# **Course Descriptions**

#### **MAT 100 or MAT 101**

MAT 100 or 101 satisfies the GEC math requirement. Students who need more math courses after they complete the GEC must take MAT 101.

## MAT 100 - Quantitative Reasoning (3 hrs.)

Prerequisite(s): ACT Math subscore >= 20 or C or higher in MAT 99.

Corequisite(s): Concurrent enrollment in MAT 100S waives the prerequisite.

Logic, probability, finance. Satisfies no prerequisite for any other mathematics course.

## MAT 100S - Quantitative Reasoning Support Class (1 hr.)

Content supplementing MAT 100 including set theory, logic, counting, probability, statistics and financial management.

#### MAT 101 - College Algebra (3 hrs.)

Prerequisite(s): Math ACT >= 20 or a grade of C or better in MAT 99 or MAT 101S.

Corequisite(s): Concurrent enrollment in MAT 101S waives the above prerequisite.

Functions and graphs, linear equations and inequalities, non-linear equations, including exponential and logarithmic equations.

#### MAT 101S - College Algebra Support Class (1 hr.)

Arithmetic operations, operations on polynomials, solving linear and quadratic equations and graphing linear and quadratic functions with additional support for MAT 101.

#### MAT 102, MAT 103, MAT 114, or MAT 167

MAT 102, 103, 114, and 167 are the appropriate starting points for students with a strong background in mathematics. Any of these courses satisfy the GEC math requirement.

**Course Descriptions** 

MAT 102 - Brief Applied Calculus (3 hrs.)

Prerequisite: MAT 101 or a mathematics ACT score of 24 or higher

This is a one semester overview of calculus, primarily designed for students majoring in business, finance

and related disciplines. The concepts of instantaneous rates of change (the derivative) and aggregation of

small quantities over time (the integral) are introduced in the context of applications in business.

MAT 103 - Plane Trigonometry (3 hrs.)

Prerequisite: MAT 101 or a mathematics ACT score of 24 or higher

This is a one semester introduction to the study of triangles and periodic functions. After explaining the

fundamentals as well as the connection between the two, the course focuses on trigonometric functions by

analyzing their applications, graphs and identities and by solving equations involving these functions.

MAT 114 - Calculus for the Arts and Sciences (3 hrs.)

Prerequisite: MAT 101 or a mathematics ACT score of 24 or higher

This is a one semester overview of calculus, primarily designed for students majoring in arts and the life

sciences. The concepts of instantaneous rates of change (the derivative) and aggregation of small quantities

over time (the integral) are introduced in the context of applications in biology and other life sciences.

MAT 167 - Calculus I with Analytic Geometry (3 hrs.)

Prerequisite: MAT 103 or a mathematics ACT score of 26 or higher

This is a thorough one semester introduction to the many ways in which instantaneous rates of change

(derivatives) are useful in mathematics, the sciences, and indeed any disciplines that rely on data that can be

represented by a function. Applications include a thorough analysis of the graphing of functions, optimization

and an exposition of Newton's method as a first look into how computers are programmed to assist with

mathematics. This course is the first in the four-semester calculus sequence for mathematics and science

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