SECOND YEAR

Applied Mathematics –II	E202
Prerequisite : E201	(3-3-1-0)

Partial Differentiation: Function of two or more variables, Partial derivatives, Directional derivative, Gradient, divergence and Curl, Tangent plane and normal line and Maxima, minima & saddle point. Ordinary Differential Equations: First order (variables separable, homogeneous), First order (linear – Bernoulli and exact), Second order (Homogeneous and non-homogeneous) and Higher order differential equations. Sequences and Series: Sequence: convergence, test of monotone. Series: geometric series, nth partial sum. Test of convergence, alternating series and Taylor's series. Vector Integrals: Equations of lines and planes, Product of three or more vectors, vector function & motion: velocity and acceleration, and Tangential vectors, and Curvature and normal vector.