



University of Asia Pacific

Department of Basic Sciences & Humanities

Courses Title: Mathematics III

Course Code: MTH 201 (CSE)

Course Outline:

Ordinary Differential Equations: degree and Order of ordinary differential equations, Formation of differential equations. Solutions of first order differential equations by various methods. Solution of general linear equations of second and higher orders with constant coefficients. Solution of homogeneous linear equations. Solutions by Variation of Parameters. Solution by Series.

Linear Algebra: Definition of Linear (Vector) space, subspace, Linear dependence and independence, Basis and Dimension, Linear transformation, Singular and Non-singular linear Transformation, Rank and Nullity, Representation of Linear Transformation by Matrices, Change Matrix, Determinant and Trace, Eigen value and Eigen Space, Normal and Canonical form of Matrices, Matrix Polynomials