MATHEMATICS

Professors Emeritus Hosford, Seale; Professors Ayres, Mouzon, Starr (Chairman), Pipes; Associate Professor Palas; Assistant Professors Strow, Tisdale, Williams, Hassell; Mr. Bayoud, Mr. Brown, Mr. Newman, Mrs. Simons, Mrs. Allan

Freshman Mathematics: To satisfy the requirements for a Bachelor's degree, students presenting three acceptable units may take any *two* of the following courses for which they have the prerequisite: Mathematics 2, 3, 8, 9, 21, 37. Students presenting 3½ acceptable units may take any of the aforementioned courses for which they have the prerequisite. Students presenting trigonometry may not take Mathematics 3 for credit.

Students presenting four acceptable units in mathematics have no further requirement in mathematics.

Requirement for Major: Mathematics 91, 96, 97, nine additional semester-hours of advanced work in the department or in physics (not to exceed six semester-hours in physics).

Basic Algebra—1. Algebra through quadratic equations. Designed for: first, those students who lack part of the specific entrance units in mathematics; second, students presenting the specified units in mathematics but whose foundation is such that they are unable to do creditable work in Mathematics 2. (This course may not be used to satisfy the degree requirements in mathematics, and when taken, must be over and above the total number of courses regularly required for a degree. It is a non-credit course for those students who present the specified units in Mathematics.)

College Algebra—2. Sections at various hours.

Plane Trigonometry—3. Sections at various hours.

Algebra and Trigonometry—4. An integrated course in algebraic and trigonometric functions. Special emphasis on algebraic operations and analytical trigonometry. Designed to provide sufficient background for students who wish to take Mathematics 37. (No credit allowed for students who have college credit in Mathematics 2 or Mathematics 3.)

Introduction to Mathematical Concepts—8; 9. Development of the nature of mathematics through selected concepts, such as: sets and functions, logic, groups, real and complex number systems, polynomial and exponential functions, statistics and probability, matrices and determinants. Prerequisite: three units of high school mathematics.

Mathematics of Finance—21. Interest, annuities, amortization, bonds, sinking funds, loans. Prerequisite: Mathematics 2, 3 or 4.

Mathematical Analysis—37; 38; 39. Integrated course in analytic geometry, differential and integral calculus.

Actuarial Examination Problems Part II—60b, 61b. Presentation of problems of the type covered by the second examination given by the Society of Actuaries. One hour lecture, three hours laboratory. Prerequisite: Mathematics 38. *Offered only at Dallas College.*

Actuarial Theory—62. Elementary course in theory of life insurance. Prerequisite: Mathematics 21 or 38.

College Geometry—63. Modern synthetic plane geometry. This is a continuation of classical high school geometry. Geometric constructions; properties of triangles; harmonic sections; harmonic properties of circles. Prerequisite: Mathematics 39.

Theory of Probability and Statistics—73; 74. (Statistics 73; 74).

Theory of Equations—75.

Mechanics—81; 82. (Physics 85; 86).

Actuarial Probability—85.

The Teaching of Mathematics—90.

Advanced Calculus—91; 92.

Differential Equations—96.

Introduction to Linear Algebra—97. Linear Algebra. Vectors and vector spaces, theory of matrices, linear transformations in vector spaces. Prerequisite: Mathematics 91.

Introduction to Modern Algebra—98. An introduction to the principal modern algebraic systems; integral domains; groups, rings, and fields. Prerequisite: Mathematics 97, or six hours of advanced mathematics and consent of instructor.

Directed Readings in Mathematics—99. Independent readings to fill in gaps in the student's knowledge of his major field. Open only to major students who have demonstrated superior ability. Prerequisite: Consent of instructor.

For a description of the graduate courses open to seniors, see the Bulletin of The Graduate School.