

Math

Algebra I (1.0 credit)

This course provides students with the foundation for more advanced mathematics courses and enables them to develop the skills they need to solve mathematical problems. Course content includes sets, variables, real number systems, equations and inequalities, relations and functions, graphs, rational and irrational numbers, factoring, introductory statistics, and radicals. *Students must pass the end-of-course exam to earn credit. This course is a graduation requirement.*

Geometry (1.0 credit)

This course emphasizes the essentials of Geometry. It introduces basic constructions to points, lines, planes, and angles. Critical thinking skills are developed with a basic understanding of proofs and logic. Also addressed are parallel and perpendicular relationships, and concepts involving similarity and congruence of shapes. A wide assortment of topics related to triangles and other polygons are studied, as well as relationships regarding circles. Surface area, volume, and transformations of 3-dimensional shapes are discussed in detail. Practical applications to real life are discussed where possible. *Students must take the end-of-course exam. This course is a graduation requirement.*

Geometry Honors (1.0 credit)

This course is a more rigorous course than General Geometry, with the expectations that the students will have a solid work ethic, be organized, and have a high level of responsibility. Challenging, critical thinking problems should be welcomed by students at this level. This course presents an in-depth study of the topic of Geometry, with an emphasis on a full understanding of proofs and logic. Practical applications to real life are discussed where possible. Projects, discovery activities, group discussions, and presentations are to be expected at this level. *Students must take the end-of-course exam. This course is a graduation requirement.*

Algebra II (1.0 credit)

This course provides students with a foundation for applying advanced skills to other mathematical and scientific fields. Content includes, but is not limited to: graphing linear, absolute value, polynomial and rational functions, factoring polynomials, simplifying complex numbers, solving linear, polynomial, radical, exponential, and logarithmic equations, and solving systems of equations.

Algebra II Honors (1.0 credit)

This course presents an in-depth study of the topics of Algebra II, with an emphasis on theory, and development of formulas and their application. Algebra II Honors also studies some trigonometry graphs, identities, and the unit circle. This is a rigorous study of functions, graphs, and the tools needed to study advanced mathematics.

Liberal Arts Mathematics I (1.0 credit)

This course bridges Algebra I to Geometry. Content includes algebra, geometry, statistics, probability, and consumer math.

Liberal Arts Mathematics II (1.0 credit)

This course bridges Geometry to Algebra II. Content includes intermediate level algebra, geometry, statistics, probability, trigonometry, and consumer math.

Advanced Topics in Math (1.0 credit)

This course is designed to develop the advanced algebraic, geometric, trigonometric, and statistical concepts and processes that can be used, and their relationships to each other. The content shall include, but not limited to: structure and properties of the complex number system, arithmetic and geometric sequences and series, identifying and graphing transformations of functions such as linear, rational, quadratic, cubic, and radical, absolute value, polynomial, trigonometric functions, and performing operations and compositions of functions.

Analysis of Functions Honors (0.5 credit)

The purpose of this course is to enable students to develop advanced mathematics knowledge and skills in Algebra and Trigonometry, using functions as a unifying theme. Topics shall include, but not limited to: identify and graph transformations of functions such as linear, rational, quadratic, cubic, radical, absolute value, piece-wise, polynomial, exponential, logarithmic and trigonometric, describe end behavior of polynomial functions, and identify discontinuities and asymptotes of rational functions.

Math Analysis Honors (0.5 credit)

The purpose of this course is to provide students with the study of circular and trigonometric functions and their applications. The content shall include, but not limited to: circular functions, trigonometric identities, matrix equations and their applications, graphs of trigonometric functions, particular and general solutions of trigonometric equations, and solutions of right and oblique triangles.

Math for College Readiness (1.0 credit)

The purpose of this course is to strengthen the skill level of high school seniors who wish to pursue credit generating mathematics courses at the college level. Students may be placed in this course based on PERT scores.

Pre-Calculus Honors (1.0 credit)

This course emphasizes the skills necessary for the study of theorems of polynomial behavior, the relationships among the solutions of equations, and understanding mathematical induction, trigonometric functions, and their applications.

AP Calculus AB (1.0 credit)

This course is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use

technology to help solve problems, experiment, interpret results, and support conclusions.

AP Calculus BC (1.0 credit)

This course is roughly equivalent to both first and second semester college calculus courses and extends the content learned in AB to different types of equations and introduces the topic of sequences and series. The AP course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

AP Statistics (1.0 credit)

This course is equivalent to a one-semester, introductory, non-calculus-based college course in statistics. The course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes in the AP Statistics course: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

MAC1105- FAMU Dual Enrollment College Algebra (1.0 credit)

This course is designed to assist students in developing skills for solving functions and functional notation, operations on functions, inverse functions, linear, quadratic and rational functions, absolute value and radical functions, exponential and logarithmic growth and decay. In addition, students will investigate algebraic techniques, linear and quadratic equations, inequalities, complex numbers, systems of equations and inequalities, combinations and the Binomial Theorem. Also, students will examine domains of functions, ranges of functions, graphs of functions, and relations. *(3 college math credits) In order to take this course, rising seniors must qualify with a 3.0 unweighted GPA and appropriate test scores.*

MGF 1106- FAMU Dual Enrollment Liberal Arts Math I (1.0 credit)

This course is designed to assist students in developing skills for systematic counting, probability, statistics, sets, geometry, logic, and history of mathematics. *(3 college math credits) In order to take this course, rising seniors must qualify with a 3.0 unweighted GPA and appropriate test scores.*