifford Rice, *Assistant Professor of Physics*.¹²
B.S., New Mexico, 1931; M.S., Massachusetts State College, 1934.
- Mac F. Smith, *Assistant Professor of Business Administration*.
B.B.A., Texas, 1931; M.B.A., 1934.
- Mrs. Gretchen Reinemund Sperry, *Assistant Professor of Modern Languages*.¹³
B.A., Stanford, 1937; M.A., 1939.
- Edna Von Rosenberg, *Assistant Professor of Mathematics*.¹⁴
B.A., Texas, 1918; M.A., 1927; Ph.D., 1943.
- 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., Willamette, 1920; Chicago Academy of Fine Arts; Kansas City Art Institute.

Instructors

- P. L. Armour, *Instructor in Education*.¹⁵
B.A., Simmons, 1927; M.S. (Education), Texas College of Arts and Industries, 1939.
- Mrs. Myrtle Evelyn Ball, *Instructor in Public Speaking*.
B.A., New Mexico Normal University, 1926; M.A., University of Southern California, 1943.
- Thomas Grogard Barnes, *Instructor in Mathematics*.¹⁶
B.A., Hardin-Simmons, 1933; M.S., Brown, 1936.
- Cordelia Caldwell, *Instructor in Mathematics*.¹⁷
B.S., Arizona, 1926; M.A., 1928.
- Leon Camp, *Instructor in Mathematics*.¹⁸
B.A., North Texas State Teachers College, 1927; M.A., Columbia, 1928; Ph.D., Texas, 1941.
- Charles Clark Campbell, *Instructor in Engineering*.¹⁹
B.S. (Civil Engineering), Oklahoma Agricultural and Mechanical College, 1941.
- Dorothy Marie Davis, *Instructor in Physical Education*.
B.S., North Texas State Teachers College, 1938; M.S., 1940.
- Mrs. Isabelle Kelly Fineau, *Instructor in Modern Languages*.²⁰
B.A., Texas, 1905; M.S., 1931.
- Jesse A. Hancock, Jr., *Instructor in Chemistry*.
B.S., Gonzaga University, 1939; M.S., 1940.

⁹Appointment for Long Session, 1943-1944, only.

¹⁰Absent on leave, 1943-1944.

¹¹Absent on leave, 1943-1944.

¹²Appointment for Long Session, 1943-1944, only.

¹³Appointment for Long Session, 1943-1944, only.

¹⁴Appointment for Long Session, 1943-1944, only.

¹⁵Appointment for Long Session, 1943-1944, only.

¹⁶Absent on leave, 1943-1944.

¹⁷Appointment for Long Session, 1943-1944, only.

¹⁸Absent on leave, 1943-1944.

¹⁹Appointment for Long Session, 1943-1944, only.

²⁰Absent on leave, 1943-1944.

- Kenneth Heineman, *Instructor in Physical Education*.²¹
B.A., Texas College of Mines, 1940.
- Gene Hemmle, *Instructor in Music; Director of Glee Clubs*.²²
B.M., Southern Methodist University, 1937; Kansas City Conservatory; Student of Estelle Lieblich 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.
- Mrs. Bulah Liles Patterson, *Instructor in Mathematics*.
B.A., Texas, 1921; M.A., Chicago, 1927.
- Pearl Olive Ponsford, *Instructor in English*.
B.A., Wellesley, 1919; M.A., University of Southern California, 1930; Ph.D., 1936.
- Mrs. Louise Fletcher Resley, *Instructor in Mathematics*.
B.A., Texas College of Mines, 1939.
- Mrs. Bertha Reynolds, *Instructor in Education*.
B.A., Colorado, 1921; M.A., 1922.
- Ray P. Saffold, Jr., *Instructor in Journalism*.²³
B.A., Texas College of Mines, 1941.
- William S. Strain, *Instructor in Geology; Curator of Museum*.
B.S., West Texas State Teachers College, 1932; M.S., Oklahoma, 1937.

Administrative Assistants

- Mrs. Monica G. Adams, *Assistant (Part-time) in the Museum*.
- Lu Venia Arnold, *Clerk, Office of the Registrar*.
B.A., Texas College of Mines, 1940.
- Lucy Barboglio, *Assistant Business Manager*.
B.S., Arizona, 1926.
- Grace Bogardus, *Assistant Bookkeeper and Voucher Clerk, Office of the Business Manager*.
- Mrs. Margaret Neely Brown, *Secretary to the Dean of Engineering*.
- Martha Carlson, *Transcript Clerk, Office of the Registrar*.
B.A., Mills College, 1942.
- Frances Clayton, *Assistant Librarian*.
B.A., Texas College of Mines, 1943.
- Dorothy Grace Hahn, *Secretary to the Faculty*.
B.A., Texas College of Mines, 1943.
- Mrs. Janye R. Irvin, *Assistant in the Office of the Business Manager*.
B.A., Hardin-Simmons, 1929.
- Zazle Kirkpatrick, R.N., *Resident Nurse*.
- Mrs. Betty Kennedy Lockwood, *Secretary to the Dean of Student Life*.
B.A., Texas College of Mines, 1943.
- Mrs. Annie Marie Mitchelmore, *Switchboard Operator*.
- Frances O'Reilly, *Assistant Bookkeeper, Office of the Business Manager*.
B.A., Brooklyn College, 1936.
- Mary Owens, *Bookkeeper, Office of the Business Manager*.
- Mrs. Frances Smith Stevens, *Secretary to the President*.
- Betty Anne Thedford, *Assistant Registrar*.
B.A., Texas, 1926.
- Mrs. Nell Thompson, *Loan Assistant, Library*.
- Mrs. Ruth Zeitlin, *Assistant in the Library*.
B.A., Brooklyn College, 1939; M.A., 1941.

²¹Appointment for second semester, 1943-1944, only.

²²Absent on leave, 1943-1944.

²³Appointment for Long Session, 1943-1944, only.

Critic Teachers in Elementary Teacher Training

(El Paso Public Schools)

Pina Mae Earp

B.A., Texas College of Mines, 1940.

Bessie Farquharson

B.A., Colorado College of Education, 1934.

Ethel Hanna

B.S., Sul Ross State Teachers College, 1942.

Mary Hignet

B.A., Texas College of Mines, 1940.

Marie Pritchard

B.A., Texas College of Mines, 1937; M.A., Sul Ross State Teachers College, 1942.

Eryline Stoker

B.A., Texas College of Mines, 1940.

Critic Teachers in High School Teacher Training

(El Paso Public Schools)

Celestine Barboglio

B.A., University of Arizona, 1932.

Adella Geer

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

Nancy Hammons

M.A., Texas College of Mines, 1942.

Maud Isaacks

M.A., University of Texas, 1940.

Maybelle Long

M.A., Columbia University, 1932.

Vera Michael

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

Elsie Reeves

B.A., Baylor-Belton, 1935.

Lydia Stark

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

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 unfailing water supply for the Rio Grande Valley above and below El Paso.

Its extreme dryness and medium latitude, combined with a moderately high altitude (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 32,200 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 geological, mining, language, economic, literary and aeronautical sections of the library are especially strong. The library is a depository for a select group of government publications including brochures distributed by the Office of War Information. There is also a section containing 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. Many of the popular fiction and non-fiction books are placed in general circulation, so that students may find enjoyment in recreational reading.

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 who wish to do specialized research.

MUSEUM

The El Paso Centennial Museum, allocated by the Commission of Control for the Texas Centennial Celebration, was created by the State of Texas 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 coöperation 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, 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 wishes to contribute to his income while at the same time attending college, El Paso offers a large field of opportunity. The Employment Service at the College of Mines acts as a clearinghouse to coördinate the efforts of the student and the employer. The Service 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 and correspondence should be directed to Chairman, Student Employment Service.

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.

FEEES 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.

College of Mines and Metallurgy

Bacteriology 29	\$ 2.00
Biology 310, 311, 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, 368.....	2.00
413, 460, 461.....	4.00
Civil Aeronautics 411.....	4.00
Design 301, 302, 306, 315, 316, 322, 323, 303, 304, 324, 325, 331, 332	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, 304.....	2.00
Geology 301, 302, 316, 317 and 217, 361.....	2.00
418, 419, 421, 427, 463.....	4.00
Journalism 307, 308, 341.....	2.00
Metallurgy 324, 362, 364, 264, 265.....	2.00
423, 473	4.00
Mining 261, 262	2.00
Music 11, 12, 13, 329, 349, 359, 339.....	10.00
Physical Education 01, 02, 03, 05, 07, 09, 312, 322, 323, 353K, 354, 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
Hospitalization—per semester (required of dormitory students).....	1.50
Student Association Memberships per year (Federal Tax not included)	7.50

Students' Association Fee.—The Students' Association fee is \$7.50 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.

Graduation Fee.—A graduation fee of \$5.00 is required of students in the first semester before graduation.

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

Room rent per semester*.....	\$ 45.00
Board per semester*.....	135.00
Average cost of room and board per month*.....	40.00

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.

*Subject to change on thirty days' written notice.

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, provided 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 \$135.00 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.

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 credit may not be allowed for biology if credit for either botany or zoology has been granted. A student may enter with a condition in any one subject or group except English, provided he has a total of at least fifteen acceptable units. In no case will more than four units be accepted from Section B.

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

Section A

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

SUBJECT	UNITS	SUBJECT	UNITS
English Group		Mathematics Group ⁴	
English _____	3-4	Algebra _____	1-1½-2
Fine Arts Group ¹		Plane Geometry _____	1
Art _____	1-3	Solid Geometry _____	½
Dramatics and Speech _____	½-2	Trigonometry _____	½
Music _____	1-4	General _____	1
Theory _____	1	Natural Science Group	
Harmony _____	1-2	Biology _____	1
History and Appreciation _____	1	Botany _____	1
Applied Music ² _____	1	Chemistry _____	1
Band, Orchestra, Chorus ³ _____	1-2	General Science _____	1
Foreign Language Group		Physics _____	1
Czech _____	2-3	Physiography _____	½
French _____	2-3	Physiology and hygiene _____	½-1
German _____	2-3	Zoology _____	1
Greek _____	2-3	Social Science Group	
Latin _____	2-3-4	Early European history _____	1
Spanish _____	2-3	Modern European history _____	1
		World history _____	1
		English history _____	½-1
		American history _____	½-1
		Civics _____	½-1
		Economics _____	½

¹Not more than six units will be accepted in any combination of fine arts subjects.

²Applied music must be accompanied by music theory.

³Band, orchestra, and chorus must have been offered as curricular subjects and not as student activities. Less than one unit will not be accepted.

⁴From the combination of algebra and general mathematics, only two credits may be allowed; such as, Algebra 1 and General Mathematics or Algebra 1 and Algebra 2.

Section B

The electives (4) may be chosen from any subjects other than drill subjects (such as penmanship, physical education, military training, etc.) accredited by the State Department of Education, though not more than four units may be counted in vocational subjects. A single unit in foreign language may be counted in this group.

ENGINEERING

The unit requirements for admission to Engineering are as follows:

SUBJECT	UNITS
1. English _____	3
2. Mathematics	
Algebra _____ 2	
Plane Geometry _____ 1	
Solid Geometry _____ ½	
	} _____ 3½
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 Section A, or from Section B, or from Sections A and B together _____	4½
Total _____	15

Under 4, 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 low or even medium grades. Therefore any applicant ranking in the highest quarter of his graduating class in any fully accredited secondary school and also ranking in the highest quarter of the freshman class in the scholastic aptitude test given by the College in September may enter without admission conditions.

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

Advice as to subjects in high school.—The evidence is strongly in favor of the Group A subjects as giving the best preparation for college.

High-school students expecting to go to college are therefore strongly advised to choose as nearly as possible all of their subjects from that group.

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. 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.

A student shall not receive credit for work done at another institution during a time when he is 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.

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.

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.

Engineering students admitted without entrance credit to the College by individual approval and making during their first long session, or its equivalent, at least thirty-four semester hours with an average grade of *C* will in addition absolve the admission condition in seven elective units. Other students admitted without entrance credit to the College by individual approval will absolve six elective units upon completion of thirty semester hours during the first long session, or its equivalent. If this average is not made, the 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.

Engineering

- 3 English (by completing English 1).
- 3 Mathematics (by completing Mathematics 803).
- 7 Elective units (by completing thirty-four semester hours with *C* average).
- ½ Solid Geometry (requirement for Engineering).
- 1½ units—loss of six college hours. For example: (Mathematics 305 and Chemistry 305).

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Other students

- 3 English (by completing English 1).
- 3 Mathematics (by completing freshman mathematics).
- 6 Elective units (by completing thirty semester hours with *C* average).
- 3 units—loss of twelve college hours.

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

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

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.

Attendance in physical education is subject to the provisions under the heading Attendance and Absences, page 38, 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.

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 Associations
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. Kappa Delta Pi
- 33. Sigma Delta Pi
- 34. Sigma Gamma Epsilon
- 35. Theta Chi Omicron

Greek Letter Social Organizations

- 36. Alpha Phi Omega
- 37. Chi Omega
- 38. Delta Delta Delta
- 39. Kappa Sigma Kappa
- 40. Phi Kappa Tau
- 41. Rho Sigma Tau
- 42. 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 Dean of Student Life. 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 Dean of Student Life) 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 it necessary in the case of these organizations, rules here are published annually in a Students'

Handbook, and otherwise are available at the office of the Dean of Student Life).

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

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 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 except under unusual conditions.

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.

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.

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 proscribed 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.

Arts and science students.—The normal load for beginning freshmen is fifteen units. Unusual circumstances may make it necessary for a student to take as many as eighteen hours. More than eighteen hours may be taken only with the consent of the Dean.

Students may not register for more than eighteen hours unless the score has been 297 points for the preceding semester. A full summer session is counted as a semester.

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

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, irregular, and non-credit. *Regular Students* are those taking twelve or more semester hours of work proscribed for a degree. *Irregular Students* are those taking less than twelve semester hours. *Non-credit Students* are those who register for courses without the established prerequisites. Students classified as non-credit will not receive grades or credit for the courses.

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 proscribed 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.

Arts and science 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.

Final 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.

A student absent from a final examination without an excuse from the Dean is graded F and required to repeat the semester's work if credit is desired for the course. However, if compelled to be absent from the final examination on account of illness or other imperative cause, the student is entitled to take a postponed examination. (See Postponed Examinations.)

Postponed examinations.—In case a student is compelled to be absent from a final examination because of illness or other imperative cause, a petition should be obtained from the Dean, beforehand if possible, for permission to postpone the examination until another date approved by the Dean. During the period of postponement the student is given a grade of P. X. 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 the Dean. At any event, he must file an application for examination with the Registrar on or before the fourth 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.

Absence from a postponed 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.

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 four 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.

Absence from a condition 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.

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 four 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.

Absence from an 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.

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 99, of upper division (advanced) 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 or advanced courses.

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

If *PX* or *Inc.* grades are removed within the first two weeks of the semester immediately following the one in which they were received, the scholastic standing of the student will be adjusted according to the final grades. *Px* examinations will be given within two weeks of the close of each semester.

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 consisting of the upper ten per cent of the Arts and Science Division and the upper ten per cent of the Engineering Division. To be eligible for the honor list a student must be registered for not less than fourteen semester hours and must pass all work taken.

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 13 and March 20 reports are due in the Registrar's office for the following students:

1. All students on the freshman advisory lists.

2. All students on scholastic probation 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

Required Minimum.—To remain in good standing, students must meet the following standard of work at mid-semester and semester report periods.

A student taking less than six semester hours must pass in all the work taken.

A student taking six or more semester hours must pass in at least six semester hours.

A, B, C, and D, will be considered as passing grades. *Px, Inc., E, and F* will not be considered as passing grades.

If *Px, Inc.*, or *E* grades are removed within two weeks after the end of the semester, the student's status will be adjusted.

Scholastic Probation.—A student who fails to attain the required minimum at any grade period (mid-semester or end of semester) during any semester of a long session will be placed on Scholastic Probation with the exception of beginning freshmen who will not be placed on Scholastic Probation before the end of their first semester of attendance.

The student will be warned by his Dean and his parents will be notified by the Registrar.

A student who withdraws during a semester while on Scholastic Probation will be continued on that status for the next succeeding long-session semester unless he attends an intervening summer session and passes nine semester hours.

Return to Good Standing.—A student on Scholastic Probation can return to good standing in the following ways:

1. By attaining the required minimum at any grade period in the long session.
2. By attending a summer session and passing nine semester hours.
3. After withdrawal while on Scholastic Probation, by registering after the lapse of one long-session semester.

Failure.—A student who fails to attain the required minimum at the end of two successive long-session semesters will be dropped from the College for the next succeeding long-session semester, unless permitted to continue by the President.

A student who fails in all his courses at the end of any long-session semester may be dropped from the College immediately at the discretion of the President.

Return After Failure.—A student who fails to attain the required minimum may register sooner than the second successive long-session semester if he attends an intervening summer session and passes nine semester hours.

A student who has absolved the failure requirements either by being dropped from the College for a long-session semester or by passing nine semester hours in an intervening summer session, will be permitted to reënter in good standing.

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 scholastic probation: student is continued on scholastic probation.

Effect of an unofficial withdrawal: a student who unofficially withdraws will receive the grade of *WdF* and must satisfy the requirement of *Return After Failure* (see above).

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.

ACCELERATED PROGRAM

In order to meet the needs of those engineering students who are enrolled in the accelerated program, adjustments will be made in the following order and sequence of courses. Such students should advise with the Dean of Engineering concerning course-programs before registering.

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
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MINING OPTION
Third Year

Course and Number	Title of Course	Hrs. per Wk.		Sem. Hrs. Credit
		Class	Lab.	
First Semester				
Chemistry 323	Quantitative Analysis	1	6	3
Geology 421	Advanced General Geology	3	3	4
Mathematics 325	Calculus	3	0	3
Metallurgy 423	Ore Dressing and Milling	3	3	4
Mining 521	Mining Methods	5	0	5
				19
Second Semester				
Engineering 322	Mine and Route Surveying	2	3	3
Engineering 533	Applied Mechanics and Graphic Statics	3	6	5
Geology 322	General Economic Geology	3	0	3
Metallurgy 321	General Metallurgy	3	0	3
Metallurgy 324	Assaying	1	6	3
Physics 222	Sound and Light	1	3	2
				19
Summer School				
Engineering 224	Mine Surveying:—Field Work; 8 hours a day for two weeks		96	2
Fourth Year				
First Semester				
Economics 312	Principles of Economics	3	0	3
Engineering 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.

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*, *Px* 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 Sciences, Chemistry,† Geology, Mathematics,† Physics.†

Group B

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

Minor: Biological Sciences, Business Administration, Chemistry, Art, 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 is 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.
7. Six semester hours in American and Texas Government (Government 10).
8. History 301 and 302, Economics 310, Philosophy 330 and 331.
9. 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.
10. Enough other courses to make at least one hundred and twenty semester hours.
11. 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.

‡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

ART MAJOR

Minor—See Group B under "Concentrations"

Requirements

	HOURS
1. Art—twenty-four semester hours, including Design 301 and 302,—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	6
7. Government 10.....	6
8. History 301 and 302, Economics 310, Philosophy 330 and 331	15
9. Electives, six semester hours of which must be advanced....	15
10. Physical Education—two years of service courses—(no credit)	0
	120

**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, geography, zoology.....	12
6. Mathematics 304, and 307 or 309, or 803.....	6
7. Government 10.....	6
8. History 301 and 302, Economics 310, Philosophy 330 and 331.....	15
9. Electives, six semester hours of which must be advanced.....	15
10. Physical Education—two years of service courses.....	0
	120

CURRICULUM IN
ECONOMICS MAJOR

Minor—See Group B under “Concentrations”

Requirements

	HOURS
1. Economics 312, 313, 329 and fifteen additional semester hours in economics, at least nine 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, geography, zoology _____	12
6. Mathematics _____	6
7. Government 10 _____	6
8. History 301 and 302, Philosophy 330 and 331 _____	12
9. Electives, six semester hours of which must be advanced _____	18
10. Physical Education—two years of service courses _____	0
	<hr/>
	120

**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.....	6
7. Government 10.....	6
8. History 301 and 302, Economics 310, Philosophy 330 and 331..	15
9. †Electives, six semester hours of which must be advanced—	15
11. Physical Education—two years of service courses—(no credit).....	0
	120

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

**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, 305, 316, 317, 327, 327T, and six additional advanced semester hours, including three semester hours of methods in the academic major.....	24
2. Academic major—twenty-four semester hours, twelve of which must be of advanced courses.....	24
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. History 301, 302, and 317; Economics 310, and Philosophy 330 and 331.....	18
9. Physical Education 320.....	3
10. Electives.....	3
11. Physical Education—two years of service courses—(no credit).....	0
	120

**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, 305, 314, 318, 331T, 328, 328T, and three additional advanced hours.....	24
2. Design 301, Public School Art 321, Music 301, Public School Music 353, Education 320, and Physical Education 320 and 321	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. History 301, 302, and 317; Economics 310, Philosophy 330 and 331	18
9. Electives	9
10. Physical Education—two years of service courses—(no credit)	0
	120

**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 _____	6
7. Government 10 _____	6
8. History 301 and 302, Economics 310, Philosophy 330 and 331 _____	15
9. Electives, six semester hours of which must be advanced _____	27
10. Physical Education—two years of service courses—(no credit) _____	0
	120

CURRICULUM IN
HISTORY MAJOR

Minor—See Group B under "Concentrations"

Requirements

	HOURS
1. History 301, 302, and eighteen additional 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 _____	6
7. Government 10 _____	6
8. Economics 310, Philosophy 330 and 331 _____	9
9. Electives, six semester hours of which must be advanced _____	21
10. Physical Education—two years of service courses—(no credit) _____	0
	120

CURRICULUM IN
JOURNALISM MAJOR

Minor—See Group B under “Concentrations”

Requirements

	HOURS
1. Journalism 311, 312 and eighteen additional semester hours, twelve of which must be advanced_____	24
2. Minor—eighteen semester hours, six of which must be advanced _____	18
3. English 1 and 12 or 12Q _____	12
4. Foreign language—the completion of a course numbered 12 or 13 _____	12
5. Science (laboratory)—six semester hours in each of any two of the following sciences: botany, biology, chemistry, physics, geology, zoology _____	12
6. Mathematics _____	6
7. Government _____	6
8. History 301 and 302, Economics 310, Philosophy 330 and 331_____	15
9. Electives, six semester hours of which must be advanced_____	15
10. Physical Education—two years of service courses—(no credit) _____	0
	<hr/> 120

**CURRICULUM IN
MATHEMATICS MAJOR**

Minor—See Group A under "Concentrations"

Requirements

	HOURS
1. Mathematics—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 I and 12 or 12Q_____	12
4. Foreign language—the completion of a course numbered 12 or 13 _____	12
5. Science—six hours of physics (unless physics is included in No. 2) and six hours of a second laboratory science____	12
6. Mathematics (See No. 1)_____	0
7. Government 10_____	6
8. History 301 and 302, Economics 310, Philosophy 330 and 331____	15
9. Electives, six semester hours of which must be advanced____	21
10. Physical Education—two years of service courses—(no credit) _____	0
	120

CURRICULUM IN
MODERN LANGUAGE MAJOR

Minor—See Group A 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	6
7. Government 10	6
8. History 301 and 302, Economics 310, Philosophy 330 and 331	15
9. Electives, six semester hours of which much be advanced	15
10. Physical Education—two years of service courses (no credit)	0
	120

**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. History 301 and 302, Economics 310, Philosophy 330 and 331.....	15
9. Electives, twelve semester hours of which must be advanced.....	27
10. 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 minor other than science 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.

BACHELOR OF SCIENCE

In recognition of the needs for more concentrated study in the fields of science, the Texas College of Mines has provided for the extension of the Bachelor of Science degree to include certain of the sciences outside the Division of Engineering.

Fields of Concentration

Major: Biology, Chemistry, Geology, Physics.

Minor: Biology, Chemistry, Geology, Mathematics, Physics.

Requirements

The total number of semester hours required for the Bachelor of Science degree is 132.

At least 36 semester hours of upper division work must be included with a minimum of 15 of these upper division hours in the major field.

There must be a minimum of 60 semester hours in the sciences and/or mathematics.

	HOURS
1. First concentration (major in science, at least 15 semester hours of which must be advanced) _____	30
2. Second concentration (second science or mathematics) _____	18
3. Third science _____	6
4. History 301 and 302, Economics 310, Philosophy 330 and 331 _____	15
5. English 1, and 12 or 12Q _____	12
6. Government 10 _____	6
7. *Mathematics 803 (if not included in second concentration) _____	8
8. Electives, sufficient to bring total number of required hours for degree to 132 including enough advanced hours to complete the total of 36 advanced hours required.	
9. Physical Education _____	2 yrs.
Total _____	132

All other general requirements affecting residence, grades, and graduation are the same as outlined in this catalogue for the Bachelor of Arts degree.

*Mathematics 304-309 may be substituted for Mathematics 803 in the Geology major-Biology minor or Biology major-Geology minor combinations. Students who desire to take Engineering 313 in connection with the Geology major may substitute Mathematics 305-306 for Mathematics 803.

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, Physical Education, 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 the Degree of 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 Preparatory to the Degree of Law**Leading to Degree of Bachelor of Arts**

The successful completion of the following courses plus 28 semester hours of work in the School of Law at The University of Texas leads to the Bachelor of Arts degree:

	HOURS
1. English _____	12
2. Mathematics _____	6
3. The completion of a course numbered 12 or 13 in a foreign language _____	12
4. Natural sciences (including Chemistry 801 or Physics 801 and Botany 301 and 302, or Geology 301 and 302, or Zoology 301 and 302) _____	12
5. Social sciences (including Government 10, History 315 and 316, Economics 310, Philosophy 330 and 331, nine advanced semester hours)—Not more than 12 semester hours of a freshman social science may be counted _____	36
6. Electives, six of which must be advanced _____	15
Total _____	93

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 semester hours including English 1, Government 10, and twelve semester hours of education, at least six of which must be in the elementary field.

The minimum requirements for the four-year high school teacher's certificate are sixty semester hours, including English 1, Government 10, and twelve semester hours of education, at least six of which must be in the secondary field.

The minimum requirements for the six-year high school certificate are ninety semester hours, including English 1, Government 10, and eighteen semester hours of education, six hours of which must deal with high-school teaching and one course which shall include at least thirty-six recitation hours of practice teaching.

A student who holds a B.A. or B.S. degree from the College of Mines is entitled to a permanent high-school certificate, provided he has twenty-four semester hours in education, including Education 327 and 327T.

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*.

ART

ASSISTANT PROFESSOR WISE

301fs. *Elementary Design*

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

A course stressing principles of art and planned to develop the creative ability of the student. Balance, rhythm, emphasis and unity in composition. Organization and plan in creative art. Outdoor sketching of natural forms, plants, etc., for design elements.

302fs. *Elementary Design*

Prerequisite: Design 301.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

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 of technique of handling pencil, water color, tempera, etc.

303f. *Weaving*

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

Practical work in weaving cloth, bags, table-settings, scarfs, etc. The setting up of looms, study of textiles, textures and weaves. Color and design in textiles. Originality and experimentation in weaving stressed.

304s. *Pottery*

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

A study of the methods of pottery making, coil building, wheel throwing, slip casting and various decorative methods, glazing, operation of kilns. Emphasis placed on decorative form of vases, tiles, plates, containers, etc.

306. *Sketching*

Credit value: Three semester hours. Fee: \$2.00.

Twelve hours per week, two hour periods.

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.

315f. Modern Design

Prerequisite: Design 301 and 302.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

A survey of art fields, with problems in designing furniture, china, costume, interiors, advertising, and other phases of art in industry. Development of good taste and sense of proportion and values in study of design for modern living.

316s. Modern Design

Prerequisite: Design 315.

Credit value: Three semester hours. Fee: \$2.00.

Continued study of design for modern living. Line, structure, function, emphasized. Study of materials and how to make the most of them in design.

320f. Art History and Appreciation

Prerequisite: Junior standing.

Credit value: Three semester hours.

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.

321s. Public School Art

Prerequisite: Junior standing including Design 301.

Credit value: Three semester hours.

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.

322f. Painting

Prerequisite: Design 315 and 316.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

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, tempora, water color. Students may specialize.

323s. Painting

Prerequisite: Design 315 and 316.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

Study of various techniques in painting. Organization of materials for various uses. Landscape painting, murals, illustration, etc. Study of anatomy and figure drawing. Outdoor work.

324f. Metal Work and Jewelry

Prerequisite: Twelve semester hours of Design including Design 301 and 302.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

The designing of jewelry and other objects with particular emphasis on decorative design. Study of primitive design such as Chinese, Aztec, Mayan for inspiration in decorative form, as well as modern conceptions. The use of semi-precious stone in jewelry. Use of available material in metals. Cutting, hammering, etc.

325s. Metal Work and Jewelry

Prerequisite: Twelve semester hours of Design, including Design 301 and 302.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

Constructive work in creating useful and original objects with emphasis on functional design and decorative form. The use of available metals and other materials in creating costume jewelry and such other objects as cases, plates, plaques, etc.

331. Art in Industry

Prerequisite: Twelve semester hours of Design, including Design 301 and 302.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and three laboratory hours per week.

A study of the field of industry for design possibilities. Art in machine made products. Study of the appeal of the object to the buying public from the standpoints of function and of art, with an attempt to raise standards of value. Understanding of various materials and their possibilities. Working drawings and models.

332s. Industrial Design

Prerequisite: Twelve semester hours of Design, including Design 301 and 302.

Credit value: Three semester hours. Fee: \$2.00.

This course teaches the techniques necessary to make patterns for dies and castings. Concern will be given to line, decorative qualities and ornament, together with functional purpose of three dimensional objects. Working drawings and models made.

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 or the B.S. degree in the Sciences.

310f. *Biology of the Human Body*

Prerequisite: Zoology 302.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and three laboratory hours per week.

311s. *Introduction to Human Physiology, Emphasizing Relation of Functions to Physical Exercise*

Prerequisite: Biology 310.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and three laboratory hours per week.

316f. *Principles of Heredity and Their Application to Animals, Plants, and Mankind*

Prerequisite: Sophomore standing or six semester hours in a laboratory science.

Credit value: Three semester hours.

Three lectures per week.

317s. *Evolution, with Emphasis on Methods and Trends*

Prerequisite: Sophomore standing or six semester hours in a laboratory science.

Credit value: Three semester hours.

Three lectures per week.

330s. *Technique in Histology and Cytology, Emphasizing the Preparation of Tissues and Cells for Critical Analysis*

Prerequisite: Chemistry 413, or Bacteriology 29, or 12 semester hours of Zoology, or Botany.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures or the equivalent and three laboratory hours per week.

Bacteriology

29. *General Bacteriology, Including Bacteriology of Milk, Water, and Sewage*

Prerequisite: Twelve semester hours in any one of the natural sciences or a combination of twelve semester hours in the natural sciences and junior standing.

Credit value: Six semester hours. Fee: \$4.00

Two lectures and three laboratory hours per week.

Botany

301f. *General Botany; A Survey of the Algae and the Fungi Preceded by a Survey of the Structure and Physiology of the Cell*

Credit value: Three semester hours. Fee: \$2.00.
Two lectures and three laboratory hours per week.

302s. *General Botany; A Survey of the Liverworts, Mosses, Ferns, and Seed Plants*

Prerequisite: Botany 301.
Credit value: Three semester hours. Fee: \$2.00.
Two lectures and three laboratory hours per week.

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; A Survey of the Invertebrates Preceded by Theoretical Biology*

Credit value: Three semester hours. Fee: \$2.00.
Two lectures and three laboratory hours per week.

302s. *General Zoology; A Survey of the Vertebrates, Concluding with Physiology and a Brief Survey of Animal Histology*

Prerequisite: Zoology 301.
Credit value: Three semester hours. Fee: \$2.00.
Two lectures and three laboratory hours per semester.

14. *Vertebrate Zoology: A Detailed Study of a Representative of Each Class of the Vertebrates*

Prerequisite: Zoology 302.
Credit value: Six semester hours. Fee: \$4.00.
Two lectures and four laboratory hours per week.

320s. *Animal Cytology and Histology*

Prerequisite: Zoology 14; for juniors and seniors, Zoology 302 completed with a grade of C, and Zoology 14 concurrently.
Credit value: Three semester hours. Fee: \$2.00.
Two lectures and three laboratory hours per week.

321f. *Vertebrate Embryology*

Prerequisite: Zoology 14; for juniors and seniors, Zoology 302 completed with a grade of C or better, and Zoology 14 concurrently.
Credit value: Three semester hours. Fee: \$2.00.
Two lectures and three laboratory hours per week.

CHEMISTRY

PROFESSOR LAKE; ASSISTANT PROFESSORS BALL, MERS; INSTRUCTOR HANCOCK

1. *General Chemistry*

Credit value: Six semester hours. Fee: \$4.00.

Two lectures, one demonstration hour, and two laboratory hours per week. May not be used as a prerequisite for any other chemistry course.

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.

801. General Chemistry

Credit value: Eight semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

For students who need a foundation for work in advanced chemistry, and related sciences.

The laws and theories of chemistry; the elements and their most important compounds with reference to their production and use.

305fs. General Chemistry

Credit value: Three semester hours. May not be counted in addition to Chemistry 801a or 1a.

Two lectures, one demonstration hour, and two laboratory hours per week. May not be used as a prerequisite for any chemistry course other than 801a.

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.

311fs. Qualitative Analysis

Prerequisite: Chemistry 801a and 801b with a grade of not less than C in each.

Credit value: Three semester hours. Fee: \$2.00.

One lecture and six laboratory hours per week.

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.

413fs. Quantitative Analysis

Prerequisite: Chemistry 311.

Credit value: Four semester hours, three of which may be counted as advanced. Fee: \$4.00.

One lecture and eight laboratory hours per week.

The quantitative analysis of salts, minerals and industrial products.

21 and 821. Organic Chemistry

Prerequisite: Chemistry 413.

Credit value: For 21, six semester hours; for 821, eight semester hours. Fee: \$4.00.

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 per week.

A study of the fundamental types of carbon compounds.

323fs. Quantitative Analysis

Prerequisite: Chemistry 413.

Credit value: Three semester hours. Fee: \$2.00.

One lecture and six laboratory hours per week.

A continuation of Chemistry 413.

460f. Physical Chemistry

Prerequisite: Chemistry 413, Mathematics 13, and Physics I or 812.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

Properties of substances in the gaseous, liquid, and solid state; solutions; thermochemistry.

461s. Physical Chemistry

Prerequisite: Chemistry 460.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

Homogeneous and heterogeneous equilibria; kinetics of reaction, electrochemistry, and chemical thermodynamics.

261s. Physical Chemistry

Prerequisite: Chemistry 460.

Credit value: Two semester hours.

Two lectures per week.

This course covers part of the work covered by Chemistry 461 and is intended for students who elect the option in metallurgical engineering.

368s. Principles of Colloid Chemistry

Prerequisite: Chemistry 460.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and three laboratory hours per week.

Omitted in 1943-1944.

Chemical and physical conditions of the colloid state.

ECONOMICS AND BUSINESS ADMINISTRATION

PROFESSOR HARTRICK; ASSISTANT PROFESSORS HARGREAVES,* AND SMITH

In majoring or minoring in the Department of Economics and Business Administration, a 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 other courses 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

*On leave, 1943-1944.

particular courses are fundamental for particular 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 courses. (a) For persons interested in General Economics: among others, Economics 321, 322, 332, 358, and 331, and Business Administration 311 and 314; (b) for students interested in General Business Training: among others, Business Administration 1, 331, 357, 346, 23, 337, 341 and 338, and Economics 312 and 313; (c) for students interested in Accounting: among others, Business Administration 326, 327, 330, 338, 23, 341, 359, and 346, and Economics 312 and 313; (d) for students interested in secretarial science: among others, Business Administration 1, 20, 21, 334, 335, 341, 359, 357, 331, and 338, and Economics 312 and 313.

Note to majors and minors in this department.—In order that the courses may be coordinated and planned in advance for you, you are urged to counsel with the head of this department before registration in your sophomore year. Advice at this stage may prevent subsequent difficulties in your program.

Economics

310j. *Survey of the American Economic System*

Prerequisite: Sophomore standing.

Credit value: Three semester hours. (May not be counted on major or minor requirements.)

A terminal course designed for students majoring in fields other than economic and business administration. It presents the economic background of the United States including the effects of the industrial revolution, relates the development of the American system and offers an exposition of the system as it operates now.

312js. *Principles of Economics*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

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.

313s. *Principles of Economics*

Prerequisite: Economics 312.

Credit value: Three semester hours.

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, taxation, and public credit.

321f. Public Finance and Taxation

Prerequisite: Economics 313.

Credit value: Three semester hours.

Omitted in 1943-1944; to be given in 1944-1945.

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.

322f. Money and Banking

Prerequisite: Economics 313.

Credit value: Three semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

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, bimetallicism, banking development, relation of money and credit to prices, foreign exchange principles.

329f. Economic Statistics

Prerequisite: Economics 313 and six semester hours of mathematics.

Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 332.) Fee: \$2.00.

Three lectures and three laboratory hours per week.

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, and correlation.

331f. Business and Government

Prerequisite: Economics 313.

Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 331.)

Government in a regulatory capacity and 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.

332f. Corporation Finance

Prerequisite: Economics 313.

Credit value: Three semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

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.

337]. *Marketing*

Prerequisite: Economics 313.

Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 337.)

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.

339. *War Finance*

Prerequisite: Economics 313.

Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 339.)

Given in Summer Session, 1943.

What a warring nation needs and the financial arrangements to care for these needs. A study of the effects of price control, priorities, rationing of consumer goods, substitution, and distribution. International war finance and the position of neutrals.

341s. *Advanced Banking Theory and Practice*

Prerequisite: Economics 313.

Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 341.)

Given in 1943-1944; to be omitted in 1944-1945.

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.

342. *Personnel Management and Production Problems*

Prerequisite: Economics 313.

Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 342.)

Given in Summer Session, 1943.

Policies and managerial techniques for employment, wage and salary payment, joint relations through labor unions and company representation plans. Principles underlying modern production; problems of small and large businesses using manufacturing processes.

344s. *Modern Transportation and Communication*

Prerequisite: Economics 313.

Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 344.)

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.

350f. Introduction to Foreign Trade

Prerequisite: Economics 313.

Credit value: Three semester hours. (May not be counted for credit in addition to Business Administration 350.)

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 foreign transactions.

358s. International Economic Relations

Prerequisite: Economics 313 and three semester hours of advanced economics.

Credit value: Three semester hours.

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.

Business Administration

1. Shorthand and Typewriting

Prerequisite: Open to all students.

Credit value: Six semester hours when the standard speed and accuracy is attained in both shorthand and typewriting. Fee: \$4.00.

Three lectures and six laboratory hours per week.

Mastery of the elementary principles of Gregg shorthand, transcription, and typewriting.

311f. Theory and Practice of Accounting

Prerequisite: Sophomore standing.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and four laboratory hours per week.

Principles of double-entry bookkeeping and theories of general financial accounting. The analysis and recording of business transactions, adjusting and closing entries. Financial statements, sole proprietorship accounting and practice set. Use of worksheets.

314s. Theory and Practice of Accounting

Prerequisite: Business Administration 311.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and four laboratory hours per week.

Business Administration 311 continued into a consideration of partnership accounting, corporation accounting, reserves and reserve funds, manufacturing accounts, asset valuation, practice sets on partnerships and corporations.

316s. Introduction to Business

Prerequisite: Sophomore standing.

Credit value: Three semester hours. (May not be counted toward major and minor requirements.)

A terminal course in business administration designed for students majoring in fields other than Business Administration. Gives fundamentals of business organization, types of enterprise, the relationship of business enterprise to other fields of endeavor. Business records, promotions, management, and Governmental control.

20. *Business Letters and Report Writing*

Prerequisite: English 12 or 12Q; Business Administration 314; the ability to type accurately.

Credit value: Six semester hours.

The writing of clear, concise, and forceful business letters. Practical business situations are given as the bases for letter assignments. Practice in writing sales letters, credit letters, adjustments, claim, order, rejection, collection, and application letters. Part of course is given over to the theory and practice of report writing.

21. *Advanced Stenography*

Prerequisite: Business Administration 1 and 314.

Credit value: Six semester hours. Fee: \$4.00.

Three lectures and six laboratory hours per week.

Given in 1943-1944; to be omitted in 1944-1945.

Training in advanced secretarial practice. Development of speed and accuracy in shorthand and typing. Character study and practice dictation of medical, legal and engineering phraseology. Technique in letter layouts. Practice in receiving messages and transcribing from dictating machines.

23. *Business Law*

Prerequisite: Business Administration 314 or Economics 313.

Credit value: Six semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

Textbook and case method. Cases on law of contracts, agency, bailments, sales, mortgages, negotiable instruments. Special emphasis on Texas interpretation of these legal principles.

326f. *Intermediate Accounting, First Course*

Prerequisite: Business Administration 314.

Credit value: Three semester hours.

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.

327s. *Intermediate Accounting, Second Course*

Prerequisite: Business Administration 326.

Credit value: Three semester hours.

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.

329f. Cost Accounting

Prerequisite: *Business Administration 314.*

Credit value: Three semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

Accounting for materials, labor, and manufacturing expense under specific cost system and under the continuous process cost system. Standard costs; accounting for variances; study of production orders and standing orders.

330s. Auditing

Prerequisite: *Business Administration 314.*

Credit value: Three semester hours.

Omitted in 1943-1944; to be offered in 1944-1945.

Auditing procedure, reports, and working papers used in financial investigations; balance sheet and detailed audits. Verification of assets, liabilities, and nominal accounts.

331f. Business and Government

Prerequisite: *Business Administration 314.*

Credit value: Three semester hours. (May not be counted for credit in addition to Economics 331.)

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.

332f. Business Statistics

Prerequisite: Six semester hours of mathematics and junior standing.

Credit value: Three semester hours. (May not be counted for credit in addition to Economics 329.) Fee: \$2.00.

Three lectures and three laboratory hours per week.

Training in quantitative methods of analysis used in dealing with mass data. The use of graphic and tabular presentations, organizing and describing data, the frequency distribution, measures of central tendency, dispersion, skewness, time series analysis, correlation.

334s. Office Organization and Practice

Prerequisite: *Business Administration 1 and 314.*

Credit value: Three semester hours. Fee: \$2.00.

Omitted in 1943-1944; to be given in 1944-1945.

Practice in the use of dictating, bookkeeping, and duplicating machines, and other types of office equipment. Demonstrational work in the use and operation of a telephone switchboard. Filing, advanced dictation and transcription practice. Designed for students intending to go into office work.

335f. Office Management

Prerequisite: *Business Administration 1 and 314.*

Credit value: Three semester hours.

Omitted in 1943-1944; to be given in 1944-1945.

The location, equipment, organization, and general routine practice within the modern business office. Two viewpoints are presented: that of the office manager, and that of the office employee. Designed primarily for students going into office work.

337f. Marketing

Prerequisite: Business Administration 314.

Credit value: Three semester hours. (May not be counted for credit in addition to Economics 337.)

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.

338f. Federal Tax Accounting

Prerequisite: Business Administration 314.

Credit value: Three semester hours.

Omitted in 1943-1944; to be given in 1944-1945.

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.

339. War Finance

Prerequisite: Business Administration 314.

Credit value: Three semester hours. (May not be counted for credit in addition to Economics 339.)

Given in Summer Session, 1943.

What a warring nation needs and the financial arrangements to care for these needs. A study of the effects of price control, priorities, rationing of consumer goods, substitution, and distribution. International war finance and the position of neutrals.

341s. Advanced Banking Theory and Practice

Prerequisite: Business Administration 314.

Credit value: Three semester hours. (May not be counted for credit in addition to Economics 341.)

Given in 1943-1944; to be omitted in 1944-1945.

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 department, the Federal Reserve System, open market operations.

342. Personnel Management and Production Problems

Prerequisite: Business Administration 314.

Credit value: Three semester hours. (May not be counted for credit in addition to Economics 342.)

Given in Summer Session, 1943.

Policies and managerial techniques for employment, wage and salary payment, joint relations through labor unions and company representation plans. Principles underlying modern production; problems of small and large businesses using manufacturing processes.

344s. *Modern Transportation and Communication*

Prerequisite: Business Administration 314.

Credit value: Three semester hours. (May not be counted for credit in addition to Economics 344.)

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.

348s. *Latin-American Resources and Trade*

Prerequisite: Business Administration 314.

Credit value: Three semester hours.

Omitted in 1943-1944; to be given in 1944-1945.

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.

350f. *Introduction to Foreign Trade*

Prerequisite: Business Administration 314.

Credit value: Three semester hours. (May not be counted for credit in addition to Economics 350.)

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 foreign transactions.

356s. *Securities Markets of the United States*

Prerequisite: Business Administration 314.

Credit value: Three semester hours.

Omitted in 1943-1944; to be given in 1944-1945.

Study of flotation of new securities, the New York Stock Market and other markets, relationship of the issuing corporation and the investment banker, services performed by brokers, techniques in market trading, the Securities and Exchange Act.

357f. *Investments*

Prerequisite: Business Administration 314.

Credit Value: Three semester hours.

Omitted in 1943-1944; to be given in 1944-1945.

Investment principles, investment banking, security analysis, security classification including rails, industrials, utilities, governments and others. The investor's viewpoint.

358f. Life Insurance

Prerequisite: Business Administration 314.

Credit value: Three semester hours.

A study of the principles underlying group risk bearing, rate making, "loading," types of carriers, term insurance, the endowment policy, annuities, disability and accident benefits. Organization and administration of risk carriers.

359s. General Insurance

Prerequisite: Business Administration 314.

Credit value: Three semester hours.

Risk, its nature and economic significance. The insurance contract, fire insurance, marine insurance, property insurance, life insurance, burglary, robbery, and theft insurance, types of carriers. State supervision of insurance carriers. Social insurance.

EDUCATION

PROFESSORS FARQUEAR AND PUCKETT; ASSISTANT PROFESSOR MCCUSKEY;
INSTRUCTORS REYNOLDS AND ARMOUR

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

Credit value: Three semester hours.

Three lectures per week.

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.

305fs. The American School System

Credit value: Three semester hours.

Three lectures per week.

The course, which is introductory to the study of education, gives attention to the relation of American public schools to social and economic changes, also to problems in the development of the curriculum, instructional practices, school organization, and administration.

311T. Introduction to Teaching

Prerequisite: Education 301 and Sophomore standing.

Credit value: Three semester hours.

Six lectures per week.

(Given in Summer Session, 1943.)

An introduction to teaching practices in the elementary and secondary school.

321f. Public School Organization and Administration

Prerequisite: Twelve semester hours in education.

Credit value: Three semester hours.

Three lectures per week.

Problems confronting the administrative office in local schools, such as relation of superintendent with board and public, organization of schools, development of curricula, selection and promotion of teachers.

332f. Problems in Modern Education

Prerequisite: Education 314 and 318, or 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

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.

336Ts. Current Curriculum Trends and Problems

Prerequisite: Education 314 and 318, or 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

A study of present theory and practice of curriculum revision in elementary and secondary schools, and of the function of the school in present society.

340f. The Administration and Supervision of Extracurricular Activities in the Modern School

Prerequisite: Education 314 and 318, or 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

The course deals with the purpose and principles of extracurricular activities in the school, with special emphasis on types of activities, organizations and administration of the program, and principles of supervision.

341f. Principles in Guidance

Prerequisite: Education 314 and 318, or 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

Consideration is given to the general meaning, importance, and function of guidance together with a survey of techniques and the evaluation of outcomes.

344s. *Recent Educational Trends and the War Emergency*

Prerequisite: Education 314 and 318, or 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

Movements which have been important in the development of American education receive major attention. Consideration is also given to the relation of present educational trends to the war emergency.

355s. *Mental and Educational Measurement*

Prerequisite: Education 314 and 318, or 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

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.

359j. *Philosophy of Education*

Prerequisite: Education 314 and 318, or 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

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.

370. *Psychiatry*

Prerequisite: Twelve hours of Education, or Junior standing and six hours of Education.

Credit value: Three semester hours.

Six lectures per week.

(Given in Summer Session, 1943.)

Consideration is given to the casual factors of behavior difficulties and methods of treatment. Various types of psychopathy and their causes are dealt with as a basis for understanding "normal" behavior. Emphasis is placed upon the treatment of everyday life problems.

371. *Medical Information*

Prerequisite: Twelve hours of Education, or Junior standing and six hours of Education.

Credit value: Three semester hours.

Six lectures per week.

(Given in Summer Session, 1943.)

A course designed to describe the normal functioning of the human body, a knowledge of the modern concept of disease and its treatment, a realization of the social significance of ill health, as well as ability to interpret a doctor's findings and medical reports.

372. *Counseling Techniques* (Emphasis Placed on Social Case Work.)
 Prerequisite: Twelve hours of Education, or Junior standing and six hours of Education.
 Credit value: Three semester hours.
 Six lectures per week.
 (Given in Summer Session, 1943.)
 Social case work methods and the interview. Use of community resources. Presentation of case material with special emphasis on problems arising in schools. An analysis of behavior trends with methods of treating the whole child in his environment. Also techniques for promoting self guidance in the older child.
 Educational and vocational guidance is considered as a part of the total function of counseling in behavior and in personality development.
373. *Principles and Practices in Secondary School Curriculum*
 Prerequisite: Twelve hours of Education, or Junior standing and six hours of Education.
 Credit value: Three semester hours.
 Six lectures per week.
 (Given in Summer Session, 1943.)
 Emphasis is placed upon basic principles of curriculum development, as well as upon workshop practices designed to give teachers opportunities to engage in the production of courses of study for use in their respective teaching fields.
98. *Thesis Course for Master's Degree*
 Prerequisite: Twelve semester hours of advanced courses in Education; graduate standing; permission of chairman of department.
 Credit value: Six semester hours.

Elementary

- 314f. *Child Psychology*
 Prerequisite: Education 301 and Sophomore standing.
 Credit value: Three semester hours.
 Three lectures per week.
 A study of the changes which take place in the life of the child as related to the processes of elementary education.
- 318s. *Introduction to Elementary Education*
 Prerequisite: Education 301 and Sophomore standing.
 Credit value: Three semester hours.
 Three lectures per week.
 An introduction to teaching in the elementary grades. Attention given to guiding learning through activities of children.
- 320s. *Children's Literature*
 Prerequisite: Education 314 and 318, or 316 and 317.
 Credit value: Three semester hours.

Three lectures per week.

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.

328f. *Observation of Teaching in the Elementary School* (Formerly Education 28a.)

Prerequisite: Education 314 and 318.

Credit value: Three semester hours.

Two lectures and five laboratory hours per week.

A study of the principles of teaching and the observation of class work. A minimum of five hours weekly in the elementary classroom will be required during the semester, more time being assigned if necessary.

328Ts. *Student-Teaching in the Elementary School* (Formerly Education 28b.)

Prerequisite: Education 314, 318, and 328.

Credit value: Three semester hours.

Five laboratory hours per week.

The construction of lesson plans, and teaching under supervision. One hour daily for five days a week is required during the semester. The course may follow or be taken concurrently with Education 328.

331Tf. *Methods and Materials of Instruction in the Elementary School*

Prerequisite: Education 314 and 318.

Credit value: Three semester hours.

Two lectures and three laboratory hours per week.

This is an intensive study of methods for the elementary schools, with emphasis centered upon reading, social studies, arithmetic, and science. It includes observations, as well as a survey of the literature in each field.

High School

316f. *Psychology of Adolescence*

Prerequisite: Education 301 and Sophomore standing.

Credit value: Three semester hours.

Three lectures per week.

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.

317s. *An Introduction to High-School Teaching*

Prerequisite: Education 301 and Sophomore standing.

Credit value: Three semester hours.

Three lectures per week.

Basic principles of high-school teaching and high-school management are considered.

322j. *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.

Three lectures per week.

323j. *Teachers' Course in Modern Languages*

Prerequisite: Course 12 in a language; and Education 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

Methods of teaching modern languages in secondary schools.

326s. *Teachers' Course in English.*

Prerequisite: English 12; and Education 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

Methods of teaching English in secondary schools.

327j. *Observation of Teaching in the High School* (Formerly Education 27a.)

Prerequisite: Education 316 and 317.

Credit value: Three semester hours.

One hour daily for five days a week is required during the semester.

A study of the principles of teaching and the observation of class work.

327Ts. *Student Teaching in the High School* (Formerly Education 27b.)

Prerequisite: Education 316, 317, and 327.

Credit value: Three semester hours.

One hour daily for five days a week is required during the semester.

The construction of lesson plans, and teaching under supervision.

329f. *Teachers' Course in the Social Studies*

Prerequisite: Twelve semester hours in History; and Education 316 and 317.

Credit value: Three semester hours.

Three lectures per week.

Methods of teaching the social studies in the secondary schools.

362. *Technique of Teaching in the Secondary School*

Prerequisite: Junior standing including nine semester hours in education.

Credit value: Three semester hours.

Six lectures per week.

(Given in Summer Session, 1943.)

A critical study of teaching practice in the secondary school.

ENGINEERING, DRAWING AND AVIATION

PROFESSOR THOMAS; ASSOCIATE PROFESSOR KIMES;
INSTRUCTORS CAMPBELL, STRAIN

Engineering**410s. Elements of Electrical Engineering**

Prerequisite: Physics 12a, and registration in Mathematics 13b.

Credit value: Four semester hours. Fee, \$4.00.

Three lectures and three laboratory hours per week.

Direct current electric and magnetic circuits; the direct current generator; measuring instruments; electrostatics; energy relations; transients; and conduction through gases.

412f. Elements of Mechanism

Prerequisite: Mathematics 803, Drawing 302, and Physics 1.

Credit value: Four semester hours. Fee: \$4.00.

Two lectures and six laboratory hours per week.

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.

313s. Plane Surveying

Prerequisite: Mathematics 803 and Drawing 302.

Credit value: Three semester hours.

Three lectures a week.

Given Summer, 1943; omitted in 1943-1944; to be offered first term Summer, 1944.

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.

414. Field Surveying

Prerequisite: Engineering 313. Students must begin work on the day the field work opens.

Credit value: Four semester hours. Fee: \$4.00.

192 hours.

Given both terms Summer, 1943.

Summer work; practical field course covering the topics outlined in Engineering 313. Accurate and rapid work will be insisted upon.

415. Applied Mechanics

Prerequisite: Physics 1, and Mathematics 13a in advance or concurrently.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.
Given Fall Semester, 1943-1944.

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.

322s. Mine and Route Surveying

Prerequisite: Engineering 414, and Mining 521.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and three laboratory hours per week.

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.

224. Mine Surveying; Summer Field Work

Prerequisite: Engineering 322.

Credit value: Two semester hours. Fee: \$2.00.

Eight hours daily for two weeks, immediately following the close of the Spring semester.

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.

226. Economic Problems for Engineers

Prerequisite: Economics 312 in advance or concurrently and senior standing in any engineering course.

Credit value: Two semester hours.

Application of economic analysis to engineering and industrial problems which require a knowledge of engineering for their solution.

431s. Electrical Circuits and Machines

Prerequisite: Physics 12 or 812, and Mathematics 13.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours a week.

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.

533s. Applied Mechanics and Graphic Statics

Prerequisite: Drawing 302, Mathematics 13 and Physics 12 or 812.

Credit value: Five semester hours. Fee: \$4.00.

Three lectures and six laboratory hours per week.

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.

434f. Strength of Materials

Prerequisite: Engineering 533, or Engineering 415.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

Given Spring semester, 1943-1944.

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.

335s. Masonry and Reinforced Concrete

Prerequisite: Engineering 434.

Credit value: Three semester hours.

Three lectures a week.

Given Summer, 1943; omitted in 1943-1944.

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.

350s. Steam Power Plants

Prerequisite: Mathematics 13, and Physics 12 or 812.

Credit value: Three semester hours.

Three lectures a week.

Given Fall semester, 1943-1944.

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.

354f. Hydraulics

Prerequisite: Physics 12 or 812, and Mathematics 13.

Credit value: Three semester hours.

Three lectures a week.

Omitted in 1943-1944; to be given in 1944-1945.

Properties of fluids; hydrostatics; fluids in motion; flow of liquids through pipes, orifices, and over weirs; fluid friction and loss of head; Bernoulli's theorem; flow of water in canals and rivers; Kutter's formula; and graphical methods.

Drawing

301f. Engineering Drawing

Credit value: Three semester hours. Fee: \$2.00.

Two one-half hour discussions and eight hours of supervised drawing a week.

For all engineering students. Freehand lettering, geometrical construction, orthographic projection, auxiliary views, sectional views, dimensioning, working drawings, and pictorial methods.

301s. Engineering Drawing

A repetition of 301f.

302s. Descriptive Geometry

Prerequisite: Drawing 301.

Credit value: Three semester hours. Fee: \$2.00.

Two one-half hour discussions and eight hours of supervised drawing per week.

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.

302f. Descriptive Geometry.

A repetition of 302s.

Aviation

411. Aeronautics

Prerequisite: Sophomore standing.

Credit value: Four semester hours. Fee: \$4.00.

Six lectures a week.

Given Summer 1943; both semesters 1943-1944.

This course conforms with the outline given by the Civil Aeronautics Administration for the Elementary (Private) Civilian Pilot Training Program. Not less than fourteen hours are devoted to Civil Air Regulations, twenty-four hours each to Air Navigation and Aeronautical Meteorology, and ten hours to General Servicing and Operation of Aircraft. Completion of this course satisfies the aeronautical knowledge requirements for a Private Pilot certificate.

ENGLISH AND PUBLIC SPEAKING

PROFESSOR SONNICHSEN; ASSOCIATE PROFESSOR ZIMMERMAN; ASSISTANT
PROFESSORS LANGSTON, MOSES, EGG; INSTRUCTORS BALL,
JAMES, PONSFORD

English

For the degree of Bachelor of Arts twelve semester hours in English are required—English 1 and English 12 or 12Q. English 1 and English 310 are required for the degree of Bachelor of Science in Mining Engineering; English 1 and English 12 or 12Q for the degree of Bachelor of Science in the Sciences. English majors are advised to take English 12, but may elect English 12Q if they so desire. Either English 12 or English 12Q may be presented as prerequisite to any advanced course in English.

1. Freshman English

Credit value: Six semester hours.

Three class periods per week.

A basic course required of all Freshmen designed to help the student clarify his ideas, organize his information, and improve his power of expression. The emphasis of the course is on writing; consequently theme writing receives the major stress. Emphasis is also placed on reading for ideas and style; on exercises and drills to promote correctness in usage and grammar; on use of the library; on scholarly form; and on the enlargement of vocabulary.

1as. Freshman English

Repetition of the first semester of English 1.

310fs. Technical Writing

Prerequisite: English 1.

Credit value: Three semester hours.

Three class periods per week.

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.

12. Outline History of English Literature

Prerequisite: English 1.

Credit value: Six semester hours.

Three class periods per week.

Survey of English literature from the beginning to the present time with emphasis on major works and authors. Two essays on some aspect of the life or literature of the periods covered are required each semester. Recommended for English majors.

12as. Outline History of English Literature.

Repetition of the first semester of English 12.

12Q. English and American Literature of Today

Prerequisite: English 1.
 Credit value: Six semester hours.
 Three class periods per week.

A course designed to replace English 12 for students not expecting to specialize in English. The reading includes novels, short stories, plays, poetry, biography, and nonfiction. Most of the material is by present-day writers, though literary specimens from the past, such as plays by Shakespeare, are frequently read for purposes of comparison and explanation. The object of the course is to help the student orient himself in the world of the present through a study of its literature, and to help him investigate various kinds of reading in which he may find pleasure and profit throughout his life. Two essays are required each semester on reading done outside of class.

12Qas. English and American Literature of Today

Repetition of the first semester of English 12Qa.

312Q. English and American Literature of Today.

The first semester of English 12Q offered for Engineering students and others in need of three hours independent credit in literature.

320f. Shakespeare: The Earlier Plays

Prerequisite: English 12 or 12Q.
 Credit value: Three semester hours.
 Three class periods per week.
 To be offered in 1944-1945.

Detailed study of a few of the plays composed before 1601, with a rapid reading of others belonging to the same period.

321s. Shakespeare: The Later Plays

Prerequisite: English 12 or 12Q.
 Credit value: Three semester hours.
 Three class periods per week.
 To be offered in 1944-1945.

Detailed study of some of the great tragedies, followed by a rapid reading of other plays written after 1600.

322f. Victorian Poetry

Prerequisite: English 12 or 12Q.
 Credit value: Three semester hours.
 Three class periods per week.
 To be omitted in 1944-1945.

Consideration of the poetic works of Browning primarily, and study of such noteworthy minor poets as Arnold, Clough, James Thompson, and others.

323s. Victorian Poetry

Prerequisite: English 12 or 12Q.
 Credit value: Three semester hours.

Three class periods per week,
To be omitted in 1944-1945.

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.

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.
Three class periods per week.

To be omitted in 1944-1945.

327f. *An Outline History of the English Novel*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Offered in 1943-1944; to be omitted in 1944-1945.

A study of prose fiction in England from the Middle Ages to the nineteenth century, particular attention being given to the novels of Richardson, Fielding, Smollett, Sterne, Walpole, Burney, Jane Austen, and Scott.

328s. *An Outline History of the English Novel*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Offered in 1943-1944; to be omitted in 1944-1945.

A continuation of English 327, with study of typical works of Dickens, Thackeray, the Brontes, George Eliot, Hardy, and Meredith.

329f. *English Romantic Poetry, the Earlier Phase*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

To be offered in the Summer of 1944.

Rapid survey of the revival of Romanticism in the eighteenth century, followed by a more detailed consideration of the works of Burns, Scott, Coleridge, and Wordsworth.

330s. *English Romantic Poetry, the Later Phase*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

To be offered in the Summer of 1944.

Consideration of the work of Byron, Shelley, Keats, and some of their contemporaries.

331f. *The Drama in England since 1660*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

A study of the representative plays of the Restoration, of the eighteenth and nineteenth centuries, and of such modern playwrights as Jones, Pinero, Barker, St. John Hankin, Shaw, Coward, Galsworthy, Maugham, Dane, etc.

332s. *The Development of the American Drama*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

A study of the drama of the Colonial and Revolutionary Periods, followed by a consideration of the development of the drama to modern times. Attention will be given to such modern playwrights as the Mack-eyes, Thomas, Sheldon, Kaufman and Connelly, Crothers, Hughes, Davis, Anderson, Rice, Hellman, Howard, Behrman, and O'Neill.

334f. *Contemporary Poetry*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Offered in 1943-1944; to be omitted in 1944-1945.

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.

335s. *Contemporary Prose*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Offered in 1943-1944; to be omitted in 1944-1945.

Prose of the late Victorians, Georgians, and post-war writers in England; parallel work by American writers during the same period.

336f. *American Literature*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Omitted in 1943-1944; to be offered in 1944-1945.

A study of the chief American poets and prose writers up to the Civil War.

337s. *American Literature*

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Omitted in 1943-1944; to be offered in 1944-1945.

A study of the most important poets and prose writers in America from the Civil War to the present.

339f. Early Eighteenth-Century Prose and Poetry

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Omitted in 1943-1944; to be offered in 1944-1945.

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.

340s. Later Eighteenth-Century Prose and Poetry

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Omitted in 1943-1944; to be offered in 1944-1945.

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. Thompson, Gray, Collins, Young, Chatterton, Cowper, Blake, and Burns will be given special study.

341f. The Short Story

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Offered in 1943-1944; to be omitted in 1944-1945.

The literature and technique of the short story; its rise and the nature of its form; examination of masterpieces and typical specimens from the short-story literature of England, America, Russia, France, and other countries.

342s. Life and Literature of the Southwest

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Offered in 1943-1944; to be omitted in 1944-1945.

A study of the social background of the Southwest and its reflection in literature.

355s. The American Novel

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Omitted in 1943-1944; to be offered in the Summer of 1944.

A careful study of representative American novels and novelists from 1850 to the present.

357f. The English Novel since 1900

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

To be offered in the Summer of 1944.

A survey of the English novel since 1900, concentrating on such figures as H. G. Wells, Arnold Bennett, John Galsworthy, Somerset Maugham, Aldous Huxley, J. B. Priestley, D. H. Lawrence, James Joyce, and Virginia Woolf.

358f. The English Language

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Omitted in 1943-1944; to be offered in 1944-1945.

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; development from the Anglo-Saxon period to modern times.

359s. The English Language

Prerequisite: English 12 or 12Q.

Credit value: Three semester hours.

Three class periods per week.

Omitted in 1943-1944; to be offered in 1944-1945.

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 student's native language.

98. Thesis Course for Master's Degree

Prerequisite: Twelve semester hours of advanced courses in English; graduate standing.

Credit value: Six semester hours.

Confer with the chairman of major department immediately after registration.

Public Speaking

301fs. Speech Correction

Credit value: Three semester hours.

Three class periods per week.

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.

305js. Principles of Speech

Prerequisite: Public Speaking 301.

Credit value: Three semester hours.

Three class periods per week.

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.

312f. Play Production

Prerequisite: Sophomore standing or six semester hours of Public Speaking.

Credit value: Three semester hours.

Three class periods per week.

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.

313s. Play Production

Prerequisite: Public Speaking 312.

Credit value: Three semester hours.

Three class periods per week.

A continuation of Public Speaking 312, with emphasis on casting, rehearsing, and directing.

320s. Oral Interpretation

Prerequisite: Junior standing, including six semester hours of Public Speaking.

Credit value: Three semester hours.

Three class periods per week.

A course 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.

321f. Radio Speech

Prerequisite: Junior standing including six semester hours of speech.

Credit value: Three semester hours.

Three class periods per week.

A course in the theory and practice of radio writing and speaking with special attention to radio drama.

GEOLOGY AND GEOGRAPHY.

PROFESSOR QUINN; ASSOCIATE PROFESSOR NELSON; INSTRUCTOR STRAIN

Geology

301f. Physical Geology

Prerequisite: None.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and two laboratory hours per week.

Given in 1943-1944; to be offered in 1944-1945.

A critical study of the principles of physiography and dynamic and structural geology.

302s. Historical Geology

Prerequisite: Geology 301.

Credit value: Three semester hours. Fee: \$2.00.

Three lectures and two laboratory hours per week.

Given in 1943-1944; to be offered in 1944-1945.

A critical study of the principles of stratigraphy, paleogeography and organic developments.

316f. Mineralogy

Prerequisite: Chemistry 1 (Chemistry 801 for engineering students).

Credit value: Three semester hours. Fee: \$2.00.

One lecture and six laboratory hours per week.

Given in 1943-1944; to be offered in 1944-1945.

Crystallography and blowpipe analysis; a study of the crystallographic, chemical, and physical of minerals and mineral determination by blowpipe methods. Classification of minerals.

317s and 217s. Mineralogy

Prerequisite: Geology 316.

Credit value: Geology 317. Three semester hours; Geology 217 two semester hours. Fee: \$2.00.

317s—One lecture and six laboratory hours per week.

217s—Six laboratory hours per week.

Given in 1943-1944; to be offered in 1944-1945.

Determinative mineralogy; a continuation of 316f. Largely devoted to the identification of minerals by physical characteristics.

418f. Invertebrate Paleontology

Prerequisite: Geology 301 and 302.

Credit value: Four semester hours. Fee: \$4.00.

Two lectures and six laboratory hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

A systematic study of the structure and classification of important invertebrates together with their development and geological significance.

419s. Paleontological Stratigraphy

Prerequisite: Geology 418.

Credit value: Four semester hours. The last two hours of this course count as advanced. Fee: \$4.00.

Two lectures and six laboratory hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

A comprehensive study of the stratigraphy of North America with special emphasis on that of West Texas and the Southwest.

421]. Advanced General Geology

Prerequisite: Geology 217 or 317; and Geology 302.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

Given in 1943-1944; to be offered in 1944-1945.

Certain topics of general geology such as stratigraphy, petrology, and structural geology are expanded in an advanced and quantitative manner.

322s. General Economic Geology

Prerequisite: Geology 217 or 317; and Geology 302.

Credit value: Three semester hours.

Three lectures.

Given in 1943-1944; to be offered in 1944-1945.

A general consideration of economic occurrences of mineral deposits and rocks with considerable attention given to those of Texas and the Southwest.

427s. Petrology and Petrography

Prerequisite: Geology 421 in advance or concurrently.

Credit value: Four semester hours. Fee: \$4.00.

Two lectures and six laboratory hours per week.

Given in 1943-1944; to be offered in 1944-1945.

The determination, origin, and subsequent history of minerals and rocks as revealed in mineral grains and thin sections by the petrographic microscope.

361s. Advanced Economic Geology

Prerequisite: Geology 427 in advance or concurrently and Geology 322.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and three laboratory hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

Discussions and original papers on new developments in the field of ore deposits. Methods of geological examination; preparation of geological reports and manuscripts; bibliography research; applications of the principles of ore deposition to the search for ore; advanced consideration of the mineral deposits of Texas.

463s. *Geology of Petroleum, the Fuels, and the Non-Metals*

Prerequisite: Geology 421.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

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 occurrence of the non-metallic mineral deposits, stressing those occurring in Texas and the Southwest.

264j. *Field Geology*

Prerequisite: Six semester hours of advanced courses in geology.

Credit value: Two semester hours.

One lecture and one afternoon in the field per week.

Given in 1943-1944; to be offered in 1944-1945.

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 for the successful completion of this course.

074s. *Geology Field Trip*

Prerequisite: Senior standing or permission of Head of Department of Geology.

Credit value: None.

A survey trip of about two weeks at close of the Spring term.

Given in 1943-1944; to be offered in 1944-1945.

A survey trip of about two weeks covering districts of geological interest.

Geography

303s. *Elements of Geography*

Prerequisite: None.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and three laboratory hours per week.

Given in 1943-1944; to be offered in 1944-1945.

A study of the major geographic realms emphasizing the relation of man to the various natural elements of his environment. 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.

304s. *Elements of Geography*

Prerequisite: Geography 303.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and three laboratory hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

A continuation of Geography 303.

HISTORY, GOVERNMENT, AND SOCIOLOGY

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

History

301/s. *Principles of American Democracy*

Prerequisite:

Credit value: Three semester hours.

Three lectures per week.

Survey of the factors that have affected the growth of American democracy; European background, American environment, development of social and political institutions, conflict with imperial control and separation, constitution making—state and national, Jeffersonian republicanism and Jacksonian democracy, the Civil War.

302/s. *The Contemporary Scene: United States and World Affairs*

Prerequisite:

Credit value: Three semester hours.

Three lectures per week.

Deals with the Industrial Revolution and its influence upon American industry; economic imperialism; American participation in world affairs; the First World War and after; economic depression; The New Deal; and the Second World War.

4. *History of England*

Prerequisite:

Credit value: Six semester hours.

Three lectures per week.

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.

308/s. *History of Europe, 1500-1815*

Prerequisite:

Credit value: Three semester hours.

Three lectures per week.

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.

309/s. *History of Europe, 1815-1914*

Prerequisite:

Credit value: Three semester hours.

Three lectures per week.

Brief survey of conditions at the time of Napoleon's downfall; 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 World War I.

312f. *The Ancient World*

Prerequisite: Sophomore standing or six semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

A survey of the ancient civilizations—Babylonian, Chaldean, Assyrian, Persian, and Egyptian; more intense 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.

313s. *Medieval Europe*

Prerequisite: Sophomore standing or six semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

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.

315f. *History of the United States to 1865*

Prerequisite: Sophomore standing, or six semester hours of history. Not open to those who have had History 301 and 302.

Credit value: Three semester hours.

316s. *History of the United States since 1865*

Prerequisite: Sophomore standing, or six semester hours of history. Not open to those who have had History 301 and 302.

Credit value: Three semester hours.

317f. *A General Survey of the History of Texas*

Prerequisite: Sophomore standing or six semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

323f. *Europe, 1870-1900*

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

A survey of the different countries of Europe and their internal developments to the close of the century.

324s. *Europe after 1900*

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

Europe in the twentieth century. The last years of peace, the World War, the peace treaties.

325f. History of the United States, 1607-1787

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

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.

326s. History of the United States, 1787-1829

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Confederation and Constitution; formulation of foreign policy; Jeffersonian Democracy and Hamiltonian Federalism; expansion and development of Jacksonian Democracy; rise of nationalism and conflict over states' rights.

330f. History of the Far East

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

To be offered in 1944-1945.

Modernization of the nations of the Far East with particular attention given in China and Japan. The social, political, economic, and intellectual aspects of this transformation are considered in the light of the impact of Western influences.

331s. Russian History

Prerequisite: Twelve semester hours of history.

Credit value: Three semester hours of history.

Three lectures per week.

335f. History of the United States, 1829-1850

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

Jacksonian Democracy; expansion of the United States into the South-west and Far West; development of the controversy over state rights; slavery and cotton capitalism.

336s. History of the United States, 1850-1865

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

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.

347f. *Latin America: The Colonial Period*

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

This course gives a survey of the history and institutional development of Spanish and Portuguese America in the Colonial period.

348s. *Latin America: The National Period*

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

This course deals with the empires and republics of Latin America after the Wars for Independence.

349s. *The Mexican Nation*

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

The cultural and political evolution of Mexico from Independence to the present time. Emphasis will be placed upon Mexico's social development, her people, their arts and crafts, the years of revolution and their aftermath.

353f. *A Survey of Political and Social Britain from 1815 to 1895*

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Omitted in 1943-1944; to be offered in 1944-1945.

Tory England, the beginnings of reform, leaders and events in the making of modern Britain.

354s. *Britain and the Empire from 1895 to the Present*

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Omitted in 1943-1944; to be offered in 1944-1945.

The Boer War, the Empire and foreign relations, the Liberal party and internal reform, the World War, the Treaty, Britain since 1919.

355f. *History of the United States since the Civil War, 1865-1900*

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

To be offered in 1944-1945.

Reconstruction, industrial development and regulation, sectionalism, grangers, greenbackers, populism, silver crusade, passing of the frontier, civil service reform, rise of imperialism.

356s. Contemporary History of the United States, 1900 to the Present

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

To be offered in 1944-1945.

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.

359s. The Anglo-American Southwest

Prerequisite: Twelve semester hours in history.

Credit value: Three semester hours.

Three lectures per week.

Given in Summer of 1943.

American expansion into Texas and the Far Southwest; filibustering expeditions into Texas; Pike and early exploratory expeditions; the Austins and American colonization of Texas; Santa Fe trade; Texas Revolution and Independence; Texas Republic; English and American Rivalry in Texas and California; Mexican War and acquisition of California.

98. Thesis Course for the Masters' Degree

Prerequisite: Twelve semester hours of advanced courses in history; graduate standing.

Credit value: Six semester hours.

Confer with the departmental head immediately after registration.

Government**310s and 10. American Government**

Prerequisite: Sophomore standing.

Credit value: For 310 or 10a, three semester hours; for 10, six semester hours.

Three lectures per week.

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.

322s. American State and Local Government

Prerequisite: Government 310 and 311.

Credit value: Three semester hours.

Three lectures per week.

Given in Summer of 1943.

Organization, powers, functions, and business methods of state and local administrative agencies; problems of integration, centralization, budget and fiscal control. Plans for reorganization and cooperation with federal and local agencies. Special reference to Texas.

330j. International Politics

Prerequisite: Government 310 and 311, or 10.

Credit value: Three semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

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.

331s. *International Organization and Administration*

Prerequisite: Government 310 and 311, or 10.

Credit value: Three semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

The development of the machinery and procedure of international government for the peaceful settlement of international disputes.

334f. *American National Government and Administration*

Prerequisite: Government 310 and 311, or 10.

Credit value: Three semester hours.

Three lectures per week.

Omitted in 1943-1944; to be offered in 1944-1945.

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.

335s. *American National Government and Administration*

Prerequisite: Government 310 and 311, or 10.

Credit value: Three semester hours.

Three lectures per week.

Omitted in 1943-1944; to be offered in 1944-1945.

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.

343f. *The Foreign Policies of the United States*

Prerequisite: Government 310 and 311, or 10.

Credit value: Three semester hours.

Three lectures per week.

Given in Summer of 1943.

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.

Sociology

310js. *Introduction to the Study of Society*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Three lectures per week.

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.

311js. Social Pathology

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Three lectures per week.

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.

332s. Public Opinion

Prerequisite: Sociology 310 and 311.

Credit value: Three semester hours.

Three lectures per week.

To be omitted in 1943-1944.

Analysis of the origins, processes, functions, limitations, measurement, special problems and laws of public opinion. Special attention is given to the formation of public opinion in wartime.

333f. Juvenile Delinquency

Prerequisite: Sociology 310 and 311.

Credit value: Three semester hours.

Three lectures per week.

A study of the causative factors in juvenile delinquency. Attention is given to the methods of social analysis, the clinical approach, the interrelation of physical, mental and social factors in delinquency. Emphasis upon the problem of delinquency in wartime.

334f. Social Problems in Wartime

Prerequisite: Sociology 310 and 311.

Credit value: Three semester hours.

Three lectures per week.

A study of social disorganization accompanying rapid change during wartime. The war program as it affects family life, health, education, morals, law observance and standards of living. Changes in social attitudes and values. A survey of national, state and local resources, and programs for approaching social problems growing out of the present war.

335s. Social Aspects of Post-War Planning

Prerequisite: Sociology 310 and 311.

Credit value: Three semester hours.

Three lectures per week.

A survey of the social problems that will probably grow out of the war: demobilization of men; reconversion of industry to a peacetime basis; problems resulting from wartime mobility, shifts in population, dislocation of families; vocational rehabilitation; a study of current social security plans such as the Beveridge Plan and the Wagner-Murray Bill.

347j. *Population Problems and Immigration*

Prerequisite: Sociology 310 and 311.

Credit value: Three semester hours.

Three lectures per week.

To be offered in 1944-1945.

Population movements and their social control; problems of population, distribution, and assimilation. Social questions attending the complex composition of the American people; and 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.

348s. *Criminology.*

Prerequisite: Sociology 310 and 311.

Credit value: Three semester hours.

Three lectures per week.

To be offered in 1944-1945.

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.

349s. *The Family*

Prerequisite: Sociology 310 and 311.

Credit value: Three semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

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.

JOURNALISM

ASSISTANT PROFESSOR WILLIAMS; INSTRUCTOR SAFFOLD

301j. *Introduction to Fields of Journalism*

Credit value: Three semester hours.

Three lectures per week.

Orientation course, giving an introduction in newspaper practice and the essentials of the field of journalism to acquaint the student who may be planning to major in that field with the problems ahead.

307j. *Elementary Photography*

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and four laboratory hours per week.

Learning of the normal order of the photographic process. Discussion of lenses and cameras along with the actual photographic process: ex-

posure, 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.

308f. Fields of Photography

Prerequisite: Journalism 307 or permission of the chairman of the department.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and four laboratory hours per week.

A continuation of Elementary Photography with special emphasis on commercial photography. A survey to the various fields of photography with a practical working knowledge taught of high-speed cameras and their most effective uses. Discussion of films—when and how to use them, filing systems for negatives and prints and the coloring and toning of photographs.

311j. News Gathering and Reporting

Prerequisite: Sophomore standing including English 1.

Credit value: Three semester hours.

Three lectures per week.

Instruction and practice in interviewing and writing: discussion of news sources, news values, and various types of news stories: study of the organization of the newspaper staffs and news gathering associations. Required of all students majoring in journalism. (Formerly, Journalism 12a.)

312s. News and Copy Reading

Prerequisite: Sophomore standing including English 1.

Credit value: Three semester hours.

Three lectures per week.

Theory of writing newspaper copy and writing headlines. Special instruction by leading newspaper men and women. Regular assignments on college publications. Required of all students majoring in journalism. (Formerly, Journalism 12b.)

313j. History and Principles of Journalism

Prerequisite: Sophomore standing including English 1.

Credit value: Three semester hours.

Three lectures per week.

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 the magazine of today.

315j. Basic Advertising

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Two lectures per week; four hours laboratory per week.

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 copy.

316f. Comparative Journalism

Prerequisite: English 1 and Sophomore standing.

Credit value: Three semester hours.

Three lectures per week.

Study of foreign and American publications.

316ks. Current Events

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Three lectures per week.

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.

319s. Radio News Processing

Prerequisite: English 1 and Sophomore standing.

Credit value: Three semester hours.

Two lectures per week; four hours laboratory per week.

The preparation of local and wire service news for radio news broadcasting and interpretation.

322f. The Special Article

Prerequisite: Journalism 311 and 312 or English 12.

Credit value: Three semester hours.

Three lectures per week.

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.

324s. News Editing

Prerequisite: Journalism 311 and 312 or Journalism 313.

Credit value: Three semester hours.

Two lectures per week; four hours laboratory per week.

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.

325f. Small Newspaper Production and Management

Prerequisite: Journalism 311 and 312.

Credit value: Three semester hours.

Three lectures per week.

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.

326s. Advertising, Copywriting and Special Layouts

Prerequisite: Journalism 311 and 312 and Journalism 315.

Credit value: Three semester hours.

Two lectures per week; four hours of laboratory per week.

Study of technique of copywriting and layout, direct mail advertising, circulars and department store layouts. Study of marketing and media.

329s. Principles of Typography

Prerequisite: Journalism 311 and 312.

Credit value: Three semester hours.

Two lectures per week; four hours of laboratory per week.

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.

340s. Editorial Writing and Direction

Prerequisite: Journalism 311 and 312.

Credit value: Three semester hours.

Three lectures per week.

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.

341s. Pictorial Journalism

Prerequisite: Journalism 311 and 312.

Credit value: Three semester hours. \$2.00 lab. fee.

Two lectures per week; four hours of laboratory per week.

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, photoengraving, elements of picture layouts.

MATHEMATICS AND PHYSICS

PROFESSOR KNAPP; ASSOCIATE PROFESSORS DURKEE, SCHWID; INSTRUCTORS
BARNES, CAMP, LILIES, RESLEY, CHAPMAN

Mathematics

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*

Prerequisite: One year of high-school geometry and one and one-half years of high-school algebra.

Credit value: Eight semester hours.

Four recitations per week.

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.

304js. *Mathematical Analysis*

Credit value: Three semester hours.

Three recitations per week.

An introductory course designed for academic students unifying the basic ideas of algebra, trigonometry, and analytical geometry by means of the function concept.

305js. *Algebra*

Credit value: Three semester hours.

Three recitations per week.

A review of secondary-school and intermediate algebra for engineering students whose background in this subject is deficient. This course may not be used to satisfy the mathematics requirement for the B.A. degree unless Mathematics 306 is also taken.

306js. *Trigonometry*

Credit value: Three semester hours.

Three recitations per week.

Fundamentals of trigonometry and its applications. Recommended to students who wish to enter military service and whose program does not include Mathematics 803.

307js. *Mathematics of Investment*

Prerequisite: Mathematics 304.

Credit value: Three semester hours.

Three recitations per week.

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 requirement or elective hours for the B.A. degree.

208s. *Solid Geometry*

Credit value: Two semester hours.

Two recitations per week.

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.

309fs. Mathematical Analysis

Prerequisite: Mathematics 304.

Credit value: Three semester hours.

Three recitations per week.

A continuation of Mathematics 304 and designed for students who do not plan to take other courses in mathematics.

13. Calculus

Prerequisite: Mathematics 208 unless solid geometry is presented for entrance, and Mathematics 803.

Credit value: Six semester hours.

Three recitations per week.

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.

325f. Calculus

Prerequisite: Mathematics 13.

Credit value: Three semester hours.

Three recitations per week.

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, and elementary Fourier expansions.

326s. Differential Equations

Prerequisite: Mathematics 13.

Credit value: Three semester hours.

Three lectures per week.

A study of the common types of ordinary and partial differential equations of geometry, mathematics, and electricity.

333f. Theory of Equations

Prerequisite: Mathematics 13.

Credit value: Three semester hours.

Three lectures per week.

Omitted in 1943-1944; to be offered in 1944-1945.

Theory of polynomials, cubic and quartic equations, approximate methods, determinants, symmetric functions, and other topics.

337s. *Modern College Geometry*

Prerequisite: Mathematics 13.

Credit value: Three semester hours.

Three lectures per week.

Omitted in 1943-1944; to be offered in 1944-1945.

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.

41. *Analytical Mechanics*

Prerequisite: Mathematics 13 and six credit hours in physics.

Credit value: Six semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

Equilibrium and motion of a particle and rigid body in two and three dimensions. May be counted as six advanced semester hours in physics.

Physics

1. *General Physics*

Credit value: Six semester hours. Fee: \$4.00.

Three lectures and two laboratory hours per week.

801. *General Physics*

Credit value: Eight semester hours. Fee: \$4.00.

Four lectures and two laboratory hours per week.

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.

12. *Second-Year Physics*

Prerequisite: Physics 1, and Mathematics 13 concurrently.

Credit value: Six semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

First semester: mechanics and heat.

Second semester: electricity and magnetism, light, and sound.

812. *Physics*

Prerequisite: Mathematics 13 concurrently.

Credit value: Eight semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

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.

222s. Sound and Light

Prerequisite: Physics 812.

Credit value: Two semester hours. Fee: \$2.00.

One lecture and three laboratory hours per week.

34. Electricity and Magnetism

Prerequisite: Physics 12 or 812 and Mathematics 13.

Credit value: Six semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

Advanced theory and laboratory work.

339f. Heat

Prerequisite: Mathematics 13 and six semester hours of physics.

Credit value: Three semester hours.

Three recitations per week.

Omitted in 1943-1944; to be offered in 1944-1945.

Advanced topics.

340s. Light

Prerequisite: Mathematics 13 and six semester hours of physics.

Credit value: Three semester hours.

Three lectures per week.

Omitted in 1943-1944; to be offered in 1944-1945.

Advanced topics.

41. Analytical Mechanics

Prerequisite: Mathematics 13 and six semester hours of physics.

Credit value: Six semester hours.

Three lectures per week.

Given in 1943-1944; to be omitted in 1944-1945.

MINING AND METALLURGY

PROFESSORS GRAHAM AND THOMAS; ASSISTANT PROFESSORS JENNESS AND BALL

Mining

521f. Mining Methods

Prerequisite: Geology 316, Drawing 302, and Physics 812.

Credit value: Five semester hours.

Five lectures per week.

Given Fall semester 1943-1944.

A comprehensive study of mining methods, including prospecting, development, exploitation, earth and rock excavation, explosives, tunneling, shaft sinking, timbering, boring, underground transport, and hoisting.

223s. Coal Mining

Prerequisite: Mining 521.

Credit value: Two semester hours.

Two lectures per week.

Omitted in 1943-1944; offered in 1944-1945.

The extraction, cleaning, and marketing of coal, and the manufacture of coke and collection of all the by-products are considered.

231s. Mining Hygiene

Prerequisite: Junior standing.

Credit value: Two semester hours.

Two lectures per week.

Omitted in 1943-1944; offered in 1944-1945.

Lectures and recitations. Prevention of communicable diseases, personal hygiene, public health, food, air, water, soil, ventilation and heating, sewage 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.

260f. Mine Plant

Prerequisite: Senior standing.

Credit value: Two semester hours.

Two lectures per week.

Omitted in 1943-1944; offered in 1944-1945.

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.

261s. Mine Plant

Prerequisite: Mining 260.

Credit value: Two semester hours. Laboratory fee: \$2.00.

One lecture and three laboratory hours per week.

Omitted in 1943-1944; offered in 1944-1945.

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.

262s. Mine Plant Design

Prerequisite: Mining 260 and Mining 267.

Credit value: Two semester hours. Fee: \$2.00.

Six laboratory hours per week.

Given in Summer of 1943-1944; offered in 1944-1945.

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.

267j. Management

Prerequisite: Completion of requirements for the Bachelor of Science degree by the end of the following Fall semester.

Credit value: Two semester hours.

Two lectures per week.

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 requirement for the Bachelor of Science degree by the end of the following Fall semester.

269s. Management

Prerequisite: Mining 267.

Credit value: Two semester hours.

Two lectures per week.

Given Spring semester, 1943-1944, and Summer, 1943.

A continuation of the work given in Mining 267.

074s. Mining Trip

Prerequisite: Completion of the requirements for the Bachelor of Science degree by the end of the following Fall semester.

Credit value: None; but required for graduation.

Omitted in 1943-1944.

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.

Metallurgy**321s. General Metallurgy**

Prerequisite: Chemistry 413, Physics 812, Geology 316 and 217.

Credit value: Three semester hours.

Three lectures per week.

Given in Fall semester, 1943-1944.

Introductory course covering a description of the various processes for treating all the ordinary metals, with a calculation of slags and furnace charges.

423f. Ore Dressing and Milling

Prerequisite: Geology 217, Drawing 302, and Physics 812.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

Given Spring semester, 1943-1944.

A study 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.

324s. Assaying

Prerequisite: Chemistry 323.

Credit value: Three semester hours. Fee: \$2.00.

One lecture and six laboratory hours per week.

The determination of gold, silver, and lead by fire methods in minerals, ores, and products of mills and smelters.

325f. Non-metallics

Prerequisite: Metallurgy 423 must have been completed, or if not, must be taken concurrently.

Credit value: Three semester hours.

Three lecture hours per week.

Omitted in 1943-1944; offered in 1944-1945.

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.

252f. Principles of Copper Smelting

Offered subject to demand.

Credit value: Two semester hours.

Two lectures per week.

Omitted in 1943-1944; offered in 1944-1945.

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.

253s. Electric Furnaces

Offered subject to demand.

Credit value: Two semester hours.

Two lectures per week.

Omitted in 1943-1944; offered in 1944-1945.

A foundation course in electric smelting and the commercial applications of the electric furnace.

361f. Iron, Copper, and Lead

Prerequisite: Metallurgy 321.

Credit value: Three semester hours.

Three lectures per week.

Given in Spring semester 1943-1944.

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.

261f. Iron, Copper, and Lead

Prerequisite: Metallurgy 321.

Credit value: Two semester hours.

Two lectures per week.

Given in Spring semester 1943-1944.

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.

362f. Metallurgy of Leaching Processes

Prerequisite: Metallurgy 321.

Credit value: Three semester hours. Fee: \$2.00.

Two lectures and three laboratory hours per week.

Given in Summer, 1943; omitted Long Session 1943-1944.

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.

263f. Advanced Ore Dressing

Prerequisite: Metallurgy 423.

Credit value: Two semester hours.

Two lectures per week.

Given in the Summer, 1943, and Spring semester, 1943-1944.

A study of the engineering features of ore dressing, machinery, and mill circuits.

364s. Metallurgical Laboratory

Prerequisite: Metallurgy 361 and Metallurgy 362.

Credit value: Three semester hours. Fee: \$2.00.

Nine laboratory hours per week.

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.

264s. Metallurgical Laboratory

Prerequisite: Metallurgy 361.

Credit value: Two semester hours. Fee: \$2.00.

Six laboratory hours per week.

Omitted in 1943-1944. Offered in 1944-1945.

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.

265f. Ore Dressing and Milling

Prerequisite: Metallurgy 263 in advance or concurrently.

Credit value: Two semester hours. Fee: \$2.00.

Six laboratory hours per week.

Given in Summer 1943 and Spring semester 1943-1944.

Ore testing and mill design.

473s. Metallography

Prerequisite: Metallurgy 261.

Credit value: Four semester hours. Fee: \$4.00.

Three lectures and three laboratory hours per week.

Given Fall semester 1943-1944.

An elementary course in the metallography of various metals and products and the heat treatment of iron and steel.

074s. Metallurgical Trip

Prerequisite: Completion of the requirements for the Bachelor of Science degree by the end of the following Fall semester.

Credit value: No credit, but required for graduation.

Omitted in 1943-1944.

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.

MODERN LANGUAGES

PROFESSOR BACHMANN; ASSISTANT PROFESSORS AVRETT, ELDRIDGE, SPERRY

Students entering with two units of high-school language normally enter Course 1a in the same language. With three units they enter 1b and with four units they may enter 12a if their preparation seems adequate to the department; otherwise they will be placed in 1b.

Students with less than two years of high-school language and such as show exceptional proficiency may take a placement test to determine which course they should enter to their best advantage. However, in all cases and regardless of the course with which the student starts he must take twelve semester hours of *numbered courses* to fulfill the language requirement for the B.A. degree.

The Aa and Ab courses while carrying six elective hours of elementary credit do not count as one of the language courses prescribed for the degree and are intended primarily for such students as have not had two years of high-school language or their equivalent.

French, German, Spanish*A. Fundamentals of Grammar and Pronunciation*

Credit value: Six semester hours.

Three lecture hours per week.

Elementary grammar; reading of easy texts; dictation; oral drill; conversation.

1. Grammar, Reading and Composition

Prerequisite: Course A or two admission units in the language.

Credit value: Six semester hours.

Three lecture hours per week.

Grammar review, written exercises, dictation, reading of intermediate texts. Outside readings with weekly conferences and reports.

12. Intermediate Readings in the Modern Period

Prerequisite: Course 1.

Credit value: Six semester hours.

Three lecture hours per week.

Selected readings from the nineteenth and twentieth centuries. Some grammar review, reports, conferences and outside readings.

French

326f. *History of French Literature: Early Period*

Prerequisite: French 12.

Credit value: Three semester hours.

Three lecture hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

An outline survey of French Literature from Rabelais to Chénier.
Collateral reading and reports.

328s. *History of French Literature: Later Period*

Prerequisite: French 12.

Credit value: Three semester hours.

Three lecture hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

An outline survey of French Literature from Chateaubriand to Anatole France.

340. *Modern Drama: Later Period*

Prerequisite: French 12.

Credit Value: Three semester hours.

Three lecture hours per week.

Given in the Summer session of 1943.

348s. *French Naturalism*

Prerequisite: French 12.

Credit value: Three semester hours.

Three lecture hours per week.

Offered in 1943-1944; to be omitted in 1944-1945.

A study of outstanding types of fiction of the later nineteenth century, including such authors as Maupassant, Zola, and Flaubert as well as such naturalistic playwrights as Becque, Augier, Brieux, and others.

357f. *Advanced Composition and Grammar Review*

Prerequisite: French 12.

Credit value: Three semester hours.

Three lecture hours per week.

Offered in 1943-1944; to be omitted in 1944-1945.

A course recommended especially for prospective teachers and language majors. Exercises in oral and written composition and translation.

377. *History of French Poetry*

Prerequisite: French 12.

Credit value: Three semester hours.

Three lecture hours per week.

Given in the Summer session of 1943.

Spanish

1q. Practical Spoken Spanish

Prerequisite: Course A or two admission units in Spanish.

Credit value: Six semester hours. (Formerly Spanish 301.)

Three lecture hours per week.

A course intended primarily for those students wishing to develop a fluency in conversational practice. Only the minimum essentials of grammatical illustration are included. This course is not intended for language majors or minors, nor for students who already speak Spanish.

13. Advanced Conversation and Social and Business Spanish

Prerequisite: Spanish 1 or 1q.

Credit value: Six semester hours.

Three lecture hours per week.

Training in Spanish social and business practices in every-day life. This course is not intended for language majors or minors.

326f. History of Spanish Literature: Early Period

Prerequisite: Spanish 12.

Credit value: Three semester hours.

Three lecture hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

An outline survey of Spanish Literature from its beginnings through the Golden Age. Selected class readings; outside readings and reports.

327s. History of Spanish Literature: Later Period

Prerequisite: Spanish 12.

Credit value: Three semester hours.

Three lecture hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

An outline survey of Spanish Literature from the seventeenth century to the contemporary period. Selected class readings; outside readings and reports.

332s. Classical Epoch Prose

Prerequisite: Spanish 12.

Credit value: Three semester hours.

Three lecture hours per week.

Offered in 1943-1944; to be omitted in 1944-1945.

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 selected masterpieces; outside readings and reports.

334f. *Early Epics and Ballads*

Prerequisite: Spanish 12.

Credit value: Three semester hours.

Three lecture hours per week.

Offered in 1943-1944; to be omitted in 1944-1945.

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.

335f. *Modern Novel: Early Period*

Prerequisite: Spanish 12.

Credit value: Three semester hours.

Three lecture hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

A study of the trends in the development of the novel from the latter part of the eighteenth to the latter part of the nineteenth century. Readings from such authors as Padre Isla, Fernán Caballero, Alarcón, Juan Valera, Pereda, Pérez Galdós, Pardo Bazán, etc.; outside reading reports.

336f. *Modern Drama: Early Period*

Prerequisite: Spanish 12.

Credit value: Three semester hours.

Three lecture hours per week.

Offered in 1943-1944; to be omitted in 1944-1945.

A study of the trends in the development of the drama from the latter part of the eighteenth to the latter part of the nineteenth century. Readings from such dramatists as Moratín, Martínez de la Rosa, Bretón de los Herreros, López de Ayala, Tamayo y Baus, etc.; outside reading reports.

337s. *Modern Novel: Later Period*

Prerequisite: Spanish 12.

Credit value: Three semester hours.

Three lecture hours per week.

Omitted in 1943-1944; to be offered in 1944-1945.

A study of the Spanish novel from the latter part of the nineteenth century to the present. Selected readings from Palacio Valdés, Blasco Ibáñez, Baroja, Ricardo León, Pérez de Ayala, Concha Espina, etc.; outside reading reports.

338. *The Romantic Period*

Prerequisite: Spanish 12.

Credit value: Three semester hours.

Three lecture hours per week.

Given in the Summer session of 1943.

340s. Modern Drama: Later Period

Prerequisite: Spanish 12.
Credit value: Three semester hours.
Three lecture hours per week.
Offered in 1943-1944; to be omitted in 1944-1945.

A study of the Spanish drama from the latter part of the nineteenth century to the present. Readings from the works of representative dramatists, including Echegaray, Pérez, Galdós, Benavente, los Quinteros, etc.; outside reading reports.

358f. Contemporary Literature

Prerequisite: Spanish 12.
Credit value: Three semester hours.
Three lecture hours per week.
Given in the Summer session of 1943

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

301fs. Sight Singing and Elementary Theory

Prerequisite: Open to all students.
Credit value: Three semester hours.
Three lectures per week.
To be offered in 1944-1945.

This course includes elementary theory and its application, i.e., scale building, music notation applied in singing of melodies at sight and melody dictation.

302s. Beginner's Harmony

Prerequisite: Music 301 or consent of instructor.
Credit value: Three semester hours.
Three lectures per week.
To be offered in 1944-1945.

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.

18. Second Course in Harmony

Prerequisite: Music 301 and 302.

Credit value: Six semester hours.

Three lectures per week.

To be offered in 1944-1945.

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 harmonics, transition, modulation, and further work in keyboard harmony.

30. History of Music

Prerequisite: Music 301 and 302 and Junior standing.

Credit value: Six semester hours.

Three lectures per week.

To be offered in 1944-1945.

A general course covering the entire field of music beginning with the ancient tribes and tracing its development through to the contemporary composers.

331fs. Music Appreciation

Prerequisite: Junior standing.

Credit value: Three semester hours.

Three lectures per week.

To be offered in 1944-1945.

A course offered to all students for advanced elective credit. The survey of musicians and their works, beginning with Bach, is an opportunity for the non-music student to enrich his musical understanding.

40. Counterpoint

Prerequisite: Music 301 and 302, and Junior standing.

Credit value: Six semester hours.

Three lectures per week.

Omitted in 1943-1944; to be offered 1944-1945.

This course is a study of the melodic tones; melody formation; two, three, and four-part counterpart in all species; invertible counterpart; canonic imitation; and original writing in the contrapuntal forms.

50. Analysis and Conducting

Prerequisite: Twelve semester hours of music including 301 and 302.

Credit value: Six semester hours.

Omitted in 1943-1944; to be offered in 1944-1945.

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.

353j. Public School Music Methods

Prerequisite: Education 317 or 318, and Music 301.

Credit value: Three semester hours.

Three lectures per week.

To be offered in 1944-1945.

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.

Applied Music

01. Band Ensemble

Prerequisite: Open to all wind and percussion instrumentalists.

Credit value: Non-credit.

Five hours per week.

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.

02. Choir Ensemble

Prerequisite: Open to all students interested in choral work.

Credit value: Non-credit.

Five hours per week.

The mixed choral ensemble on the campus made available to all students interested in choral singing.

03. Orchestra Ensemble

Prerequisite: Open to all string instrumentalists.

Credit value: Non-credit.

Five hours per week.

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 Wind Instrument Technique

Prerequisite: Music 01.

Credit value: Six semester hours. Fee: \$10.00.

Three lectures and six practice hours.

The course is so designed as to permit each student to acquaint himself with all the wind 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.

12. *Class Voice*

Prerequisite: Music 02.

Credit value: Six semester hours. Fee: \$10.00.

Three lectures and six practice hours.

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.

13. *Class Strings*

Prerequisite: Music 03.

Credit value: Six semester hours. Fee: \$10.00.

Three lectures and six practice hours.

This course is designed to acquaint students with string instrument technique as well as to study major works in the string quartet, orchestra or solo field.

329-339-349-359. *Class Piano*

Prerequisite: Permission from departmental head.

Credit value: Three semester hours. Fee: \$10.00.

Three classes and six practice hours.

PHILOSOPHY AND PSYCHOLOGY

PROFESSOR ROTH

Philosophy

312f. *Logic*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

Introduction to essentials of correct thinking; deductive and inductive reasoning; fallacies and argumentation; scientific methodology.

314f. *Problems of Philosophy*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Omitted in 1943-1944; to be offered in 1944-1945.

An introduction to the main general problems of philosophy such as those of matter, mind, life, truth and value.

315s. *Ethics*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Omitted in 1943-1944; to be offered in 1944-1945.

Introductory survey of the evolution of moral codes and ideals; reflective morality; conduct and character; conflicts of interests; personal and social ethics.

316s. *Philosophies of Life*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Omitted in 1943-1944; to be offered in 1944-1945.

A study of the various classical philosophies of life and their moral, religious and esthetic values.

317s. *The Philosophy of Civilization*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

A comprehensive study of the development of civilization and culture; man's place in the world today and his potential destiny.

330f. *Ethics of Human Relationships*

Prerequisite: Junior standing.

Credit value: Three semester hours.

Given in 1943-1944; to be given in 1944-1945.

An attempt to find functional bases for the practical solution of realistic problems involved in human relationships; the implications of man's biological interrelatedness, psychological motivations, social and economic interdependence will be stressed.

331f. *Integration of the Fields of Knowledge*

Prerequisite: Junior standing.

Credit value: Three semester hours.

Given in 1943-1944; to be given in 1944-1945.

An attempt to show the interrelationship of the several branches of human knowledge; the close bond existing among the physical, biological and social sciences; our quest to synthesize such knowledge so as to evolve therefrom a clearer perspective as to the purpose of God and the Universe, man's place in the world and his ultimate destiny.

Psychology

310f. *Introductory Psychology*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

A survey of the field of general psychology.

311s. *Fields of Psychology*

Prerequisite: Psychology 310 or its equivalent.

Credit value: Three semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

Survey of applied, business, industrial, abnormal and social psychology; mental measurements and experimental methods.

316s. Business Psychology

Prerequisite: Psychology 310 or its equivalent.

Credit value: Three semester hours.

Omitted in 1943-1944; to be offered in 1944-1945.

A study of the psychological factors and principles involved in modern business, industry, marketing, advertising and salesmanship.

320f. The Psychology of Personality

Prerequisite: Psychology 310, and three additional semester hours of either philosophy or psychology.

Credit value: Three semester hours.

Omitted in 1943-1944; to be offered in 1944-1945.

A study of the fundamental traits of personality, their origin, development and control; maladjustments and disorders of the personality and their treatment.

344s. Mental Hygiene

Prerequisite: Six semester hours in psychology or philosophy, or both.

Credit value: Three semester hours.

Omitted in 1943-1944; to be offered in 1944-1945.

351f. Social Psychology

Prerequisite: Six semester hours in psychology or philosophy, or both.

Credit value: Three semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

A study of social phenomena: social motivation, behavior and control.

352s. Abnormal Psychology

Prerequisite: Six semester hours in psychology or philosophy, or both.

Credit value: Three semester hours.

Given in 1943-1944; to be omitted in 1944-1945.

Suggestibility and hypnotism; dreams; nervous and mental disorders; mental effect of drugs; normal and abnormal motivation; the concept of insanity; spiritistic phenomena. Lectures and demonstrations.

HEALTH, PHYSICAL EDUCATION AND RECREATION

PROFESSORS McCARVER, CURTICE; ASSOCIATE PROFESSOR MILNER; INSTRUCTORS KANE, DAVIS AND HEINEMAN

Service Courses

The service courses are provided (1) to promote vigorous, mental, emotional, social and physical health for meeting this wartime emergency; (2) to further the education of the individual through physical activities; (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 skills, knowledge and achievement. Class instruction is supplemented by a varied program of intramural sports for men and for women which gives an opportunity for additional participation and recreation.

The service courses for men are designed to provide vigorous, strenuous, and aggressive activities that will be of military value. All men students will be given instruction in the following activities: touch football, tumbling, gymnastics, speedball, boxing, wrestling, basketball, military track, hand to hand fighting, swimming, and other minor sports.

Service courses will be numbered from 01 to 09 for freshmen men and women 010 to 019 for sophomore men and women.

Professional Courses in Health and Physical Education

Physical Education

The majors in Physical Education are strongly urged to have one minor in Health Education and a second minor in another teaching field.

Those who wish to qualify as physical education teachers or as 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 part-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.)

3. All beginning classroom teachers who direct or teach any part of the Physical or Health Education program must have at least six semester hours of college credit in professional teacher-training courses in that field. Beginning teachers should register for Health Education 310 and Physical Education 321.

312f. Methods in Physical Education

Prerequisite: Sophomore standing.

Credit value: Three semester hours. Fee: \$2.00.

One lecture and four laboratory hours per week.

Open to men only.

Theory and practice in Physical Education activities that are applicable to the elementary and junior high-school boy, with special emphasis on elementary tumbling, apparatus, calisthenics, pyramid building, stunts, and games.

16. Major Sports

Prerequisite: Sophomore standing.

Credit value: Six semester hours.

Three lecture hours per week.

Coaching methods in football, basketball, and track. Training, conditioning, practice schedules, and sport fundamentals are stressed.

319s. *Organization and Administration of Physical Education*

Prerequisite: Sophomore standing.

Credit value: Three semester hours.

Three hours of lecture per week.

The place of Physical Education in the total educational situation will be presented, along with fundamental aspects of a well-rounded Physical Education program. Particular emphasis will be placed on the administrative problems underlying a functional program.

321f. *Curriculum Construction*

Prerequisite: Junior standing.

Credit value: Three semester hours.

Three hours of lecture per week.

A study of the principles of curriculum construction, the philosophy of play, content, progression and organization of the play program for all levels of the educational program. A curriculum to meet a specific situation will be outlined.

322s. *Methods in Physical Education—Advanced*

Prerequisite: Junior standing.

Credit value: Three semester hours. Fee: \$2.00.

One hour of lecture and four laboratory hours per week.

Open to men only.

Theory and practice in Physical Education activities that are applicable to the high-school boy. Advanced teaching skills and methods will be introduced in tumbling, apparatus work, gymnastics, boxing, wrestling, track activities, gymnasium games, and certain minor sports.

323f. *Methods in Physical Education (Co-educational)*

Prerequisite: Junior standing.

Credit value: Three semester hours. Fee: \$2.00.

One hour of lecture and four laboratory hours per week.

Theory and practice in the methods of teaching co-educational activities. The activities included are: swimming, dancing, tennis, volleyball, playground ball, soccer, speedball, badminton, camping, fishing, hiking, hobbies, horseshoes, shuffleboard, bowling, etc.

350f. *Organization of Community Recreation*

Prerequisite: Junior standing.

Credit value: Three semester hours.

Three hours of lecture per week.

Methods of organizing and directing community recreation. The nature and scope of a public recreation program, the various agencies providing recreation and the problems for administering a comprehensive program.

351js. Recreational Leadership

Prerequisite: Junior standing.

Credit value: Three semester hours.

Three hours of lecture per week.

Students will be given an opportunity to assemble a wide variety of recreational materials suitable to the varied interests of children, adolescents and adults. Actual leadership experience will be provided.

353Ks. Methods and Materials in Teaching Physical Education for Women

Prerequisite: Junior standing.

Credit value: Three semester hours. Fee: \$2.00.

One hour of lecture and four laboratory hours per week.

Theory and practice in the technique of sports and activities included in the Physical Education program for the elementary school.

354f. Methods in Physical Education for Women (Advanced)

Prerequisite: Junior standing.

Credit value: Three semester hours. Fee: \$2.00.

One hour of lecture and four laboratory hours per week.

Theory and practice in the development of skill in activities adaptable to the high-school girl.

355s. Adaptation of the Program to Special Cases

Prerequisite: Junior standing.

Credit value: Three semester hours.

Three hours of lecture per week and special field trips.

The need for emphasis on prevention and correction of defects as a part of the Physical Education program. The specific exercise treatment for certain functional and structural conditions in cooperation with the school physician.

356f. Tests and Measurements in Health and Physical Education

Prerequisite: Junior standing.

Credit value: Three semester hours.

Three hours of lecture per week.

A study of tests will be made, both in Health and Physical Education as to their purpose and use, scoring and interpretation.

Health Education**310fs. Individual Hygiene**

Prerequisite: Sophomore standing. (Required of all women January, 1943.)

Credit value: Three semester hours.

Three hours of lecture per week.

Study of home and community health problems. Emphasis and stress on physical fitness, prevention of disease, safety, establishment of proper health habits, and knowledge to use effectively medical science.

320f. Community Hygiene

Prerequisite: Health Education 310 or approval of the department head.

Credit value: Three semester hours.

Three hours of lecture per week and special field trips.

Consideration of health of people as a group and with the social and governmental agencies which are concerned with environmental control and health protection.

330s. School Health Problems

Prerequisite: Health Education 310 or 320 or approval of the department head.

Credit value: Three semester hours.

Three hours of lecture and special field trips.

Major problems of the organization and administration of school health programs will be analyzed.

340f. Developmental Health

Prerequisite: Health Education 310 and 320 or approval of the department head.

Credit value: Three semester hours.

Three hours of lecture per week.

Study of the health problems developing at the various maturity levels, from birth to senility.

344s. Mental Hygiene (Psychology)

Prerequisite: Six semester hours in psychology or in Philosophy or both.

Credit value: Three semester hours.

Three lecture hours per week.

Educational psychology may be counted as one of the prerequisites.

360s. Methods and Materials in Health Education

Prerequisite: Health Education 310 and 320 or approval of the department head.

Credit value: Three semester hours.

Three lecture hours per week.

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.

COLLEGE OF MINES AND METALLURGY

REGISTER OF STUDENTS

Summer Session 1943

Acosta, Lorenza	El Paso	Brown, Joseph R.	El Paso
Adams, Barbara	El Paso	Brown, Margaret Nolan	El Paso
Aguilar, Lorenzo	Juarez, Chih., Mex.	Brown, Wendell	El Paso
Aguilar, Ruperto G.	Juarez, Chih., Mex.	Bruce, Jane	El Paso
Alexander, Harold	El Paso	Bryant, Marjorie	El Paso
Allen, D. Jayne	El Paso	Bubb, Alleine	El Paso
Allen, Mary	El Paso	Bubb, Harry	El Paso
Allison, John	El Paso	Burchell, Ann Kathleen	El Paso
Alvarez, Antonio	Juarez, Chih., Mex.	Burchell, Margo	El Paso
Alvarez, Lucy	El Paso	Burleson, John	El Paso
Alvarez, Raul	Juarez, Chih., Mex.	Burleson, Lewis	El Paso
Anderson, Amelia	El Paso	Cairns, Shirley	El Paso
Arguelles, Eduardo	El Paso	Calderhead, Elva Jane	El Paso
Arnold, Earl	El Paso	Camp, Bettie Sue	El Paso
Arroyo, Robert	El Paso	Camp, Jennie	El Paso
Arroyo, Vicente	El Paso	Campbell, Gene	El Paso
Attel, Alice	El Paso	Capron, Bette	El Paso
Autrey, Byron	Kermit	Carameros, Alex Hector	El Paso
Ayub, Pablo	El Paso	Carey, Naomi	El Paso
Baca, Francisco	El Paso	Carpenter, Andrew	El Paso
Baca, Susie	El Paso	Carr, Warren E.	Sterling City
Bailey, Elinor	El Paso	Carrroll, William H.	El Paso
Baker, David Knight	El Paso	Carruth, James S.	El Paso
Bales, Mrs. Londaline	El Paso	Cartwright, Joy Ann	El Paso
Ball, Flora	El Paso	Casas, David	El Paso
Ballentine, John Richard	Ysleta	Casner, Edward H.	El Paso
Barboglio, Celestine	El Paso	Chaffee, Rowand	El Paso
Barger, Corie	El Paso	Chappell, Dorothy	El Paso
Barger, Mrs. Eleanor	El Paso	Chew, Gloria	El Paso
Barnes, E. Orris	El Paso	Clark, Oma	El Paso
Bean, Henry Ellis	El Paso	Clarke, Patricia	El Paso
Beattie, Bonnie Janice	El Paso	Clayton, Frances	El Paso
Beckett, Robert	El Paso	Clegg, Joyce	El Paso
Bejarano, Manuel	Anthony, N. M.	Coffin, Rebekah	El Paso
Bell, Helen	El Paso	Cole, Mrs. Dorothy	El Paso
Bernard, Molly	El Paso	Collins, Spencer	Midland
Bixler, Glen J.	El Paso	Cook, Ellen	El Paso
Blair, Anita Lee	El Paso	Cooper, Delphine	El Paso
Blakely, Mary C.	El Paso	Cordova, Luis	Juarez, Chih., Mex.
Blaugrund, Maurice H.	El Paso	Cottingim, Quillen	El Paso
Bogardus, Mrs. Louise	El Paso	Cousar, Robert Moore	El Paso
Boling, Dixie	El Paso	Crowley, Michael	El Paso
Borunda, Carlota	El Paso	Cuellar, Ramiro	Juarez, Chih., Mex.
Bothwell, Robert	El Paso	Cuellar, Raul Hermilo	Juarez, Chih., Mex.
Bowers, Walter	El Paso	Daniels, Mary	Anthony, N. M.
Braem, Minnie Mae	El Paso	Davidson, Mae	El Paso
Bremer, Charles	El Paso	Davis, Mary Virginia	El Paso
Bremer, Frank Anthony	El Paso	Davis, Thelma	El Paso
Briones, Amelia	El Paso	Deason, Otha C.	El Paso

Dehlinger, Betty Lou	El Paso	Hague, James	El Paso
de la Garza, Edmundo		Hall, A. C.	El Paso
	Juarez, Chih., Mex.	Hamrah, Joe	El Paso
Devlin, Thomas F.	El Paso	Handy, Lavon	El Paso
Diaz, Oscar	Juarez, Chih., Mex.	Hanley, Julia M.	El Paso
Dickson, Margaret Hamilton	El Paso	Hanrahan, Peggy	El Paso
Douglas, Rosemary	El Paso	Harper, Annie L.	El Paso
Duran, Alejandro	El Paso	Harwell, Ann	El Paso
Duran, Gilbert	Juarez, Chih., Mex.	Head, Alice Galloway	El Paso
Dwyer, Pat	El Paso	Hearn, Mary Alice	El Paso
Eason, Etna	El Paso	Hebron, Teresa	El Paso
Edge, Mary Jane	El Paso	Heffield, Tallulah	El Paso
Egbert, Orvill	El Paso	Heininger, Jean	El Paso
Ekery, Gabriel A.	El Paso	Henry, Mrs. Mary	El Paso
Ellington, Leslye	Ysleta	Hernandez, Mario	El Paso
Esparza, Socorro	El Paso	Herrera, Jess	El Paso
Espey, Martha	El Paso	Hickerson, Carlos, Jr.	El Paso
Ewing, Helen	El Paso	Higdon, Therese	El Paso
Farenkamp, Blanche	El Paso	Hinojosa, Barbara	El Paso
Farquear, Phyllis	El Paso	Hintze, Wm. Robert	El Paso
Feltham, Charlsie	El Paso	Hoadley, Lloyd	El Paso
Finalle, Leone M.	El Paso	Holguin, Henry A.	El Paso
Fisher, Doris Gruber	El Paso	Howard, Mary Lee Klink	El Paso
Fisher, Dorothy	Canutillo	Huestis, Maryon	El Paso
Fisher, Josephine	El Paso	Huffaker, Mrs. Lois	El Paso
Fisher, Mrs. Lovella S.	El Paso	Huggett, Lillian G.	El Paso
Flores, Consuelo	El Paso	Hungerford, Mrs. Betty	El Paso
Flores, Jose	El Paso	Iverson, Marguerite	El Paso
Fogle, Katie Sue	El Paso	Izquierdo, Mike	El Paso
Foote, Mrs. Sara	El Paso	Jackson, Armand	El Paso
Foster, Fanny	El Paso	Jameson, Naomi	El Paso
Foster, Inez	El Paso	Jarvis, William	El Paso
Fox, Nan	El Paso	Jauregui, Luis Antonio	
Frias, Yolanda	El Paso		Juarez, Chih., Mex.
Fuller, Dora	El Paso	Johnson, Glen	El Paso
Gaddy, Burrell	El Paso	Johnson, Rosemary	El Paso
Gaddy, Rachel	El Paso	Jones, Bobby	Clint
Garcia, Bertha	El Paso	Jones, Mary Alice	El Paso
Garcia-Nunez, Ana	El Paso	Jones, Raymond	El Paso
Gardea, Joe	El Paso	Karal, Frank C.	El Paso
Gault, Helen	El Paso	Keeling, Mabel	El Paso
Gifford, La Von N.	El Paso	Kelley, Anna Marie	El Paso
Gill, Mrs. W. G.	El Paso	Kelly, Ellen	Clint
Glass, Jimmie	El Paso	Kennedy, Ann	Dallas
Goldberger, Jerry	El Paso	Kennedy, William Morrison	El Paso
Goldfarb, Irvin	El Paso	Kiefer, Della	El Paso
Gonzalez, Frank S.	El Paso	Kilgore, John Douglas	El Paso
Gonzalez, Oscar	El Paso	Kilgore, Katherine M.	El Paso
Goodman, Haskell	El Paso	Knight, Zena Oliver	El Paso
Graf, Faith	El Paso	Knox, Betty Frances	El Paso
Grant, Ruby	El Paso	Konkright, Pat	El Paso
Graves, Joseph B., Jr.	El Paso	Kowalewski, Alfinia M.	El Paso
Gruber, Juanita	El Paso	Labbe, O. A.	El Paso
Guffey, Lorraine	El Paso	Lait, Shirley Louise	El Paso
Guthrie, Julia Ann	El Paso	LaMar, C. H.	El Paso
Gutierrez, Enrique Ernest		LaRock, Thomas Byron	El Paso
	Juarez, Chih., Mex.	Lavin, Bertha	El Paso
Hadlock, Viola Mary	El Paso	Eawson, Fred	El Paso

Register of Students

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Layne, Harold	El Paso	Oppenheimer, Larry	El Paso
Lazanas, George H.	El Paso	Ostertag, Edward F.	El Paso
Leasure, Ruth	El Paso	Owen, John	El Paso
Leib, Sylvia	El Paso	Paddock, Mrs. Alice	El Paso
Leon, Luz	El Paso	Palafox, Fernando	El Paso
Lewis, Betty	El Paso	Palafox, Mario	El Paso
Lewis, Carolyn Ruth	El Paso	Paredés, Oliver	El Paso
Little, Dorothy	El Paso	Park, Mary Jane	El Paso
Lorentzen, Wayne	El Paso	Parker, Darrell	El Paso
Lovret, Clinton	El Paso	Patterson, Margaret H.	El Paso
Lowrey, Bessie	Ysleta	Perez, Porfirio	El Paso
Luckett, Joe	El Paso	Perry, Jack	Artesia, N.M.
McAllister, Hazel	El Paso	Phillips, Lillian	El Paso
McAlmon, Mrs. G. A.	El Paso	Pickens, Alma	El Paso
McConn, Richard L.	El Paso	Pillow, D. L.	El Paso
McDow, Ishmael	El Paso	Piper, Betty Grace	El Paso
McKinley, Leroy	El Paso	Plowman, Averil	Anthony, N.M.
McTier, Eldon	El Paso	Ponsford, Marian	El Paso
Maddox, Sara Thomas	El Paso	Porras, Jesus Arturo	El Paso
Malooly, Rosaleen	El Paso	Pressy, Ruth	El Paso
Manker, Charles	El Paso	Puckett, Eugene J.	El Paso
Mann, Ruth E.	El Paso	Puente, Victor	El Paso
Manzanares, Martha	El Paso	Purdy, Bernard	El Paso
Marczeski, John A.	El Paso	Pyburn, John Raymond	El Paso
Marner, Beatrice	El Paso	Pyburn, Muriel	El Paso
Maros, Mary	Fabens	Quintana, Lawrence	El Paso
Mason, Mrs. Barry	El Paso	Quintanilla, Carlos G.	El Paso
Masten, Frank	El Paso	Rabe, Carlyle J.	El Paso
Mayo, Jessie Julia	Brownwood	Rains, Marjory	El Paso
Mellen, Barbara	El Paso	Rallis, John	El Paso
Meyers, Roberta	El Paso	Ralston, Stanley	El Paso
Mier, Rosa Maria	El Paso	Ramke, Elise	El Paso
Miller, Mrs. Harry L.	El Paso	Rasmussen, Evelyn	El Paso
Miller, John William	El Paso	Rathbun, Donald	El Paso
Miller, Mrs. Lucille	El Paso	Reavis, Mary Alice	El Paso
Mings, Robert	El Paso	Redic, Mrs. Elizabeth B.	El Paso
Molloy, Mrs. Grace T.	Ysleta	Reeves, Mary Alice	El Paso
Montes, Ezequiel	El Paso	Rheinheimer, Frieda J.	El Paso
Mooney, James L.	El Paso	Rhett, Barbara C.	El Paso
Moore, Imogene	El Paso	Richards, George	El Paso
Moore, Robert Eugene	Forwell	Richmond, Lalita	El Paso
More, Hazel B.	El Paso	Riggins, Lee	El Paso
Morkin, E. Dowd	El Paso	Rigney, Paul	El Paso
Morrill, Mrs. Elizabeth	El Paso	Robinson, Mrs. Annie	El Paso
Morris, Winnie Fred	El Paso	Rogers, Betty	El Paso
Morrow, William A.	El Paso	Rogers, Mrs. Earl	El Paso
Mowad, Matilde	El Paso	Rosas, Mauro	El Paso
Mulcahy, Catherine	El Paso	Rosch, Lee L.	El Paso
Mulcahy, Elizabeth Anne	El Paso	Roslyn, Margaret	El Paso
Munoz, F. N.	El Paso	Roybal, Frank Norton	El Paso
Murphy, Dorothy	El Paso	Roybal, Minerva	El Paso
Napoles, Carmen A.	El Paso	Rush, Bonnie D.	El Paso
Narrance, Dorothy	El Paso	Rowden, Louise Ellen	El Paso
Newell, Mary	Sierra Blanca	Ryan, Mary	Fabens
Norris, Sammy	El Paso	Safford, Mrs. Helen R.	El Paso
Nogaim, Victoria	El Paso	Sakamoto, Gengo	El Paso
Olson, Frank Hugh	El Paso	Salas, Rosendo	Juarez, Chih., Mex.
O'Neill, Susie	El Paso	Salas-Porras, Francisco	El Paso

Sanderson, Tommy	El Paso	Tanaka, Mrs. Isabelle K.	El Paso
Sandoval, Irene	El Paso	Tarver, Mrs. Mary K.	El Paso
Saucier, George	El Paso	Taylor, Jack D.	Texarkana
Saunders, Mrs. Jessie	El Paso	Taylor, Kittie Louise	El Paso
Schneider, Mrs. Betty J.	El Paso	Teague, Ailsa	El Paso
Schuhmann, Hazel Claire	El Paso	Tercero, Josefa	Balmorea
Schwartz, Frances M.	El Paso	Thomas, Anne	El Paso
Schwartz, Laszlo	El Paso	Thurman, Ruth	El Paso
Schwartz, Samuel	El Paso	Tigner, Lola	El Paso
Scott, James Monroe	El Paso	Toone, Dale	McNary
Scott, Lillian E.	El Paso	Torres, Jaime	El Paso
Seawell, Betty	El Paso	Tracht, Betty Ann	El Paso
Sewell, Ila Christine	El Paso	Trevino, Adelina	El Paso
Sewell, Raymond	Clint	Trevino, Alicia	El Paso
Shaffer, Oliver J.	El Paso	Trujillo, Martha	El Paso
Shearman, Joan Frances	El Paso	Vanderpool, Walter H.	El Paso
Shaver, Lucille	El Paso	Vasquez, Jose	El Paso
Shaw, Mignon	El Paso	Villa, Frederico	Ft. Hancock
Shiner, Jack, Jr.	El Paso	Villa, Rosalia	Ft. Hancock
Silva, Joe Victor	Juarez, Chih., Mex.	Wadlington, Frank Y.	El Paso
Sinsky, Anthony J.	Racine, Wisconsin	Wafer, Jimmy	El Paso
Sitton, Fred	El Paso	Walker, Lytle, Jr.	El Paso
Smith, Edwin Leslie	El Paso	Waller, Jo Ann	El Paso
Smith, Kaye	El Paso	Walsh, Edward	El Paso
Smith, Lloyd	Red Wing, Minn.	Ward, Nora	El Paso
Smith, Mary Alice	El Paso	Wechter, Max	El Paso
Smith, Maxine	El Paso	Wehmeyer, Donald	El Paso
Smith, Reba Nelle	El Paso	Wells, Lois	El Paso
Smith, Virginia	El Paso	Wells, Louise	El Paso
Sochat, Mrs. Elsie	El Paso	Wells, Mrs. Mina Briant	Ysleta
Spitz, Leona	El Paso	Whitaker, J. M., Jr.	El Paso
Stacy, Mary Gray	El Paso	White, Mary Louise	Anthony, N.M.
Stark, Lydia M.	El Paso	Whittington, Zoe Ratliff	Ysleta
Steen, Charles	Houston	Wilson, Howard C., Jr.	El Paso
Stevens, Carroll R., Jr.	El Paso	Wilson, Marguerite	El Paso
Stevens, Sara Lee	El Paso	Wilson, Sue C.	El Paso
Stewart, Concha	El Paso	Wolfe, Charlotte Belle	El Paso
Stewart, Jacqueline	El Paso	Wood, Agnes G.	El Paso
Stewart, Reida	El Paso	Wright, Mary Etta	El Paso
Stone, Mrs. Thelma	El Paso	Wynn, A. O.	El Paso
Stowell, Alta M.	El Paso	Zeitlin, Ruth	El Paso
Stranberg, Florence	El Paso	Zimmerman, James B.	Pecos
Stringer, Joyce	El Paso	Zink, Joe T.	El Paso
Sullivan, Dorothy Elizabeth	El Paso	Zork, Marian	El Paso

REGISTER OF STUDENTS

Long Session, 1943-1944

Acevedo, Josefina	El Paso	Bartlett, Lloyd N.	El Paso
Acosta, Lorenza E.	El Paso	Beahler, Arline	El Paso
Acosta, Ramon	El Paso	Bell, Helen	El Paso
Adams, Barbara S.	El Paso	Bell, Howard	Valentine
Adams, Mrs. Beatriz	El Paso	Bemis, John C.	El Paso
Aguilar, Lorenzo	Juarez, Chih., Mex.	Benjamin, Ruth	El Paso
Aguilar, Ruperto	Juarez, Chih., Mex.	Bernard, Molly	El Paso
Aguirre, Mary A.	El Paso	Bethany, John T.	El Paso
Alarcon, Flora	San Elizario	Bickley, Dorothy	El Paso
Albright, James L.	Dailey, W. Va.	Bickley, Louise	El Paso
Alcorn, Robert H.	El Paso	Bilodeau, Francis A.	El Paso
Allen, Ellen Mae	El Paso	Bischoff, Elinor	El Paso
Allen, Lena	El Paso	Black, Bill Allen	Marfa
Allen, Mary	El Paso	Blair, Anita	El Paso
Allen, Roy W.	El Paso	Blalock, Earline	El Paso
Alphin, Dorothy	El Paso	Bianco, Javier	El Paso
Alvarez, Antonio	Juarez, Chih., Mex.	Blaugrund, Ann Louise	El Paso
Alvarez, Raul	Juarez, Chih., Mex.	Boling, Dixie May	El Paso
Anderson, Clyde Lee	El Paso	Bomar, Nancy Scott	El Paso
Anderson, Lucille	El Paso	Borenstein, Betty	El Paso
Anderson, Viola	El Paso	Borschow, Paul	El Paso
Anchondo, Rodolfo	El Paso	Bothwell, Robert	El Paso
	Juarez, Chih., Mex.	Bower, June	El Paso
Anderson, Amelia B.	El Paso	Bowman, Charles A.	El Paso
Angell, Ursula	El Paso	Boylan, Margaret	El Paso
Arbuckle, Walter K.	El Paso	Boylan, Natalie	El Paso
Archer, Charlene	El Paso	Bozzell, Jeanne	Weatherford
Ares, Angie Lee	El Paso	Bradford, C. J.	El Paso
Arguelles, Eduardo	El Paso	Bradshaw, Elizabeth	El Paso
Armijo, Arcelita	El Paso	Bremer, Charles	El Paso
Armijo, Gloria	El Paso		Chihuahua, Chih., Mex.
Arnold, James C.	El Paso	Bremer, Frank A.	El Paso
Arnold, Margaret	El Paso		Chihuahua, Chih., Mex.
Arredondo, Hector	El Paso	Bremer, Manuel	El Paso
Arroyo, Vicente	El Paso		Chihuahua, Chih., Mex.
Ashcroft, W. J.	El Paso	Braem, Minnie	El Paso
Aspeitia, Armida	El Paso	Bridgers, Rowena	El Paso
Attel, Alice	El Paso	Briesh, Katherine M.	El Paso
Ayub, Pablo	El Paso	Briggs, Eugenia	El Paso
Azar, Edward	El Paso	Brinkmann, Dolores	El Paso
Azar, Philip	El Paso	Brooke, Gertrude	El Paso
Baca, Francisco	Juarez, Chih., Mex.	Brooks, Elva H.	Maywood, Ill.
Baca, Manuel	Juarez, Chih., Mex.	Brooks, Fred	El Paso
Bachica, Mary Jane	El Paso	Brown, Beverly	El Paso
Bailey, Jennie O.	El Paso	Brown, Edward L.	El Paso
Baker, David Knight	El Paso	Brown, Kenneth C.	El Paso
Baldwin, William L.	El Paso	Brown, Mary G.	El Paso
Ball, Flora	El Paso	Brown, M. Nolan	El Paso
Ball, George H.	El Paso	Brown, J. Robert	El Paso
Ballentine, John R.	Yaleta	Bryant, Marjorie	El Paso
Ballesteros, Leonel R.	El Paso	Buckner, Joanne	El Paso
	Clarkdale, Ariz.	Buhler, Betty	Ft. Bliss
Barger, Corie B.	El Paso	Bullington, Martha	El Paso

Burchell, Ann	El Paso	Curry, Betty	El Paso
Burleson, Lewis	El Paso	Daniel, James M.	El Paso
Burns, Nancy	El Paso	Davis, Rose Irene	El Paso
Burns, Rollin Lee	El Paso	Deal, Dorothy	El Paso
Burtis, Eloise	El Paso	de la Garza, Edmundo	Juarez, Chih., Mex.
Bustamante, Delia	El Paso	Delaney, Helen Elizabeth	Ysleta
Bynum, Cornelia	El Paso	Denton, Anna Jean	Clint
Byrne, Nina Gene	El Paso	Dean, Richard L.	El Paso
Cairns, Shirley	El Paso	Deputy, Kent	El Paso
Calderhead, Elva Jane	El Paso	DeWitt, Arthur N.	El Paso
Calderon, Juventino	El Paso	DeWitt, William	El Paso
Calisch, Hattie Belle	El Paso	Diaz, Oscar H.	Juarez, Chih., Mex.
Callery, Helen G.	El Paso	Dickenson, Betty	El Paso
Calvert, Jean Moore	El Paso	Dittoe, Rosemary	El Paso
Camp, Elizabeth S.	El Paso	Dockray, Mrs. Grace	El Paso
Carameros, Alex	El Paso	Donohue, Wilma E.	El Paso
Carlsen, Flora	El Paso	Douglas, Rosemary	El Paso
Carpenter, A. H.	El Paso	Downer, Eleanor	El Paso
Carpenter, Sharley	El Paso	Drummond, Irene	El Paso
Carr, Warren	Sterling City	Duran, Alejandro	El Paso
Carrera, Yvonne	El Paso	Duran, Gilberto	Juarez, Chih., Mex.
Carroll, Jean	El Paso	Dyer, Betty	El Paso
Carroll, William H.	El Paso	Eiland, Kathleen	El Paso
Carruth, James	El Paso	Ekery, Gabriel	El Paso
Carter, Mrs. Icy	El Paso	Enriquez, Carlos	Chihuahua, Chih., Mex.
Cartwright, Joyann	El Paso	Epstein, Anna K.	El Paso
Cary, Lady Margaret	Ft. Bliss	Erhard, Audrey L.	El Paso
Cary, Martha Ann	Ft. Bliss	Escobar, Benjamin	El Paso
Casas, Sabas David	El Paso	Esparza, Socorro	El Paso
Cates, Jeanne	El Paso	Estrada, Leo C.	El Paso
Cherry, John D.	El Paso	Evans, Mrs. Betty	El Paso
Chew, Gloria	El Paso	Evans, Mary Ann	El Paso
Childers, Donald	Ysleta	Everett, Peggy	El Paso
Chinn, Robert L.	El Paso	Ewing, Helen	El Paso
Clemons, Louise	El Paso	Fagan, Patricia Ann	El Paso
Clinch, Virginia Lee	El Paso	Fager, Helen Jane	El Paso
Cockrell, Carol	El Paso	Farquar, Phyllis	El Paso
Coffin, Rebekah	El Paso	Feinberg, Doris	El Paso
Cohen, Maury	El Paso	Feltham, John D.	El Paso
Cole, Hilda V.	El Paso	Ferguson, Jean	El Paso
Congdon, Walter R.	El Paso	Ferlet, Robin	Anthony, N. M.
Cook, Allis Jan	El Paso	Fernandez, Renato	El Paso
Cook, Joe H.	El Paso	Fetterly, Dorris	El Paso
Cooper, Delphine	El Paso	Feuille, Anne A.	El Paso
Cooper, Hazel, A.	El Salto, Dgo., Mex.	Fight, Estelle	El Paso
Cordero, Francisco	Chihuahua, Chih., Mex.	Fisher, Doris	El Paso
Cordova, Luis	Juarez, Chih., Mex.	Fisher, Howard B.	El Paso
Corona, Aurora	El Paso	Fisher, Mrs. Kay	El Paso
Cousar, Robert	El Paso	Fisher, Mrs. Lovella	El Paso
Cravey, Ben	El Paso	Flores, Consuelo	El Paso
Credson, Patricia	El Paso	Flores, Elvira	El Paso
Cross, William	Silver City, N. M.	Flores, Jose	El Paso
Crutchfield, Mary	El Paso	Flournoy, Margaret Mary	El Paso
Cuellar, Ramiro	Juarez, Chih., Mex.	Fogle, Katie Sue	El Paso
Cuellar, Raul	Juarez, Chih., Mex.	Foote, Sara Bain	El Paso
Cummings, Alice S.	El Paso	Ford, Betty Ann	El Paso
Cunningham, Teresa	El Paso		

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Ford, Mina Ruth	El Paso	Hearn, Alice	El Paso
Ford, Virginia M.	El Paso	Hebbeln, J. J.	El Paso
Franey, Victor Edward	El Paso	Hebbeln, Miriam V.	El Paso
Frank, Betty Ann	El Paso	Hebron, Teresa	El Paso
Frazer, Adele	El Paso	Heid, Charles	El Paso
Frias, Yolanda	El Paso	Heininger, Edward	El Paso
Fryer, Helen	El Paso	Heininger, Jean M.	El Paso
Funk, Flora Alice	El Paso	Heller, Henrietta	El Paso
Furutani, Yaye	El Paso	Hellweg, Kitty	El Paso
Gaddy, Burrel	El Paso	Hemley, Julian	Vinton
Gaddy, Rachel	El Paso	Henderson, Dorris	San Angelo
Callagher, Joy	El Paso	Herman, Mrs. Dorothy	El Paso
Garbern, Daniel	El Paso	Hernandez, Mario	El Paso
Garcia, Bertha	El Paso	Herrera, Jesse	El Paso
Garcia-Nunez, Ana	El Paso	Hinojosa, Barbara	El Paso
Garcia-Nunez, Manuel	El Paso	Hintze, William	El Paso
Gardiner, Juanita	El Paso	Hoffman, Elma L.	Canutillo
Garner, Betty	El Paso	Holguin, Henry A.	El Paso
Gault, Helen	El Paso	Howard, Mary Lee	El Paso
Gehring, Herbert	El Paso	Howell, Sallie W.	El Paso
Gibbs, Paul H.	El Paso	Hoy, Lucille	El Paso
Gifford, LaVon	El Paso	Humphris, Roberta	El Paso
Gil, Estela	Clint	Hunter, Helen	El Paso
Giles, Helen	El Paso	Huntress, Barbara	El Paso
Gillespie, Gertrude M.	Big Spring	Hurd, David R.	El Paso
Gillett, Shirley George	El Paso	Hurst, Betty Jean	El Paso
Golden, Terence M.	El Paso	Hyde, B. David	Ft. Bliss
Comillion, Mary Louise	El Paso	Hyde, Carol	Ft. Bliss
Gossett, Mollie	El Paso	Izquierdo, Mike	El Paso
Gottlieb, Bernice	El Paso	Jackson, Fleta	El Paso
Graf, Faith	El Paso	Jackson, Paul	El Paso
Graham, Charles E.	El Paso	Jacques, Margaret	El Paso
Grant, Norma	El Paso	Jacquin, Georgina	El Paso
Graves, Mary	Melissa	Jarvis, William H.	El Paso
Greet, Eleanor	El Paso	Jauregui, Luis Antonio	El Paso
Groves, Sydna	El Paso	Jennings, Ruth	El Paso
Cruber, Juanita	El Paso	Johnson, Elaine	El Paso
Guffey, Loraine	El Paso	Johnson, Glen R.	El Paso
Guthrie, Julia Ann	El Paso	Johnson, Gordon	El Paso
Hale, Howard A.	El Paso	Johnson, Margaret	El Paso
Hale, James R.	El Paso	Johnson, Rosemary	El Paso
Hall, A. C.	El Paso	Johnston, Betty Ruth	El Paso
Hall, Sylvia H.	El Paso	Johnston, Violet	Detroit
Hamlyn, Mildred	El Paso	Jones, Mary Alice	El Paso
Hammond, Margaret	El Paso	Jones, Raymond	El Paso
Hamrah, Joe	El Paso	Kane, Margaret A.	El Paso
Hamrah, Lee	El Paso	Karal, Frank	El Paso
Harding, Eugene	El Paso	Karam, Mary F.	Coolidge, Ariz.
Hardy, Betty Jo	El Paso	Kash, Mrs. Goldie	El Paso
Harmsworth, Ruth Lane	El Paso	Keaton, Charles	Biggs Field
Harris, Ann	El Paso	Keeney, Mabel V.	El Paso
Harris, Charles H.	El Paso	Keller, Patricia	El Paso
Harris, Mrs. Esther	El Paso	Kennedy, Anne	Ft. Bliss
Harris, Marian	El Paso	Kennedy, Dorothy	Corpus Christi
Harrison, Jo Anne	El Paso	Kerr, Crawford S.	El Paso
Harry, Allie Mae	El Paso	Kerr, Mrs. Dorsey	El Paso
Havens, Virginia	El Paso	Kerr, Jay Alvin	El Paso
Hayter, Elvera	Ft. Stockton	Kerr, William Rex	El Paso

Kersey, Ruth	El Paso	McCray, William E.	El Paso
Key, John B.	El Paso	McCullough, Herbert L.	El Paso
Kilgore, Catherine	El Paso	McGreevy, Phyllis	Marion, Ind.
Kilgore, John D.	El Paso	McKechnie, Joy	El Paso
Kilpatrick, Martha	El Paso	McKinney, Irene	El Paso
Kinard, Frances	Memphis	McLaughlin, Ed. Bruce	Omaha, Neb.
King, Marian	El Paso	McLaughlin, Rita	El Paso
Kingsley, Tom Robert	El Paso	McNeil, Jessie Mason	El Paso
Kircher, Rita	El Paso	McTier, Eldon	El Paso
Kirkpatrick, Virginia	El Paso	Maddox, Sara	El Paso
Kirkpatrick, Zazie	El Paso	Maese, Mary Louise	El Paso
Kitterman, Gail	El Paso	Major, Nannie May	El Paso
Klink, Betty Jane	El Paso	Manker, Raymond C.	El Paso
Klink, Nimrie	El Paso	Mann, Ruth E.	El Paso
Konkright, Phyllis	El Paso	Manzanares, Martha D.	El Paso
Kotz, Emma L.	El Paso	Marcus, Edward	El Paso
Kowalewski, Alfinia	El Paso	Marczeski, John A.	El Paso
Lacombe, Edward J.	Biggs Field	Markgraff, Beatrice	El Paso
Lafferty, Frederick	El Paso	Maros, Mary	Fabens
Lait, Shirley	El Paso	Marsh, George	El Paso
Lambert, Maxine	El Paso	Marston, Aileen	El Paso
Lange, Bertha	El Paso	Martinez, Ernesto B.	El Paso
Langston, Beach	El Paso	Martinez, Martha	El Paso
Lardizabal, Laura	El Paso	Martinez, Mike	El Paso
Lawson, Carl	Aztec, N. M.	Maxon, Betty	El Paso
Lay, Eloise	El Paso	May, James R.	Ft. Necessity, La.
Lazanas, George	El Paso	Mayo, Julia	Ft. Bliss
Lea, Dick	El Paso	Medrano, Fernando	El Paso
Lee, Carolyn	El Paso	Mellen, Barbara	El Paso
Leggett, Mrs. W. B.	El Paso	Mellon, Morris	Alpine
Leib, Sylvia	El Paso	Mendoza, Elisa	El Paso
Leon, Luz	El Paso	Mertz, George	El Paso
Leonard, B. R., Jr.	El Paso	Mier, Rosa Maria	El Paso
Lerner, Harriet	El Paso	Millar, Virginia Cananea, Son.	Mex.
Lettunich, Martin	Clint	Miller, Ada Mae	El Paso
Levagoood, Edith	El Paso	Miller, A. Leonard	La Tuna
Lewis, Carolyn	El Paso	Miller, Lucille P.	El Paso
Leyva, Robert	El Paso	Miller, Robert R.	El Paso
Lilley, Frances	El Paso	Mollinar, Martin	El Paso
Linthicum, Antoinette	El Paso	Molloy, Grace T.	El Paso
Little, Dorothy E.	El Paso	Montes, Ezequiel	El Paso
Lochhausen, Roberta R.	Sanderson	Moore, Betty Nell	El Paso
Long, MayBelle	El Paso	Moore, Marian	El Paso
Lorentzen, Wayne L.	El Paso	Morkin, Elizabeth Dowd	El Paso
Lovret, Clinton	El Paso	Morrill, Betty Gayle	El Paso
Lowry, Frances	El Paso	Morris, Winnie Fred	El Paso
Luckett, Joe S.	El Paso	Morrow, Emilie	El Paso
Luettich, Barbara	El Paso	Morse, Alberta H.	El Paso
Lujan, Roger	El Paso	Motley, Robert M.	Biggs Field
Lundell, Earl R.	El Paso	Mowad, Matilde	El Paso
Lundy, James H.	El Paso	Mudd, Madison L.	El Paso
Lundy, J. H.	El Paso	Mueller, Jerry K.	El Paso
Luyster, Betty Jane	El Paso	Mueller, Betty	El Paso
Lyles, Mary N.	El Paso	Muhn, James M.	El Paso
Lyons, Peggy	El Paso	Mulcaby, Anne	El Paso
McCabe, Mary Ellen	El Paso	Munzinger, Gretchen	El Paso
McClelland, Mary Alice	Tornillo	Murphy, Dorothy	El Paso
McCluer, Ruth O.	El Paso	Murphy, Mayme	El Paso

Murray, John A.	El Paso	Porras, J. Arturo	Ojinaga, Chih., Mex.
Mustain, Alice G.	El Paso	Portillo, Bertha	El Paso
Mustain, Paul	El Paso	Portillo, Stella A.	El Paso
Nabhan, James	El Paso	Potter, Doris Sue	El Paso
Napoles, Carmen	El Paso	Powell, Nora	El Paso
Napoles, Cecilia	El Paso	Power, Bob Lee	El Paso
Nelson, Jean	El Paso	Price, Bobby June	Delhi, Okla.
Nelson, Minnie E.	El Paso	Price, Mrs. Owen F.	El Paso
Neugebauer, Betty Louise	El Paso	Price, Robert B.	El Paso
Nevarez, Maria R.	El Paso	Prichard, Paul P.	El Paso
Newell, Mary	Sierra Blanca	Pringle, Dorothy B.	El Paso
Newland, Richard	El Paso	Prothro, Jewell	El Paso
Nicoll, James S.	El Paso	Provencio, Raul	El Paso
Nicoll, Mrs. Marian	El Paso	Provencio, J. Roberto	Juarez, Chih., Mex.
Nordwald, Leo	El Paso	Puente, Victor	El Paso
Norris, Sam	El Paso	Purdy, Bernard E.	El Paso
Oaxaca, Fernando	El Paso	Pyburn, Jack	El Paso
Oberkamp, Dorothy G.	El Paso	Quinn, Beatrice	El Paso
Ohswaldt, Dolores	El Paso	Quintanilla, Carlos	Chihuahua, Chih., Mex.
Olds, Betty Louise	El Paso	Ralston, Stanley	El Paso
Olivas, Mardoqueo L.	Tucumcari, N.M.	Rameey, Tom C.	El Paso
Olson, Frank H.	El Paso	Randel, Maggie C.	El Paso
O'Neill, Susie	El Paso	Rathbun, Donald	El Paso
Oppenheimer, Betty	El Paso	Reader, Reba Nelle	El Paso
Oppenheimer, Larry	El Paso	Reavis, Mary Alice	El Paso
Ornelas, Maria Magdalena	El Paso	Redfield, Glen A.	El Paso
Orr, Rosalie	El Paso	Regan, Mary Elizabeth	El Paso
Owen, Frank, III	El Paso	Reichert, Glorva	El Paso
Page, Dorothy Lee	El Paso	Reinhardt, Dorothy	El Paso
Parafox, Argelia	El Paso	Reynolds, Louis J.	El Paso
Palafox, Mario	El Paso	Rheinheimer, Frances	El Paso
Palmer, Lee	El Paso	Rhett, Barbara	El Paso
Pangburn, Conchita	El Paso	Rich, Mary	Stephenville
Paredes, Oliver S.	El Paso	Richards, Betty Sue	Canutillo
Park, Mary Jane	El Paso	Richards, Clarence	El Paso
Partearroyo, Cecilia	El Paso	Richards, Clifford	El Paso
Patterson, Mary Helen	El Paso	Richards, George	El Paso
Patton, James Eugene	El Paso	Richie, Margaret	El Paso
Patton, Patricia	El Paso	Richmond, Lalita	El Paso
Payne, Alberta	El Paso	Riggins, Lee	El Paso
Pearson, Bill	El Paso	Riggs, Bill Allen	Fabens
Pedroncelli, Ann	El Paso	Rigney, Paul	El Paso
Pemberton, Mary Jane	El Paso	Rios, Cecilia Ann	El Paso
Percival, Reva	El Paso	Rish, Ethel M.	Chicago, Ill.
Perrin, Mildred	El Paso	Riter, Adah Lee	El Paso
Peterson, Martha P.	El Paso	Rivas, Graciela	El Paso
Pickel, Maryan	El Paso	Rivera, Matilde	El Paso
Pickens, Alma	El Paso	Rivero, Velia	El Paso
Pillow, D. L.	El Paso	Roberts, Azelie Alice	El Paso
Piper, Betty Grace	El Paso	Roberts, Elsie B.	El Paso
Plouge, M. S.	El Paso	Roberts, Mayme Sue	Artesia, N.M.
Plouge, Virginia	El Paso	Robinson, Ada Jean	El Paso
Poling, Charles	El Paso	Robinson, Lemuel H.	El Paso
Politt, Frank C.	El Paso	Robinson, Patricia	El Paso
Ponsford, Emanuel E.	El Paso	Robles, Ruben	El Paso
Ponsford, Marian	El Paso		
Pool, Sue	El Paso		

Rodriguez, Mary	El Paso	Snowden, Edna Ella	El Paso
Rogers, Betty	El Paso	Soltner, Lucille	El Paso
Romero, Isela	El Paso	Spikes, Amelda	El Paso
Romero, Victor Manuel	Juarez, Chih., Mex.	Spitz, Leona J.	El Paso
Romero, Ralph R.	El Paso	Stallings, Kathleen	Clint
Rosenfeld, Calvin	El Paso	Stevens, Carroll R.	El Paso
Ross, Katherine G.	El Paso	Stevens, Evelyn Scott	El Paso
Ross, William H.	El Paso	Stevens, Helen L.	El Paso
Roth, Judith	El Paso	Stevens, Nelda	El Paso
Rowden, Louise	El Paso	Stevenson, James Allen	El Paso
Rowe, Elizabeth Anne	El Paso	Stewart, Anona	El Paso
Ruffini, Charles J.	Mexico, D.F.	Stewart, Glendyne	El Paso
Ruffini, William J.	Mexico, D.F.	Stover, Raymond John	El Paso
Rush, Bonnie Dale	El Paso	Stowell, Alta M.	El Paso
Ryan, Eileen	El Paso	Strain, Geraldine	El Paso
Ryan, Mary	Fabens	Stranberg, Florence	El Paso
Saar, Bernhard	El Paso	Stringer, Joyce R.	El Paso
Saffold, Ray P.	El Paso	Stuart, Frank E.	El Paso
Salas, Rosendo	Juarez, Chih., Mex.	Stuart, Robert R.	El Paso
Salas-Porras, Francisco	El Paso	Sullivan, Dorothy	El Paso
Salazar, Raul	El Paso	Swain, Beverly	El Paso
Salazar, Robert	El Paso	Swan, William C.	El Paso
Samford, Gayle	El Paso	Swart, Alice	Baton Rouge, La.
Sanders, Mrs. Charm	El Paso	Swegler, Flora	El Paso
Sanderson, Tommy	El Paso	Swenson, Richard	El Paso
Saucier, George	El Paso	Swenson, Sylva	El Paso
Schafer, Catherine	Clint	Tanaka, Isabelle	El Paso
Scherotter, Norma L.	El Paso	Taylor, Billie Wayne	El Paso
Saucedo, Eduardo	El Paso	Taylor, Faith V.	San Antonio
Saucedo, Carlos	El Paso	Taylor, Jack D.	Texarkana
Schillinger, William	El Paso	Taylor, Joy	El Paso
Schuhmann, Claire	El Paso	Taylor, Mary Elizabeth	El Paso
Schuler, Beatrice	Parral, Chih., Mex.	Thomas, Dorothy	El Paso
Schwartz, Betty Lou	El Paso	Thomson, Junius	El Paso
Schwartz, Frances M.	El Paso	Tibbetts, Carl	El Paso
Schwartz, Laszlo	El Paso	Tiernan, Rita	El Paso
Scott, Edna	El Paso	Tiller, Lela	El Paso
Scott, James M.	El Paso	Tinguely, Roy S.	El Paso
Seawell, Betty	El Paso	Tipton, Sybil	El Paso
Seawell, Virginia	El Paso	Todd, James F.	El Paso
Shafer, Virginia	Carlsbad, N. M.	Tracht, Betty Ann	El Paso
Shearman, Joan	El Paso	Tracy, Tommie Ann	El Paso
Shiner, Jack V.	El Paso	Trantham, Dorothy	El Paso
Shipp, Herbert	El Paso	Trevino, Alicia	El Paso
Sinsky, Anthony J.	Biggs Field	Trujillo, Martha	El Paso
Skousen, Margaret E.	El Paso	Tyner, Frances	El Paso
Slauter, David	El Paso	Vail, Charlie	El Paso
Small, Susanna	El Paso	Valentino, Lucy	El Paso
Smith, Amelia Briones	El Paso	Valenzuela, Josefina	El Paso
Smith, Basil	El Paso	Varela, Aurelia	El Paso
Smith, Dorothy	El Paso	Vasquez, Jose	El Paso
Smith, Elizabeth	El Paso	Vasquez, Manuel	Fabens
Smith, Kaye	El Paso	Vasquez, Susanna	El Paso
Smith, Mary Alice	El Paso	Vera, Apolonio	El Paso
Smith, Virginia	El Paso	Vetter, Bonnie	El Paso
Smith, Wilma Jean	El Paso	Villareal, Jose Luis	El Paso
			Monterrey, N.L., Mex.
		Wade, Bill	El Paso

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Wadlington, Frank Y.	El Paso	White, Mrs. T. B.	La Tuna
Walker, Carolyn	El Paso	Whittington, Zoe	Ysleta
Walker, John Ray	El Paso	Wiggs, Mrs. Ethel	El Paso
Wallace, Ethel	El Paso	Wilcox, Mary Ann	El Paso
Waller, Ann	El Paso	Wilkinson, Joan	El Paso
Waller, JoAnn	El Paso	Willbern, York	El Paso
Walsh, Edward	El Paso	Williams, Bert	El Paso
Walters, Walter	El Paso	Williams, Frances	El Paso
Ward, Coletta	El Paso	Williams, Judson F.	El Paso
Wardy, Georgette	El Paso	Williams, Louise	El Paso
Warren, Billy Ruth	El Paso	Williams, Margaret	El Paso
Warren, Ruth	El Paso	Williams, Richard C.	El Paso
Watson, Gynne	El Paso	Williamson, Richard	Canutillo
Watt, Vance	El Paso	Willis, Nellmar	El Paso
Weaver, Richard	El Paso	Wilson, Olga Pool	El Paso
Weaver, Vinnie	Clint	Wilson, Rena Lee	El Paso
Webb, C. W., Jr.	El Paso	Windberg, Anne Frances	El Paso
Weber, Helen	El Paso	Woldert, Marian	El Paso
Wechter, Max	El Paso	Wolfe, Charlotte	El Paso
Wehmeyer, Donald A.	El Paso	Wong, Joey	El Paso
Wendt, Earl J.	El Paso	Wood, Agnes	El Paso
Whitaker, J. M.	El Paso	Woodard, Betty	El Paso
White, Alan	El Paso	Wright, Ema Delle	El Paso
White, Betsy	El Paso	Wright, Mary Etta	El Paso
White, Evelyn E.	El Paso	Wynn, A. O.	El Paso
White, Harold	El Paso	Young, Eddie Mae	El Paso
White, Mary Louise	Anthony, N.M.	Young, Mrs. Elmore	El Paso

STATISTICAL SUMMARIES

Students

	Long Session, 1942-1943			Long Session, 1943-1944		
	Men	Women	Total	Men	Women	Total
Engineering						
Postgraduates _____	0	0	0	0	0	0
Seniors _____	22	0	22	4	0	4
Juniors _____	23	0	23	9	0	9
Sophomores _____	55	0	55	26	0	26
Freshmen _____	112	0	112	92	0	92
Non-credits _____	0	0	0	0	0	0
Unclassified _____	0	0	0	0	0	0
Total _____	212	0	212	131	0	131
Arts and Sciences						
Postgraduates _____	5	43	48	12	24	36
Seniors _____	36	79	115	4	53	57
Juniors _____	48	73	121	12	61	73
Sophomores _____	59	90	149	20	94	114
Freshmen _____	106	146	252	70	188	258
Non-credits _____	41	17	58	12	24	36
Unclassified _____	0	0	0	9	17	26
Total _____	295	448	743	139	461	600
Total Individual Students _____	507	448	955	270	461	731
Summer Session, 1943						
	Men	Women	Total			
Students registered in the first term _____	157	178	335			
Students registered in the second term _____	109	164	273			
Total _____	266	342	608			
Total Individual Students in the Summer Session _____	176	241	417			

