

University of Texas Bulletin

No. 2736: September 22, 1927

SUPPLEMENT TO THE CATALOGUE
OF
THE COLLEGE OF MINES AND METALLURGY
1926-1927

With Additional Announcements for
1927-1928



PUBLISHED BY THE UNIVERSITY FOUR TIMES A MONTH, AND ENTERED AS
SECOND-CLASS MATTER AT THE POSTOFFICE AT AUSTIN, TEXAS,
UNDER THE ACT OF AUGUST 24, 1912

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. . . . It is the only dictator that freemen acknowledge and the only security that freemen desire.

Mirabeau B. Lamar

GENERAL INFORMATION

Additional Courses

In addition to the courses enumerated in the regular Catalogue of the College of Mines and Metallurgy other courses will be offered during the Long Session of 1927-1928 as announced in this bulletin. These courses are largely academic in character. In this list are to be found many of freshman and sophomore rank and several of more advanced character.

Notation of Courses

The system of notation used in the regular University of Texas Catalogue for 1926-1927 is followed in this bulletin.

Courses are designated by numbers which indicate both rank and value in semester hours. 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 00 and 99 are used, instead of numbers between 600 and 699. The two digits on the right indicate the rank of the course; if between 0 and 9 the course is of freshman rank; if between 10 and 19, of sophomore rank; if between 20 and 59, of junior rank; if between 60 and 79, of senior rank; if between 80 and 99, of graduate rank.

Two courses whose numbers have the same right-hand digits may not be both counted for credit by the same student—for example, Philosophy 315 and Philosophy 15, the former being substantially merely a part of the latter; similarly for Greek 301 and Greek 1.

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

The lower-case letters *f* (first semester), *s* (second semester), *t* (first term), *q* (second term), following a course number show the semester of the Long Session or the term of the Summer Session in which the course is given.

A course not so designated runs throughout the Long Session or Summer Session and in such a case the lower-case *a* means the first half of such a course, the letter *b* the second half. For example, English 225 is a course running through the entire Long Session, meeting once a week and carrying two semester hours of credit, and English 1a is the first half of English 1 (freshman English) given in the second semester and carrying three semester hours of credit, which, however, cannot be counted for graduation until English 1b, the second half of English 1, has been completed.

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

Number of Hours to Be Carried at One Time

The amount of work as defined in the College of Mines and Metallurgy Catalogue applies to mining students. All other students will be governed in this matter by the restrictions set forth in the Catalogue of the Main University.

In general these limitations are as follows:

Fifteen hours a week is the standard amount of work for a student.

More than sixteen hours a week in one semester or term may not be carried except upon petition approved by the Dean.

During his first semester a freshman is not allowed to take more than sixteen hours a week. During his second semester or term he will be allowed to take seventeen hours, provided his scholastic standing warrants it.

Sophomores and juniors may carry additional work within certain limitations, provided definite scholastic requirements are met.

Less than twelve hours a week a student may not carry except upon written petition approved by the Dean, and filed with him. Without this petition filed with the Dean credit will not be given, or would even be cancelled. A student under 21 must present a written request from a parent or guardian accepting the conditions under which the privilege

is granted, and a written statement from some responsible person known to the University authorities vouching for him as mature for his age and serious-minded. In allowing this privilege, the Faculty reserves the right to sever the student's connection with the University without imputation and without giving reasons for its action.

Classification of Students

The classification of students as defined in the College of Mines and Metallurgy Catalogue applies to engineering students. All other students are classified as follows: Freshmen, sophomores, juniors, and seniors. Until the completion of thirty semester hours in addition to the full admission requirements, they are freshmen; then, until sixty semester hours are completed, sophomores; then, until ninety semester hours are completed, juniors; then seniors until graduation.

Fees and Deposits

1. Registration fee.—In all the colleges and schools of the Main University, in the Medical Branch of the University at Galveston, and in the College of Mines and Metallurgy at El Paso a registration fee of \$30 shall be required of every student each Long Session to be paid at registration, this fee being administered on the following basis:

(1) A student registered for six semester hours or less shall pay \$10; for more than six but not to exceed twelve semester hours, \$20; for more than twelve semester hours, \$30. Students registered *in absentia* belong to the first group.

(2) All registrations in the first semester shall be regarded as registrations for the entire session and will call for the fee as specified in the preceding paragraph.

(3) A student who pays less than the full fee of \$30 because he is registered for twelve hours or less and later adds to his registration shall pay an additional amount in accordance with the scale provided above.

(4) A student registering in the second semester shall pay one-half of the amount required for the session, in accordance with the scale provided above.

(5) A student in the first semester who withdraws before the beginning of the second semester shall have one-half of the registration fee paid refunded to him. Otherwise, this fee is not returnable under any circumstances.

2. Laboratory fees.—For each laboratory course of three semester hours or less a laboratory fee of \$2 shall be charged, and for each such course of four semester hours or more a laboratory fee of \$4 shall be charged. If a student is allowed to drop a laboratory course, one-half of the fee will be refunded for the semester not begun.

3. Deposits.—All laboratory courses of whatever credit value require a deposit against breakage of \$2 each except in chemistry, in which the deposit shall be \$6 each. Certificates of payment of these deposits must be received from the Auditor before students can be assigned to desks in the laboratories or enrolled in their classes. A Library deposit of \$6 shall be required of every student. This deposit is subject to charges for fines assessed against the depositor or for books lost or injured. These deposits less charges for breakage or loss will be returned to the student at the end of the session or upon his withdrawal from the University. If a deposit is exhausted before the end of the session, the student will be required to renew it.

4. Visitor's fee.—A fee of \$5 shall be required of persons not registered in the University who wish to visit one or more courses. If Library privileges are desired, the Library deposit shall be made.

5. Scholarships.—In the session of 1927–1928, all scholarships awarded by the University on the authority of and in accordance with provisions duly announced shall carry exemption from the registration fee in any college or school of the University.

Selection of Courses

Certain rules govern the order and choice of work, especially 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 courses prescribed for the first two years toward the Bachelor of Arts Degree and the Bachelor of Science Degree in Education are given as examples.

Bachelor of Arts

FRESHMAN YEAR

1. The following work is prescribed for the freshman year:

- (a) English 1.
- (b) Six semester hours in mathematics or six semester hours in Latin (Latin 1) or six semester hours in Greek (Greek 1 if no units in Greek were credited toward admission; Greek 12 if two units were so credited.) However, students offering either Latin or Greek in satisfaction of the foreign language requirement must choose mathematics.
- (c) A foreign language, either ancient or modern.
- (d) A natural science or a second foreign language, ancient or modern, or history.
- (e) Six more semester hours, if needed to make thirty semester hours.

2. Two foreign languages may not be begun by freshmen.

3. Courses numbered from 1 to 9, inclusive, are open to freshmen.

4. Freshmen may not take more than eight semester hours in one department.

SOPHOMORE YEAR

5. The following work is prescribed for the sophomore year:

- (a) Any unabsolved freshman requirements.
- (b) English 12 or 13.

- (c) A foreign language, either ancient or modern. If a modern language was begun in the freshman year, it must be continued here.
- (d) A natural science.
- (e) Enough other courses to make thirty semester hours.

Bachelor of Science in Education

FRESHMAN YEAR

1. The following work is advised for the freshman year :
 - (a) English 1.
 - (b) A natural science.
 - (c) A foreign language.
 - (d) Six additional semester hours in natural science, or six semester hours in mathematics, or six semester hours in the major or minor field.
 - (e) Education 301 and 302.

SOPHOMORE YEAR

2. The following work is advised for the sophomore year :
 - (a) Any unabsolved freshman requirements.
 - (b) English 12 or 13.
 - (c) A foreign language.
 - (d) Economics 11 or Government 11.
 - (e) Education 314 and 317.
 - (f) Six additional semester hours in natural science, or six semester hours in mathematics, or six semester hours in the major or minor field.

(NOTE.—If the second course in natural science, or the work in mathematics is taken in the freshman year, then the six semester hours in the major or minor should be selected. Otherwise, the science or mathematics requirements should be completed.)

3. Two foreign languages may not be begun by freshmen.

4. If any semester of a course prescribed for freshmen is finished after ninety semester hours have been completed or during the session of graduation, that semester will not count toward the required 120 semester hours.

5. If a condition in a course open to freshmen is removed during the session of graduation, that course will count for two semester hours less than its value.

6. If a course open to freshmen is taken after ninety semester hours have been completed or during the session of graduation, it will count for two semester hours less than its value.

ADDITIONAL COURSES OF INSTRUCTION

Biological Sciences

BOTANY

1. *Elementary Botany*.—General survey of the development of the plant kingdom; cell structure, tissues, physiological processes, methods of reproduction, relation to environment, distribution, and economic importance of plants. Two lectures and three laboratory hours. Laboratory fee, \$4; deposit, \$2.

316s. *Elementary Bacteriology*.—History of bacteriology, laboratory methods, morphology, physiology, and taxonomy of bacteria, yeasts and moulds; the germ theory, immunity, and quantitative analysis of water, milk, sewage, and foods. Suitable to the needs of students in home economics. Open only to women students. Prerequisite: Chemistry 1. No previous training in botany required. Two lectures and three laboratory hours. Laboratory fee, \$2; deposit, \$2. (Formerly Botany 26.)

ZOOLOGY

1. *General Zoology*.—For students beginning the study of zoology. General survey of animal life, with emphasis upon the important phases of theoretical biology. Two lectures and four laboratory hours. Laboratory fee, \$4; deposit, \$2.

6. *Anatomy, Physiology, and Hygiene*.—Laboratory includes simple physiological experiments, dissection of a mammal; a general survey of the microscopic structure of tissues and organs; chemistry of foods and digestion, reproduction. Principles of hygiene are discussed. Three lectures and three laboratory hours. Laboratory fee, \$4; deposit, \$2. (Formerly Zoology 16.)

Business Administration

001f. *Elementary Typewriting*.—A non-credit course, equivalent to one-half the typewritten work of Business

Administration 1210, given for the benefit of those who do not desire shorthand. Laboratory fee, \$4; deposit, \$2. (Formerly Business Administration 0134.)

1210. *Shorthand and Typewriting*.—Mastery of the principles of Gregg shorthand and typewriting. Credit given for the shorthand only. Prerequisite: Junior standing. Six discussion periods and six laboratory hours. Laboratory fee, \$4; deposit, \$2. (Formerly Business Administration 634.)

811. *Principles of Accounting*.—Uses of accounting; interpretation of financial statements; the accounting process; sole owner, partnership, and simple corporation accounting. Prerequisite: Sophomore standing. Three discussion periods and four laboratory hours. The last two semester hours of this course count as advanced. (Formerly Business Administration 411.)

420f. *Business Correspondence*.—The use of correct and forceful English for business purposes. Prerequisite: English 1, and 12 (formerly 2) or 13, with an average grade of at least *C* on the two courses (otherwise, English 1, 12, and 13), and Business Administration 811 and 001 or its equivalent. (Formerly Business Administration 250.)

Chemistry

10. *Elementary Organic Chemistry*.—For students who can afford only two years of pre-medical training. Prerequisite: Chemistry 1. Two lectures and three laboratory hours. Laboratory fee, \$4; deposit, \$6. (Formerly Chemistry 40.)

Education

Students expecting to apply for a four-year elementary certificate should enroll in Education 301 and 302, and students expecting to apply for a four-year high-school certificate should take Education 314 and 317 after completing 301 and 302.

301f. *Introduction to Educational Psychology*.—A study of some of the topics in educational psychology which relate

most directly to an understanding of the learning process and the conduct of children. (Formerly Education 1ab.)

301s. *Introduction to Educational Psychology*.—Repetition of Education 301f. (Formerly Education 1ab.)

302f. *Methods and Management in the Elementary School*.—Deals with the methods for teaching elementary school subjects, and with the management of elementary school pupils. (Formerly Education 1c.)

302s. *Methods and Management in the Elementary School*.—Repetition of 302f. (Formerly Education 1c.)

314f. *Child Psychology*.—A study of the changes which take place in the life of the child as related to the processes of education. Prerequisite: Education 301 and 302 and sophomore standing. (Formerly Education 104.)

314s. *Child Psychology*.—Repetition of 314f. (Formerly Education 104.)

317s. *An Introduction to High-School Teaching*.—Basic principles of high-school teaching and high-school management will be considered. Prerequisite: Education 301 and 302 and sophomore standing. (Formerly Education 117 and 137.)

342s. *Educational Statistics*.—An introduction to the study of statistical methods as related to education. Prerequisite: Education 314 and 317, and preferably Education 355. (Formerly Education 174.)

355f. *Mental and Educational Measurement*.—Introduction to measurement in education. Typical methods of measuring intelligence, character, and achievement. Elementary statistical terms and processes. Preparation for use of mental and educational tests. Prerequisite: Education 314 and 317, or their equivalent. (Formerly Education 176.)

Engineering

302s. *Descriptive Geometry*.—Elements of descriptive geometry including problems in warped surfaces, intersections of solids and shades and shadows. Prerequisite: Drawing 1 and Mathematics 301 (formerly 1a). Two lectures and two laboratory periods, second semester. (Formerly Drawing 15c.)

English

13. *English Composition*.—For students who have already acquired a working knowledge of composition and considerable facility in expression, but who wish to do further work in the subject. Prerequisite: English 1. (Formerly English 3.)

320f. *Shakespeare: The Earlier Plays*.—Detailed study of a few of the plays composed before 1601, with a rapid reading of others belonging to the same period. Prerequisite: English 12 (formerly 2). (Formerly English 205a.)

321s. *Shakespeare: The Later Plays*.—Detailed study of some of the great tragedies, followed by a rapid reading of other plays written after 1600. Prerequisite: English 320. (Formerly English 205b.)

427. *An Outline History of the English Novel*.—Brief history of the novel from the romance of the Sixteenth Century through the novel of the Eighteenth Century, followed by consideration of the several types of fiction down to and including Thomas Hardy, with study of typical works of Jane Austen, Scott, Dickens, Thackeray, George Eliot, Hawthorne, Meredith, and Hardy. Prerequisite: English 12 (formerly 2). Two hours a week throughout the year. (Formerly English 207.)

Government

11. *Comparative Government*.—Governmental systems of England, France, other leading European countries, and the United States. Prerequisite: Sophomore standing. (Formerly Government 1.)

History

23. *European History since 1870*.—Examination of the trend of European history toward the realization of political and economic freedom, and the recent course of world politics; the Great War (its causes, conduct, settlements, and results), and the Russian Revolution. Survey of social and

political problems of the Old World today. Prerequisite: Twelve semester hours in history.

Home Economics

1. *Introductory Course in Foods.*—A general survey of the elementary principles of cookery with an introduction to the planning and serving of meals in the home. Two lectures and four laboratory hours. Laboratory fee, \$4; deposit, \$2.

302f. *Design.*—Costume design and the relation of the principles of line, dark and light, and color to the individual. Two lectures and four laboratory hours. (Formerly Home Economics 161 and 162.)

303s. *Design.*—House planning and the relation of the principles of design to problems relating to the home. Prerequisite: Home Economics 302. Two lectures and four laboratory hours. (Formerly Home Economics 163.)

10. *Institutional Cookery and Management.*—Practice and observation in large quantity buying and cooking; study of institutional kitchen; administrative problems. Prerequisite: Home Economics 1 and Chemistry 1. Six hours of lecture and laboratory. Laboratory fee, \$4; deposit, \$2. (Formerly Home Economics 20.)

Mathematics

301-302. *Plane Trigonometry and Analytic Geometry.*—Satisfies the requirement of six semester hours in mathematics for a degree in the College of Arts and Sciences. (Formerly Pure Mathematics 1ac.)

303f. *Analytic Geometry.*—Conic Sections. Prerequisite: Mathematics 302. Three hours first semester; three credits. (Formerly Pure Mathematics 1d.)

Modern Languages

FRENCH

24. *Advanced Composition.*—Conversation and grammatical drill for advanced students. Formal study of gram-

mar, reproduction, and original composition. Prerequisite: French 12 (formerly French 2). (Formerly French 14.)

SPANISH

27. *Advanced Composition*.—A formal study of the grammar; reproduction; original composition. To be conducted in Spanish as far as possible. Prerequisite: Spanish 12 or 13. (Spanish 12 was formerly Spanish 2; Spanish 13 was formerly Spanish 22.)

GERMAN

A. *Beginners' German*.—Meets five times a week, but work required is the same as for a regular three-hour course, four hours instead of six being devoted to outside preparation.

1. *Grammar, Reading, and Composition*.—Continuation of German A. Prerequisite: German A or two entrance units in German.

12. *Advanced Reading and Composition*.—Reading of Modern German authors, syntax and free reproduction. Prerequisite: German 1 or three entrance units in German. (Formerly German 2.)

41. *History of German Literature*.—Introductory survey of German literature, contents being stressed relatively more than form. It normally precedes other advanced courses and is required of German majors. Prerequisite: German 12 or 13 (formerly 22) or the equivalent. (Formerly German 11.)

Physics

1. *General Physics*.—For students (including pre-medical students) who expect to take only one course in physics. Three lectures and two laboratory hours. Laboratory fee, \$4; deposit, \$2.

12. *Second-Year Physics*.—First semester: electricity and magnetism; second semester: heat, light, and sound. Prerequisite: Six semester hours in mathematics and Physics 1 or 2. Two lectures and three laboratory hours. Laboratory fee, \$4; deposit, \$2. (Formerly Physics 422.)

Public Speaking

205. *Principles of Speech*.—A study of the theory of expression; exercises in developing the voice and improving stage presence; practice in speaking with special reference to distinct, direct, interesting speaking. Open only to freshmen. Two hours a week throughout the session. (Formerly Public Speaking 105.)

12. *Dramatics*.—Principles of character interpretation; elementary technique of acting; voice, speech, line reading, action, and makeup; staging, costuming, composition, colors, and materials. Prerequisite: Sophomore standing. (Formerly Public Speaking 106.)

315f. *Teachers' Course in Public Speaking*.—Emphasis upon the teaching of fundamentals of speech. Speech training in secondary schools; organization and direction of school literary societies, with study and practice of parliamentary procedure. Prerequisite: Sophomore standing. (Formerly Public Speaking 115.)

316s. *Teachers' Course in Argumentation and Debate*.—Methods of teaching argumentation and debate in high schools. Prerequisite: Sophomore standing. (Formerly Public Speaking 116.)

COURSES IN ART AND MUSIC

ART

1. *Applied Art*.—Study of principles and elements of art, and application to crafts and to the graphic and plastic arts. Subjects studied include design, lettering, drawing, painting, costume design, landscape gardening, architecture, house plans, interior decoration, furniture design, commercial advertising, sculpture, prints and etchings, art history and appreciation, and crafts. Six hours a week.

10. *Art Methods*.—Includes subjects covered in Art 1, with stress on methods used in teaching the subjects to school children. Observation of materials, methods of presentation, assignment of problems, etc., by visits to various schools of the city. Six hours a week. Prerequisite: Art 1.

MUSIC

1. *Public School Music*.—For those planning to teach in kindergarten or primary grades. Sight-singing, ear training, phrasing, notation, rhythm, scale building; methods of teaching; practice teaching; special attention to appreciation and rhythm.

2. *Harmony*.—(1) The major scale, intervals, common chords and their inversions, harmonizing melodies, original melodies, minor scale, cadences, etc. (2) The dominant seventh chord, its inversions and resolutions, secondary chords of the seventh, chords of the dominant seventh and ninth, diminished seventh and augmented sixth, modulation, altered and foreign chords. (3) Anticipations, suspensions, retardations, syncopation, seventh and eighth part harmony, analysis, harmonizing melodies, chords of the eleventh and thirteenth, fifth, sixth, seventh, and eighth part harmony. Prerequisite: Consent of instructor.

10. *History of Music*.—Takes up first primitive music and continues through Beethoven, then deals with the Romanticists and the study of modern music. Prerequisite: Music 1.





