MATHEMATICS (MATH)

MATH1000 | Algebra & Trigonometry | Lecture (3 Credits)
Real numbers and polynomials, exponents and radicals, fractional equations; proportions and linear equations; trigonometric functions, solutions of triangles, radians, trig functions graphs, vectors, and basic identities.
General Education: Mathematics

MATH1010 | Algebra I | Lecture (3 Credits)
Foundational algebra is applied the in the context of geometry and trigonometry. Topics include rules of exponents, simplifying expressions, solving equations, computing measurements of two and three dimensional shapes, solving right triangles, and solving oblique triangles.
General Education: Mathematics

MATH1020 | Algebra II | Lecture (3 Credits)
Algebraic and trigonometric skills are developed further. Topics include, functions, graphing, factoring, advanced solving techniques, systems of linear equations, coordinate trigonometry, and vectors.
Prerequisite(s): MATH1010
General Education: Mathematics

MATH1050 | Algebra, Trigonometry & Geometry | Lecture (3 Credits)
Principles of algebra, geometry and trigonometry used in the context of a technical setting. Problem-solving strategies are developed and applied to technology.
General Education: Mathematics

MATH1250 | Boolean Algebra | Lecture (3 Credits)
Binary, octal and hexadecimal number systems. Boolean algebra and mapping.
General Education: Mathematics

MATH1300 | Boolean Algebra & Number Systems | Lecture (2 Credits)
Binary, octal and hexadecimal number systems. Boolean algebra and mapping.
General Education: Mathematics

MATH1700 | Pre Calculus | Lecture (3 Credits)
Preparation for Calculus. Topics include understanding functions from symbolic, tabular, and graphical perspectives. Explore function transformations and composition, polynomial functions, rational polynomial functions, trigonometric functions, exponential functions, and conic sections. The focus is on problem solving using mathematical models to represent real world situations.
General Education: Mathematics

MATH1810 | Calculus I | Lecture (3 Credits)
The fundamental tool used by engineers and scientists to determine critical measurements, such as maximums, minimums and allowable rates of change. Computer software will enable the application of limits, derivatives, transcendental functions, implicit differentiation and related rates.
Prerequisite(s): MATH1700
General Education: Mathematics

MATH1811 | Calculus I | Lecture (4 Credits)
The fundamental tool used by engineers and scientists to determine critical measurements, such as maximums, minimums and allowable rates of change. Utilize multiple methods in the calculation and application of limits, derivatives, transcendental functions, implicit differentiation and related rates.
General Education: Mathematics

MATH1820 | Calculus II | Lecture (3 Credits)
The fundamental tool used by engineers and scientists to determine critical measurements, such as calculating the area under curves or the capacities inside of complex geometries. Computer software will enable the application of the definite integral, the fundamental theorem of calculus, applications of integration, and numerical methods of integration.
Prerequisite(s): MATH1810, Or MATH1811, Or MATH1812
General Education: Mathematics

MATH1821 | Calculus II | Lecture (4 Credits)
The fundamental tool used by engineers and scientists to determine critical measurements such as the area under curves, the volumes within complex geometries, and for describing functions as an infinite series. Computer software enables the application of the definite integral, the fundamental theorem of calculus, applications of integration, and numerical methods of integration.
Prerequisite(s): MATH1811 Or MATH1812
General Education: Mathematics

MATH2250 | Statistics | Lecture (3 Credits)
Descriptive and inferential statistics, frequency distributions, probability theory, and issues related to gathering data; computer spreadsheets facilitate the organization, analysis and display of data.
General Education: Mathematics

MATH2260 | Probability & Statistics | Lecture (4 Credits)
Introduction to probability and statistics with applications. Topics include: basic combinatorics, random variables, probability distributions, hypothesis testing, confidence intervals, and linear regression.
Prerequisite(s): MATH1810, Or MATH1811, Or MATH1812
General Education: Mathematics

MATH2810 | Multi-Variable Calculus | Lecture (4 Credits)
Differentiate and integrate functions of two and three variables. Apply differentiation and integration techniques to physical sciences and engineering. Explore the theorems of Green and Stokes.
Prerequisite(s): MATH1820 Or MATH1821
General Education: Mathematics

MATH2820 | Linear Algebra & Differential Equations | Lecture (4 Credits)
Introduction to Linear Algebra, including vector spaces and linear mappings between such spaces. Explore solution methods for ordinary differential equations, qualitative techniques; includes matrix methods approach to systems of linear equations and series solutions.
Prerequisite(s): MATH1821 Or MATH1820
General Education: Mathematics

MATH2830 | Discrete Math | Lecture (3 Credits)
Examine a set of branches of math that all have in common the feature that they are “discrete” rather than “continuous”.
General Education: Mathematics