

# MATHEMATICS (MATH)

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## **MATH 500 Calculus Concepts 3 Credit Hour(s)**

**Online Prerequisite:** Elem FuncCoord Geom-MATH128 with a score of 3

This course provides an overview of single-variable Calculus, developing an understanding of the basic concepts contained therein.

**Offered:** Online

## **MATH 505 Fundamentals of Modern Geometry 3 Credit Hour(s)**

**Online Prerequisite:** MATH 500 or (Discrete Math-MATH250 with a score of 5 and Calc Analyt Geom II-MATH132 with a score of 5)

A treatment of the foundations of modern Euclidean geometry and an introduction to non-Euclidean geometries with emphasis on hyperbolic geometry. The course focuses on demonstrating and explaining geometric concepts through axiomatic methods.

**Offered:** Online

## **MATH 510 Applied Linear Algebra 3 Credit Hour(s)**

**Online Prerequisite:** MATH 500 or (Discrete Math-MATH250 with a score of 5 and Calc Analyt Geom II-MATH132 with a score of 5)

This course focuses on developing an understanding of vector spaces their transformations as is revealed by the theory of linear algebra and matrices through both examples and proofs.

**Offered:** Online

## **MATH 520 Abstract Algebraic Systems 3 Credit Hour(s)**

**Online Prerequisite:** MATH 510

This course focuses on developing an understanding of basic algebraic concepts and the structures of groups, rings, fields and homomorphisms through both examples and proofs.

**Offered:** Online

## **MATH 530 Foundations of Multivariable Calculus 3 Credit Hour(s)**

**Online Prerequisite:** MATH 510

This course focuses on developing an understanding of multivariate calculus and its structure as well as how it applies to the study of functions and analytic geometry through both examples and proofs.

**Offered:** Online

## **MATH 545 History of Mathematics 3 Credit Hour(s)**

**Online Prerequisite:** Calc Analyt Geom II-MATH132 with a score of 3

This course covers major events in the evolution of mathematical thought from ancient times to the present.

**Offered:** Online

## **MATH 595 Directed Research 3 Credit Hour(s)**

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**Offered:** Online

## **MATH 597 Seminar 3 Credit Hour(s)**

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**Offered:** Online