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BULLETIN
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CATALOGUE
1914-1915

INCLUDING ANNOUNCEMENTS FOR
1915-1916

MAIN UNIVERSITY
AUSTIN

DEPARTMENT OF MEDICINE
GALVESTON



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Sched of Pure Meth

School of Pure Math

124 THE UNIVERSITY OF TEXAS: 1914-1915

Applied Mathematics and Pure Mathematics: ADJUNCT PROFESSOR E. L. DODD.

Germanic Languages and Romance Languages: PROFESSOR E. PROKOSCH.

Botany, Geology, and Zoology: ASSOCIATE PROFESSOR I. M. LEWIS.

Chemistry and Physics: PROFESSOR W. T. MATHER.

REQUIREMENTS FOR DEGREES

General Rules

In the College of Arts two degrees are offered: Bachelor of Arts (B. A.) and Bachelor of Science in Medicine (B. S. in Med.). No honorary degrees will be conferred by the University of Texas.

Degrees will be conferred publicly on Commencement Day.

No degree will be conferred without a residence of at least one year at the University.

An application must be filed at the opening of the session in which the degree is sought.

Bachelor of Arts

To secure the degree of Bachelor of Arts the student must complete the work prescribed under A and satisfy the requirements set down under B below. A student entering the University after the session of 1911-1912, but applying for the B. A. degree in 1913, 1914, or 1915, will be absolved from prescription A. 4 if he completes one course in a natural science requiring laboratory work (as laid down in the catalogue of 1910-1911), and will not be required to satisfy prescription A. 7, or B. 2, or B. 3.

A. Prescribed Work.

1. Two courses in English (English 1, and 2 or 3).
2. One course in mathematics (Mathematics 1ega, 1abc, or 1acd, if the student presents for admission in mathematics only algebra and plane geometry; Mathematics 1abc or 1acd, if he presents, in addition, solid geometry; Mathematics 1egb, 1egc, or 1bcd, if he presents, in addition, not solid geometry but trigonometry; Math-

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ematics 1bcd, if he presents both solid geometry and trigonometry).

3. Two numbered courses in one foreign language, either ancient or modern.

4. Two courses in natural science, one being in chemistry or physics, the other being either Botany 1, or Geology 1, or Zoology 1, or Zoology 16. Either may be taken first.

5. One course in economics (Economics 1) or government (Government 1): recommended but not compulsory for women.*

6. One-third of a course in philosophy or psychology.*

7. The courses set down in one of the groups below under C.

8. Five advanced courses.**

9. Enough other courses to make twenty, chosen by the student subject to the rules set forth in D below.

10. Two years' work in physical training, the second year's work not compulsory for men till in the judgment of the president adequate facilities are provided.

B. Special Requirements.

1. The student must make an average grade of at least C in his last ten courses. In striking an average any B will balance any D, any A any two D's, the value of the courses being equal.

*Students are urged to take the courses required under A. 5 and 6 in the sophomore or junior year.

**The following rules govern the counting of advanced courses:
a. A course counts as advanced if it is open only to students who have completed two numbered courses in the same subject (except in economics, government, institutional history, and philosophy, where one previous course is sufficient; and in general literature, where the prerequisite of English 1 and 2 is sufficient).

b. With the approval of the committee on courses a course also counts as advanced if by a special statement in the description of it in the Announcement of Courses it is open only to the following students: (1) Students who have completed two numbered courses in the same subject; (2) students who, by reason of having attained at least junior standing and having completed one numbered course in the same subject with an average grade of C or over, are allowed to take along with the higher course the second course ordinarily pre-counted towards the degree.

c. Courses counted advanced under a and b are marked A in the Announcement of Courses.

d. Either Mathematics 3 or Mathematics 15 counts as advanced when both are completed.

e. Courses in education count as advanced on the same basis as those in economics, government, institutional history, and philosophy, Education 203fw and 104s together, or Education 45 being treated as the first course precedent to all higher work.

f. Courses in law or engineering do not count as advanced.

2. The student must, before May 15 of his senior year, show such ability to write clear and correct English as to satisfy the committee on students' use of English. To promote the habitual use of clear and correct English the written work of every student in all his courses (theses, reports, quizzes, examination papers, etc.) is subject to inspection by the committee. It is the duty of each member of the teaching staff to require that his students shall be careful in their use of English, to give due weight in the making up of grades to the students' use of English, and to report promptly to the committee, submitting the evidence, any student whose use of English is seriously defective. Each session the committee will pass on the written work of every student above the rank of freshman. If any student be found deficient, the committee will prescribe for him such work as in its judgment is proper, and this work must be done to the satisfaction of the committee before the student can obtain his degree.

3. The student must show such ability to read one foreign language as to satisfy the committee on foreign language requirements. To meet this requirement he may present himself to the committee at the end of his sophomore year, or at the beginning or end of his junior year, and, unless he has previously satisfied the committee, must present himself at the beginning of his senior year. If at this time he fail to satisfy the committee, he shall have one further opportunity the following spring before March 15.

It is the intent of this requirement that the student should have such a control of the language chosen by him that he can understand and translate prose of moderate difficulty, preferably, in the case of the modern languages, in the field of his major subject.

C. Degree Groups.

The courses laid down in one of these groups must be included in the twenty required for the B. A. degree.

The student is advised to choose his group as early as possible in his college career, but not required to do so till the beginning of his junior year.

The student will note that it is possible so to arrange his minors and electives as to take in effect two majors, belong-

ing either to the same or to different groups. Such an arrangement is especially desirable for those who wish to teach two subjects.

Courses taken to satisfy a requirement in any subject laid down above under A. 1-6 count also towards satisfying the requirements laid down in that subject in these groups.

CLASSICAL GROUP (GREEK, LATIN)

Major subject: Four and two-thirds courses in Greek or Latin.

Minor subject: Two and two-thirds courses in the ancient language not chosen for the major subject.

Not more than eleven courses may be counted in foreign language.

ENGLISH AND GENERAL LITERATURE GROUP (ENGLISH, GENERAL LITERATURE, PUBLIC SPEAKING)

Major subject: Four courses in English or two courses in general literature.

Minor subjects: Two numbered courses in Latin or German or Greek or French.

One course in history.

A third numbered course in foreign language (either ancient or modern); or three courses in social science (besides the required history); or two courses in social science (besides the required history) and one course in public speaking.

MATHEMATICS GROUP (PURE AND APPLIED MATHEMATICS)

Major subject: Five courses in mathematics.

Minor subjects: Three courses in a second subject, preferably physics, or philosophy, or chemistry, or economics.

One course in philosophy.

MODERN FOREIGN LANGUAGE GROUP (FRENCH, GERMAN, SPANISH)

Major subject: Four numbered courses in French, or German, or Spanish.

Minor subjects: Three numbered courses in a second foreign language (either ancient or modern), or three numbered courses in two foreign languages (either ancient or modern).

One course in history.

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PRELIMINARY ANNOUNCEMENT OF COURSES OF INSTRUCTION FOR 1915-1916

The Final Announcement of Courses for 1915-1916 will be issued in September. It will include any changes that may be necessary in the present statement, and such new courses as may be approved. In registering, the Final and not the Preliminary Announcement should always be used.

Full courses are designated by numbers under 100, one-third courses by numbers beginning with 100, two-thirds courses by numbers beginning with 200, four-thirds courses by numbers beginning with 400, and so on.

The lower-case letters f, w, s, following a course number show the term (fall, winter, spring) in which the course is given. All other courses run throughout the year.

The lower case letters a, b, c, d, e, g, following a course number designate a particular portion of the course, and also show that this portion may not be counted till the whole course is completed.

A term initial in parenthesis (f), (w), (s), after a course number shows that that term's work is only a part of the course and may not be counted till the whole course is completed.

The capital letter F following a course number means that the course is open to freshmen; the letter A, that it is intended for undergraduates and graduates, and counts as advanced in satisfying degree requirements; the letter G, that it is intended primarily for graduates.

Where no hours are set down for class or laboratory work, they will be fixed by conference between professor and student.

Sections with odd numbers meet on Monday, Wednesday, or Friday; sections with even numbers meet on Tuesday, Thursday, or Saturday; except sections of the beginners' courses in French, German, and Spanish, which meet five times a week.

The days of the week are indicated by their initial letters.

Roman numerals in parenthesis indicate the examination group in which the course is found. No student may choose two studies in the same examination group.

T
quarters

SCHOOL OF APPLIED MATHEMATICS

see elsewhere

HARRY YANDELL BENEDICT, PH. D., *Professor of Applied Mathematics.*

CHARLES DONNELL RICE, M. S., *Associate Professor of Applied Mathematics, Chairman.*

DAVID FRANCIS BARROW, PH. D., *Instructor in Applied Mathematics.*

HYMAN JOSEPH ETTINGER, M. A., *Instructor in Applied Mathematics.*

ERNEST BAKER, *Assistant in Applied Mathematics.*

WYNDHAM EVERETTE BROWN, JR., *Assistant in Applied Mathematics.*

WILLIAM JASPER MILLER, *Assistant in Applied Mathematics.*

While the work of the school is open to academic students, and may be counted on the academic degree, the courses of instruction are particularly adapted to the needs of the engineering student.

Course 111s is to be taken by engineering students who have not had solid geometry before entering the University.

The success or failure of students in Courses 1, 202ws, and 3 in applied mathematics depends to a large extent upon their preparation in algebra. It is not sufficient that the student once knew the subject; it is important that he know it at the beginning of his work in the University. All students of engineering should have an actual working knowledge of elementary algebra through quadratics. A half-year's work beyond quadratics is strongly recommended to such students. Before entering the University the student should make a thorough review of algebra in order to avoid the loss of much time in having to learn again what was once known.

in high school

For Undergraduates

1abc. F. *Introductory Course for Engineering Students.*

Applied Mathematics 1a, 1b, and 1c together constitute a single course and may not be counted separately.

Required for Applied Mathematics 3 and 106f; Civil En-

tered for as such. Prerequisite: Latin 1 and 102, and one course in education. M. W. F. 3 (XI).

Associate Professor PENICK.

For Undergraduates and Graduates

The following courses are not open to students who have completed less than two and one-third courses in Latin:

5. A. Reading Course.

Advanced prose and poetry. The authors read in Latin 5 vary from year to year. Latin 3 is prerequisite, and 104 is strongly advised. M. W. F. 9 (I).

106. A. Composition and Style.

This course is varied from year to year. Prerequisite: Latin 104. Th. 3 (XII).

8. A. Reading Course.

Advanced prose and poetry. Latin 5 is prerequisite. M. W. F. 11 (V).

109. A. Composition and Style.

An extension of Latin 106. Th. 3 (XII).

111. A. Selected Chapters in Historical Latin Grammar.

This course is open to advanced students only, and is recommended only to those who have taken Greek and either Old English or Gothic, or to those who wish to study the origin of the Romance languages.

112 (113). A. Latin 111 in successive years.

For Graduates

13. G. Conference Course.

In 1915-1916, Catullus.

In 1914-1915 a course was given devoted to the critical study of the comedy of Plautus. The same author is not offered in consecutive years. This course is open, if a sufficient number of students apply, to those who have completed successfully Latin 5, 106, 8, and 109, or to students

engaged upon Latin 8 and 109. A reading knowledge of German and French is highly desirable. T. T. S. 9 (II).

Professor FAX.

14. G. Sanskrit for Beginners.

Professor FAX.

115. G. Advanced Sanskrit.

Professor FAX.

Latin 107w, 111, 14, and 115 are not all offered in any one year. The authors read and the exercise books used are liable to change from year to year, but the student should have the following books of reference: Harper's *Latin Dictionary* or Lewis's *Elementary Latin Dictionary*; Seyfert's *Dictionary of Classical Antiquities*; Kiepert's or Perthes's *Atlas Antiquus*; and Gildersleeve-Lodge's *Latin Grammar* (School or College Edition).

Students preparing to teach Latin in the high schools of Texas will not be recommended, save in very unusual instances, till they shall have completed upwards of three full courses in Latin. Such persons should combine Latin with Greek (not less than two courses); with Spanish or English (not less than three courses); with French or German (not less than three courses). History might also be profitably combined with Latin in the school-room, and History 1 ought to be taken along with Latin 1.

Candidates for the advanced degrees who elect Latin for a major should select their minors upon consultation with their instructors in the major subject.

SCHOOL OF PURE MATHEMATICS

MILTON BROCKETT PORTER, PH. D., *Professor of Pure Mathematics.*

JOHN WILLIAM CALHOUN, M. A., *Adjunct Professor of Pure Mathematics, Chairman.*

EDWARD LEWIS DODD, PH. D., *Adjunct Professor of Actuarial Mathematics.*

MARY ELIZABETH DECHERD, M. A., *Instructor in Pure Mathematics.*

FRANK ALEXANDER VON LAMOTTE, M. A., M. S., *Instructor in Pure Mathematics.*

GOLDIE PRINTIS HORTON, M. A., *Tutor in Pure Mathematics.*

HUGH PORTER, *Assistant in Pure Mathematics.*

HILDA LUCILLE ROBISON, *Assistant in Pure Mathematics.*

Freshmen are divided, for purposes of registration, into four groups, determined by the units in mathematics offered for entrance:

1. Those who offer only the minimum requirements, algebra and plane geometry, should take Mathematics 1ega, 1abc, or 1acd.
2. Those who offer solid geometry in addition to the minimum should take Mathematics 1abc or 1acd.
3. Those who offer plane trigonometry in addition to the minimum should take Mathematics 1egb, 1egc, or 1bcd.
4. Those who offer both solid geometry and plane trigonometry should take Mathematics 1bcd.

The completion of any one of the combinations mentioned above satisfies the requirement in mathematics for the degree of Bachelor of Arts.

A student in Group 2 who completes, with an average grade of C, any full course for which he is entitled to register will receive credit for Mathematics 1x in addition to the value of the course, provided that he has more than fourteen entrance credits in all; similarly a student in Group 3 will receive credit for Mathematics 1a; while under the same conditions a student in Group 4 will receive credit for Mathematics 1x and 1a, provided that he has fifteen entrance units in all.

This school will not recommend for high-school positions in mathematics persons who have credit for less than three full courses in the subject.

For Undergraduates

1abcdeg. F. Freshman Mathematics.

1x. Solid Geometry (given in the Summer School).

1eg (fw). F. Solid Geometry.

Section 1, M. W. F. 9 (I); Section 2, T. T. S. 9 (II); Section 3, M. W. F. 10 (III); Sections 4 and 6, T. T. S. 10 (IV); Section 5, M. W. F. 12 (VII); Section 7, M. W. F. 2 (IX); Section 8, T. T. S. 11 (VI); Section 9, M. W. F. 3 (XI).

1a (f, w, and s). F. Plane Trigonometry.

Section 1, M. W. F. 9 (I); Sections 2 and 4, T. T. S. 9 (II); Section 3, M. W. F. 9 (I); Section 5, M. W. F. 10 (III); Sections 6 and 8, T. T. S. 10 (IV); Section 7, M. W.

F. 12 (VII); Sections 10 and 12, T. T. S. 11 (VI); Sections 9 and 11, M. W. F. 2 (IX); Section 13, M. W. F. 3 (XI).

1b (f and w). F. Advanced Algebra.

Section 1, M. W. F. 9 (I); Section 2, T. T. S. 9 (II); Section 3, M. W. F. 9 (I); Section 4, T. T. S. 11 (VI); Section 5, M. W. F. 11 (V); Section 6, T. T. S. 11 (VI); Section 7, M. W. F. 12 (VII); Section 8, T. T. S. 12 (VIII); Section 9, M. W. F. 2 (IX); Section 11, M. W. F. 3 (XI).

1c (w and s). F. Introduction to Analytic Geometry.

Sections 1 and 3, M. W. F. 9 (I); Section 2, T. T. S. 9 (II); Sections 4 and 6, T. T. S. 11 (VI); Section 5, M. W. F. 11 (V); Section 7, M. W. F. 12 (VII); Section 8, T. T. S. 12 (VIII); Section 9, M. W. F. 2 (IX); Section 11, M. W. F. 3 (XI).

1d (s). F. Analytic Geometry.

Section 1, M. W. F. 9 (I); Section 2, T. T. S. 11 (VI); Section 3, M. W. F. 11 (V); Section 4, T. T. S. 12 (VIII); Section 5, M. W. F. 12 (VII); Section 7, M. W. F. 3 (XI).

Mathematics 1c or 1d is prerequisite to either Mathematics 3 or 15.

3. Calculus.

All students who intend to continue their study of mathematics should take this course in the second year. It is also especially recommended to students of physics and chemistry. It will include a large amount of problem-solving. M. W. F. 11 (V). Adjunct Professor CALHOUN.

15. Analytic Geometry.

The classic topics of plane and solid geometry will be treated. T. T. S. 10 (IV). Miss DECHERD.

Students who complete both Mathematics 3 and 15 may count one of them as an advanced course.

9. Investment and Life Insurance.

This course (the same as Business Training 9) treats of compound interest, rents, annuities, amortization, bonds, sinking funds, and the premiums and policy values in life insurance. Prerequisite: Mathematics 1. T. T. S. 9 (II).

Adjunct Professor DODD.

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For Undergraduates and Graduates

6. A. Algebra.

Elementary theory of equations, determinants, symmetric functions, theory of polynomials, etc. Prerequisite: Mathematics 15 and 10. M. W. F. 12 (VII).
Mr. LAMOTTE.

10. A. Introduction to Modern Analytic Geometry.

Students wishing to extend their knowledge of analytic geometry further than can be done in Mathematics 15 should take this course. It deals with modern co-ordinate systems and their applications to geometry. Prerequisite: Mathematics 15. M. W. F. 10 (III).
Professor PORTER.

11. A. Advanced Calculus.

The work of this course will consist of a rigorous treatment of the foundations of the calculus. Among the topics considered will be the convergence and term-wise integration of infinite series, evaluation of improper integrals, and differential equations. Prerequisite: Mathematics 3. T. T. S. 12 (VIII).
Adjunct Professor CALHOUN.

16. A. The Calculus of Variations.

The subjects treated in this course will be some theorems necessary to the theory of functions of one or more real variables, the minimizing (or maximizing) of definite integrals with fixed or variable end-points, the isoperimetric problem and several of its applications. Prerequisite: One full course of calculus.
Mr. ETTLINGER.

19. A. Actuarial Mathematics.

This course (the same as Business Training 19) deals with the theory of probability in its application to life insurance, with the construction of mortality tables, and with some of the advanced problems in life insurance. Prerequisite: Mathematics 9 and 3. Adjunct Professor DODD.
(Given in alternate years; given in 1915-1916.)

For Graduates

13. G. Advanced Mathematics.

Each year two or more courses of a somewhat advanced

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nature are given for the benefit of students making mathematics the major subject for the master's degree, or for those merely wishing to extend their knowledge of mathematics. The topics treated vary and are usually selected from the following list (see Applied Mathematics 10): (a) elementary differential equations; (b) infinite series and products; (c) differential geometry. Professor PORTER.

13. G. Introduction to Modern Analysis.

The aim of this course is to give the student some idea of the scope and power of function-theoretic methods and some insight into the leading ideas of modern mathematics. Prerequisite: Mathematics 11. Professor PORTER.

17. G.

The topics treated in this course will be differential equations, ordinary and partial; Fourier's Series and Integrals; and the Newtonian Potential Function. The attention of advanced students of physics and engineering is called to this course. Prerequisite: Mathematics 11 or its equivalent. Adjunct Professor CALHOUN and Mr. ETTLINGER.

SCHOOL OF MUSIC

FRANK LEFEVRE REED, Associate Professor of the History of Music

For Undergraduates

Division of Musical Theory

1. Harmony.

Rapid review of notation; scales; practice in melody invention; intervals; triads and inversions; dominant seventh and ninth chords and inversions; diatonic modulation.

Students must have mastered all the elements of notation and be reasonably expert in piano or organ playing; they should be able to read at sight, for example, the easier sonatas of Mozart and Haydn. Prerequisite: The consent of the instructor. T. T. S. 10 (IV).

Associate Professor REED.

2. Advanced Harmony and Elementary Counterpoint.

Music I continued. Diminished and secondary sevenths