

MTH - MATHEMATICS (MTH)

MTH 1163 Engineering Mathematics I (2-2-3)

This course explores the fundamental concepts of one variable calculus, including limits, derivatives, and integrals. Students engage in the study of limits and derivatives to understand the behavior of functions and analyze rates of change. Practical applications of derivatives are emphasized. The course then introduces integrals, with a focus on areas under curves and integration techniques. This course is designed to build a solid foundation for further studies in mathematics and related disciplines.

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

MTH 1263 Engineering Mathematics II (2-2-3)

This course offers an introduction to vectors, matrices, and multivariable calculus, along with basic differential equations. Students learn and interpret vector operations, explore matrix operations and determinants, and tackle systems of linear equations. The course covers multivariable calculus topics, including partial derivatives and multiple integrals with some applications. Additionally, learners study methods to solve first-order and linear differential equations. This course aims to enhance analytical skills and prepare students for advanced studies in applied sciences.

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