MTH - MATHEMATICS (MTH)

MTH 0103 Pre Calculus (3-1-3)
Covers concepts such as polynomial, rational functions, exponential and logarithmic functions, trigonometric functions, complex numbers.

MTH 1103 Pre Calculus (3-1-3)
Covers concepts such as polynomial, rational functions, exponential and logarithmic functions, trigonometric functions, complex numbers, systems of linear equations and matrices.

MTH 1113 Statistics for Engineering (3-1-3)
A standard approach to statistical analysis mainly for engineering students. Covers basic statistical concepts; graphs; basics probability; discrete distribution; expectations; Binomial and Normal distributions with their applications. Point and Confidence interval estimations; testing hypotheses; regression and correlation.
Prerequisites: MTH 0103 or MTH 1103

MTH 1203 Calculus I (3-1-3)
Apply the concepts of trigonometry and algebra to determine limits and establish continuity for an equation. Calculate the derivative of algebraic, trigonometric, logarithmic and exponential functions. Apply the derivative to optimisation of problems. Determine the maxima and minima of a function. Create graphs to solve problems
Prerequisites: MTH 0103 or MTH 1103

MTH 2103 Calculus II (3-1-3)
Covers Sums, indefinite and definite integrals, integration techniques, parametric equation, Polar coordinates, application of integration, introduction to numerical integration, Taylor, Maclaurin, Fourier series and their application.
Prerequisites: MTH 1203

MTH 2503 Introduction to Differential Equations (3-1-3)
This course covers modeling with differential equations, separable and first-order linear DEs, direction fields and Euler's method, systems of first-order DEs, homogeneous and non-homogeneous second-order DEs, and Laplace transforms. Upon completion, students will be able to solve first and second-order DEs, Laplace transforms, and various engineering-related applications.
Prerequisites: MTH 2103

MTH 3013 Calculus III (3-1-3)
This course covers vectors, vector fields, functions of several variables, partial derivatives, and multi-variable integrals. Upon completion, students will be able to select and use the concepts presented to tackle scientific and engineering problems
Prerequisites: MTH 2103