

Mathematics

First-Year Program

MATH-1013. Introduction to Calculus I
This course covers the fundamentals of differential and integral calculus. Topics include limits, derivatives, and applications of the derivative. Prerequisite: MATH-1033. Credit: 3.00

MATH-1033. Introduction to Calculus II
This course covers advanced topics in differential and integral calculus, including polar coordinates, vector calculus, and applications of the definite integral. Prerequisite: MATH-1013. Credit: 3.00

MATH-1103. Introduction to Mathematical Reasoning
This course introduces students to the logic and structure of mathematical proofs. Topics include set theory, logic, and the foundations of mathematics. Prerequisite: MATH-1013. Credit: 3.00

MATH-1013. Introduction to Calculus I

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MATH-1023. Introduction to Calculus II

This course covers advanced topics in differential and integral calculus, including polar coordinates, vector calculus, and applications of the definite integral. Prerequisite: MATH-1013. Credit: 3.00

MATH-1033. Finite Mathematics for the Social Sciences

This course covers mathematical concepts and techniques used in the social sciences. Topics include probability, statistics, and linear algebra. Prerequisite: MATH-1013. Credit: 3.00

MATH-1103. Introduction to Mathematical Reasoning

This course introduces students to the logic and structure of mathematical proofs. Topics include set theory, logic, and the foundations of mathematics. Prerequisite: MATH-1013. Credit: 3.00

MATH-2213. Linear Algebra

This course covers the theory and applications of linear algebra. Topics include vector spaces, linear transformations, and eigenvalues. Prerequisite: MATH-1033. Credit: 3.00

MATH-2513. Introduction to Logic (PHIL)

PHIL 2513 is a course in logic, which is a branch of philosophy. It deals with the study of the principles and methods of reasoning. The course covers topics such as propositional logic, predicate logic, and modal logic. It is designed to help students develop critical thinking skills and understand the structure of arguments.

MATH-2613. Elementary Differential Equations

MATH 2613 is a course in elementary differential equations. It covers the theory and solution of ordinary differential equations of various types, including first-order linear and nonlinear equations, and second-order linear equations. The course also introduces the concept of vector fields and phase portraits.

MATH-3613. Partial Differential Equations

MATH 3613 is a course in partial differential equations. It covers the theory and solution of partial differential equations of various types, including the wave equation, the heat equation, and the Laplace equation. The course also introduces the concept of Green's functions and the method of separation of variables.

Math-3813. Introduction to Logic (PHIL 3813)

PHIL 3813 is a course in logic, which is a branch of philosophy. It deals with the study of the principles and methods of reasoning. The course covers topics such as propositional logic, predicate logic, and modal logic. It is designed to help students develop critical thinking skills and understand the structure of arguments.

MATH-3913. Statistics with Applications

MATH 3913 is a course in statistics with applications. It covers the theory and application of statistical methods, including descriptive statistics, inferential statistics, and regression analysis. The course also introduces the concept of probability distributions and hypothesis testing.

Independent Study

MATH-4013. Independent Study

MATH 4013 is a course in independent study. It allows students to pursue a topic of their own choice in mathematics, under the supervision of a faculty member. The course is designed to provide students with an opportunity to explore advanced topics in mathematics and to develop research skills.

