THE

University of Wisconsin

Catalogue

1904-1905

MADISON
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1905
LETTERS AND SCIENCE.

e years. (Omitted in 1905-06.) Pro-

pment of the English novel. Study

als. Throughout the year; Tu., Th.,

essor Lathrop.

ms to cover the greater part of Spen-
First semester; M., W., F., at 9. As-

verse. The history of English verse-
Th., 2 to 4. Assistant Professor

Second semester; M., W., F., at 9.

station of representative poems. First

at 12. Professor Hubbard.

. Medieval literature in French and
1 reference to the Story of King Ar-
ance with one of the following sub-
ents who elect this course: Angli-
red French. Second semester; M., W.,

in American Literature. Open to stu-
ated course 49, or its equivalent. The
by semesters. Tu., Th., at 8. Assist-
structures on English biographical writ-
ly of classic biographies. First semes-
Assistant Professor Pyke.

3 to seniors in English. Throughout
associate Professor Lathrop.

7 for Graduates.

inary. Subject for 1904-05: Dryden
ss. Throughout the year; Tu., 4 to 6.
Professor Hubbard, and Assistant Pro-

M. WISCONSIN 1904-05

MATHEMATICS.

PROFESSOR VAN VELZER, PROFESSOR BLICHTER, ASSISTANT PROFESSOR SKINNER, ASSISTANT PROFESSOR DOWLING, MR. WOLFF, MR. PERSONS, MISS ALLEN, MR. RANUM, MR. SUTER, AND MR. RASTALL.

Arrangement of Courses.

The courses in Mathematics are divided into three groups, as follows:—

A. Courses 1 to 7 are planned to give a working knowledge
of elementary mathematics. All courses are elective except
courses 1 and 7, required of students in the Course in Commerce.

Students electing mathematics with a view to teaching it will
be expected to complete at least courses 3 and 4, or 4 and 5.

It will be advantageous for all students expecting to elect
mathematics to present at least ½ a unit of preparatory work in
algebra in addition to the two units in mathematics required for
entrance.

B. Courses 11 to 19 are designed for students who desire to
continue mathematical study, and who have completed the re-
quise courses in group A.

C. Courses 20 to 37 are intended primarily for graduate stu-
dents. They are designed to give some account of the various
branches of modern mathematics.

Major in Mathematics.

The requirements for an undergraduate major in mathematics
are, in addition to the thesis, 32 semester hours, as a minimum,
selected as follows: Courses 1, 2, 4, and 5 from group A, and at
least 16 semester hours from group B.

For Undergraduates.

1. Algebra. For students presenting one unit of algebra for
entrance. A brief course in University algebra; prerequisite
to all other courses in mathematics except 2. Three
hours a week for one semester.

First semester:
Section 1, M., W., F., at 8. Assistant Professor Skinner.
Section 2, M., W., F., at 9. Professor Van Velzer.
Section 3, Tu., Th., S., at 9. Mr. Ranum.
Section 4, M., W., F., at 10. Miss Allen.

Section 5, Tu., Th., S., at 10. Assistant Professor Skinner.

Section 6, Tu., Th., S., at 11. Mr. Ranum.

Section 7, M., W., Th., at 12. Miss Allen.

For Students in the Course in Commerce.

Section 8, M., W., F., at 8. Miss Allen.

Section 9, M., W., F., at 8. Mr. Rastall.

Section 10, Tu., Th., S., at 10. Mr. Rastall.

Second semester:


2. Trigonometry. Plane trigonometry and an introduction to spherical trigonometry; prerequisite to all other courses in mathematics except 1, 3, and 7. Open to all students who have had logarithms. Three hours a week for one semester.

First semester: M., W., F., at 10. Professor Van Velzer.

Second semester: Sections and instructors are the same as in sections 1 to 7 in course 1.

3. Algebra. For students presenting one and one-half units of algebra for entrance and elective to students who have taken course 1. Should be preceded by course 2 or taken along with it. Three hours a week for one semester. First semester: M., W., F., at 9; second semester: Tu., Th., S., at 10. Assistant Professor Skinner.

4. Analytic Geometry. Elementary course. Straight line, conic sections, general equation of the second degree, transcendental curves, and an introduction to geometry of three dimensions. Throughout the year; Tu., Th., at 10. Professor Van Velzer and Assistant Professor Dowling.

5. Calculus. Elementary course. Differentiation and integration of functions of one variable with the usual geometric applications. Throughout the year; M., W., F., at 10. Assistant Professor Dowling and Assistant Professor Skinner.

6. Commercial Algebra. Required of students in the Course in Commerce. Second semester; three hours a week, at hours as in sections 8, 9, and 10 in course 1. Assistant Professor Dowling, Miss Allen, and Mr. Rastall.

For Undergraduates and Graduates.

11. Calculus. Advanced. Partial derivatives and multiple integrals with the usual geometric out the year; Tu., Th., at 9. Assistant


13. Theoretical Mechanics. An elementary mechanics. This course may be taken with analytic geometry and calculus. M., W., F., at 11. Professor Sligh.


15. Projective Geometry. Lectures based der Lage. Throughout the year; T Professor Dowling.

16. Analytic Geometry of Three Dimensions preceded by course 11 or taken the year; Tu., Th., at 9. Assistant.


18. Theory of Probabilities. A course in to the needs of students of science given occasionally. The mathematics is a prerequisite. Either se Professor Sligher.

19. Differential Geometry. The application of calculus to the geometry of three Firts in alternate years; Assistant Professor Skinner.

Primarily for Graduates.

20. Elliptic Functions. This course must 12. Throughout the year; M., W., 1905-06. Assistant Professor Dowling.

at 10. Miss Allen.

., at 10. Assistant Professor Skinner.

., at 11. Mr. Rastall.

., at 12. Miss Allen.

Professor Van Velzer.

: at the course in Commerce.

at 8. Miss Allen.

at 8. Mr. Rastall.

at 8, at 10. Mr. Rastall.

Professor Van Velzer.

: Trigonometry and an introduction to

: by; prerequisite to all other courses in

, 3, and 7. Open to all students who

Three hours a week for one semester.

W., F., at 10. Professor Van Velzer.

: and instructors are the same

: in course 1.

: presenting one and one-half units each and elective to students who have

: be preceded by course 2 or taken

: a week for one semester. First

: at 9; second semester; Tu., Th., S., at

: Skinner.

Elementary course. Straight line,

1. equation of the second degree, trans-

: an introduction to geometry of three

: out the year; Tu., Th., at 9. Pro-

: Assistant Professor Dowling.

: course. Differentiation and integra-

: variable with the usual geometric

: out the year; M., W., F., at 10. As-

: Skinner.

: Required of students in the Course

: a semester; three hours a week, at

: 8, 9, and 10 in course 1. Assistant

: Allen, and Mr. Rastall.

:蕴含s and Graduates.

: Partial derivatives and multiple in-

: the same
tegrals with the usual geometric applications. Throughout the year; Tu., Th., at 9. Assistant Professor Skinner.

12. Differential Equations. Ordinary and partial differential equations with a few geometric and mechanical applications. Murray's Differential Equations is used as a text. This course must be preceded by course 11 or be taken along with it. Throughout the year; M., at 8, Tu., Th., at 9. Professor Van Velzer.

13. Theoretical Mechanics. An elementary course in analytical mechanics. This course may be taken by those who have had analytic geometry and calculus. Throughout the year; M., W., F., at 11. Professor Sliechter.


16. Analytic Geometry of Three Dimensions. This course should be preceded by course 11 or taken with it. Throughout the year; Tu., Th., at 9. Assistant Professor Skinner.

17. Quaternions. Second semester, in alternate years; M., W., F., at 12. Assistant Professor Skinner.

18. Theory of Probabilities. A course in this subject adapted to the needs of students of science and economics will be given, occasionally. The mathematics of the freshman year is a prerequisite. Either semester; twice a week. Professor Sliechter.


Primarily for Graduates.

20. Elliptic Functions. This course must be preceded by course 12. Throughout the year; M., W., F., at 9. (Omitted in 1905-06.) Assistant Professor Dowling.

22. Newtonian Potential Function. Lectures and required readings on the theory of potential with an introduction to spherical harmonics. *Twice a week for one year.* (Omitted in 1905-06.) Professor Slichter.

23. Fourier Series and Spherical Harmonics. The theory of the solution of the fundamental equations of applied mathematics is developed, and application made to a variety of scientific problems. An harmonic analyzer of eighty elements is available for use in this course. *Throughout the year.* (Omitted in 1905-06.) Professor Slichter.


29. Theoretical Hydrodynamics. Lectures on fluid motion. *Twice a week for one year, in alternate years.* A course in the theory of elasticity may be substituted for this course. Professor Slichter.

32. Theory of Invariants. This course must be preceded by courses 3 and 11. *Throughout the year, in alternate years; M., W., F., at 2.* (Omitted in 1905-06.) Assistant Professor Skinner.

33. Groups of Finite Order. *Throughout the year, in alternate years; M., W., F., at 12.* (Omitted in 1905-06.) Assistant Professor Skinner.

34. Theory of Numbers. Congruences, quadratic residues, quadratic forms, etc. The work is based on Dickich's *Zahlen-theorie.* *Throughout the year; Tu., Th., at 11.* Professor Van Velzer.

35. Higher Plane Curves. Presented from the point of view due to Clebsch as it has been perfected by Brill and Noether. *Twice a week for one year.* Assistant Professor Dowling.

36. Seminary Courses in Pure Mathematics. These courses vary from year to year according to the needs of students in the department. The aim is to make students acquainted with the literature of the subject under consideration, and to enable them to carry on research work. For 1905-06 the subject is: Groups of linear algebraic substitutions. *Two hours a week.* Assistant Professor Skinner.

37. Seminary Course in some subject in Applied Mathematics. *Two hours a week, throughout the year.* Professor Slichter.