BULLETIN OF THE UNIVERSITY OF WISCONSIN
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THE

UNIVERSITY OF WISCONSIN

CATALOGUE

1915-1916

MADISON
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May, 1916

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THE ACADEMIC YEAR 1916–1917

1916
Sept. 18–19–20 Mon.–Tu.–Wed. Registration days.
Sept. 18–19 Mon.–Tu. Examinations for admission.
Sept. 21 Thursday Lectures and recitations begin.
Nov. 30 Thursday Thanksgiving Day: legal holiday.
Dec. 21 Thurs. (Noon) Christmas recess begins.

1917
Jan. 9 Tues. (8 a.m.) Exercises resumed.
Feb. 8–9 Thur.–Fri. Registration days.
Feb. 12 Monday Lectures and recitations begin.
April 11–17 Wed.–Tues. (Inclusive) Spring recess.
May 30 Wednesday Memorial Day: legal holiday.
June 9–15 Sat.–Fri. Final examinations, second semester.
June 14–15 Thur.–Fri. Examinations for admission.
June 17–20 Sun.–Wed. Commencement week.
112. The Teaching and Supervision of Manual Arts. Yr.; 2 cr. Open to seniors and adult specials. The manual and industrial arts in regular and special schools. Mr. Crawshaw.


MATHEMATICS

PROFESSORS SLICHTER (chairman), VAN VLECK; ASSOCIATE PROFESSORS DOWLING, SKINNER; ASSISTANT PROFESSORS BURGESS, DRESDEN, HART, MARCH, WOLFF; INSTRUCTORS ALLEN, CLEMENTS, FRY, REFFER, PAINE, SIMPSON, TAYLOR; ASSISTANT WOOD.
FELLOW, MR. HOLLcroft.

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

A. Courses 1 to 8 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 who elect the minimum amount of mathematics in fulfillment of requirement "c" (see requirement for degree of Bachelor of Arts), may choose six hours from any of the first eight courses, provided courses 3 and 4 are not both chosen.

Students electing mathematics with a view to teaching the subject in the high schools are referred to the section on mathematics in the course for the training of teachers. Course 5 is strongly recommended in preparation for teaching.

It will be advantageous for all students expecting to elect mathematics to present at least one and one-half units of algebra for entrance.

B. Courses 111 to 125 are designed for students who desire to continue mathematical study, and who have completed the requisite courses in group A.

C. Courses 241 to 269 are intended primarily for graduate students.

Major and Minor in Mathematics

The requirements for an undergraduate major in mathematics consist of a thesis, courses 5 and 6, and a minimum of 11 credits from courses for undergraduates and graduates 112 or 113. The requirements for math minor subject in the course for the training on page 283.

For Undergraduate

1. Algebra. I or II; 3 cr. For students who have studied algebra for entrance. Prerequisite to all others. Mr. Skinner, Miss Allen, Mr. Clements, Mr. Simpson.

2. Trigonometry. I or II; 3 cr. Plane goth. Prerequisite to all other courses. Mr. Dowling, Mr. Skinner, Miss Allen, Mr. Simpson.

3. Analytic Geometry. II; 3 cr. Re presenting one and one-half units of algebra have taken or are taking course 2. Mr. E. Dresden.


5. Calculus. Yr.; 3 cr. Students who have mathematics or who desire calculus for advanced placement may take course 5 in the sophomore taken simultaneously by students who have completed the course for the training of teachers. Mr. Dowling, Mr. Van Vleck.

6. Determinants and Analytic Ge- mensions. 1; 3 cr. Prerequisite: course 5.

7. Commercial Algebra. I or II; 3 cr. The course in Commerce. Miss Allen, Mr. Mr. Hollcroft, Mr. Simpson.

8. Solid Geometry. I; 3 cr. Mr. H.


11. The Content of Secondary Math mission to course restricted to students en the training of Teachers. Mr. Hart.

100. Thesis Course. 2 cr. 1915-16.
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MATH
For Undergraduates, College of Engineering

50. Sub-freshman Algebra. I; no cr. For students who fail to pass the examination given to all engineering freshmen for admission to course 51. Mr. Fry, Mr. Paine.

51. Elementary Mathematical Analysis. I or II; 5 cr. Required of freshmen in engineering. Mr. Slichter, Mr. Simpson, Mr. Fry, Mr. Keffer, Mr. March, Mr. Paine, Mr. Wolfe, Mr. Taylor.

52. Elementary Mathematical Analysis. I or II; 5 cr. A continuation of 51. Required of freshmen in engineering. Mr. Slichter, Mr. Simpson, Mr. Fry, Mr. Keffer, Mr. March, Mr. Paine, Mr. Wolfe, Mr. Taylor.

53. Elementary Mathematical Analysis. I; 5 cr. A special course in the technical parts of 51 and 52 for students who have had trigonometry and analytic geometry. Mr. Burgess.

54. Differential and Integral Calculus. I or II; 4 cr. For all courses. Required of all sophomores in engineering. Mr. Slichter, Mr. March, Mr. Wolfe, Mr. Paine.

55. Calculus. I or II; 4 cr. Continuation of 54; for all courses. Elementary work in differential equations. Required of sophomores in engineering. Mr. Slichter, Mr. Wolfe, Mr. March, Mr. Fry, Mr. Paine, Mr. Keffer, Mr. Taylor.


For Undergraduates, College of Agriculture

71. Mathematics for Agricultural Students. I or II; 5 cr. Mr. Wolfe, Mr. Fry, Mr. Keffer, Mr. Wood.

For Undergraduates and Graduates

Course 5 is prerequisite to all courses in this group except 115, 124, and 125.

111. Advanced Calculus. I; 3 cr. Mr. Skinner.

112. Differential Equations. II; 3 cr. With applications to geometry and mechanics. Primarily a working course for students in mathematics and physics. Mr. Van Vleck.

*On account of the large amount of special work in courses 51 and 52, a special course is organized for students who have had trigonometry, and analytic geometry in colleges of pure science.

113. Theoretical Mechanics. Yr.; 3 cr. those who have had analytic geometry and ca

125. Theory of Equations and Intro Algebra. II; 3 cr. Mr. Dresden.

114. Modern Analytic Geometry. II years. (Omitted 1915-16.)

119. Differential Geometry. II; 3 cr. The application of the differential calculus to twisted curves and surfaces.


117. Vector Analysis. II; 3 cr. Applic. geometry. (Omitted 1915-16.)

118. Theory of Probabilities and Meth. II; 2 cr. For students of science and econom. years. (Omitted 1915-16.) Mr. Van Vleck.


124. Theory of Life Insurance. Yr.; course 7 or its equivalent. Mr. Dowling.

For Graduates

These courses are varied from year to year as of the students, other subjects being introd. those here announced.


250. Theoretical Hydrodynamics. Y. 1916-17.) Mr. Slichter.


263. Higher Algebra. I; 3 cr. (On

266. Theory of Numbers. Yr.; 3 cr.
113. Theoretical Mechanics. Yr.; 3 cr. May be taken by those who have had analytic geometry and calculus. Mr. Slichter.
125. Theory of Equations and Introduction to Higher Algebra. II; 3 cr. Mr. Dresden.
114. Modern Analytic Geometry. II; 3 cr. In alternate years. (Omitted 1915-16.)
119. Differential Geometry. II; 3 cr. In alternate years. The application of the differential calculus to the geometry of twisted curves and surfaces.
116. Introduction to Higher Mathematics. Yr.; 3 cr. A course for students majoring in physics. Prerequisite: Course 112. (Omitted 1915-16.) Mr. March.
117. Vector Analysis. II; 3 cr. Applications to physics and geometry. (Omitted 1915-16.)
118. Theory of Probabilities and Method of Least Squares. II; 2 cr. For students of science and economics. Mr. Slichter.
120. Theory of Analytic Functions. Yr.; 3 cr. In alternate years. (Omitted 1915-16.) Mr. Van Vleck.
124. Theory of Life Insurance. Yr.; 2 cr. Prerequisite: course 7 or its equivalent. Mr. Dowling.

For Graduates

These courses are varied from year to year according to the needs of the students, other subjects being introduced in addition to those here announced.

244. Higher Geometry. Yr.; 3 cr. In alternate years. (Omitted 1915-16.) Mr. Dowling.
250. Theoretical Hydrodynamics. Yr.; 3 cr. (Omitted 1916-17.) Mr. Slichter.
263. Higher Algebra. I; 3 cr. (Omitted 1915-16.) Mr. Skinner.
266. Theory of Numbers. Yr.; 3 cr. Mr. Skinner.
269. Integral Equations. Yr.; 3 cr. Mr. Van Vleck.

Mathematical Club—For instructors, graduates, and seniors making mathematics their major. Twice monthly. The object of the club will be to follow important recent developments in mathematics.

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METEOROLOGY

Mr. Eric R. Miller, of the U. S. Weather Bureau.

Courses 1 and 2 are intended to afford a general survey of atmospheric processes and their effects upon life on the earth. Courses 103 and 106 are planned to prepare students of agriculture, commerce, engineering, journalism, medicine, physical geography, etc., for the treatment of meteorological and climatological questions of importance in their professions, and to fit students for the investigation of special problems in meteorology. Further opportunity to pursue original research under supervision will be provided if desired.

For Undergraduates

1. Weather and Climate. I; 2 cr. Mr. Miller.
2. Climate and Man. II; 2 cr. Mr. Miller.

For Undergraduates and Graduates

103. Meteorology. I; 3 cr. Prerequisites: Mathematics 111 and 112, and Physics 2, or equivalents. Mr. Miller.
106. Climatology. II; 3 cr. Prerequisites: Geology 109, 113, and Political Economy 130, or equivalents. Mr. Miller.

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MUSIC

Emeritus Professor Parker; Professor Mills (chairman); Assistant Professors Bergman, Chamberlain, Conlon, Eastman, Sanders, Saugstad, Townsend

The courses in music, except course to all students, freshmen excepted, in University who show sufficient musical ability, and receive the same credit as students of the University, except as stated in the following explanatory statement.

Course 1a is open to election in the freshman year for the degree of Bachelor of Arts, in a fourteen hours, but does not count as part of the Music degree.

Students may be admitted to advanced music courses and be granted credit toward the degree of Bachelor of Arts in Music, but not for the degree of Bachelor of Science in Music.

See the statement of the School of Music for Undergraduates.

For Undergraduates

1b. Harmony. Yr.; 3 cr. Prereq: Eastman, Mr. Mills, Mr. Townsend.

* By the term applied music is meant individual or some instrument.