MATHEMATICS-II

COURSE CONTENT	CODE	SYLLABUS
DETERMINANTS AND MATRICES	1	1.1 Algebra of matrices. 1.2 Elementary properties of determinants up to 3rd order. 1.3 Consistency of equations, Crammer's rule. 1.4 Inverse of a matrix. 1.5 Inverse Matrix method to solve a system of linear equations in 3 variables.
INTEGRAL CALCULUS AND DIFFERENTIAL EQUATIONS	2	2.1 Integration as inverse operation of differentiation. 2.2 Simple integration by substitution, by parts and by partial fractions (for linear factors only). 2.3 Use of formulas $sin\ m\ x\ cos\ n\ x\ dx\ \pi/2\ 0$ for solving problems Where m and n are positive integers. 2.4 Definition of Differential Equation, Order and Degree of Differential Equation
TWO-DIMENSIONALCO-ORDINATE GEOMETRY	3	3.1 General Introduction, Distance formula and section formula. 3.2 Equation of straight line in various standard forms. 3.2.1 Slope form, Intercept form, Perpendicular form. 3.2.2 One-point slope form, Two-point form, General form (without proof). 3.3 Angle between two lines, Parallel and perpendicular lines. 3.4 Perpendicular distance formula.
CIRCLE AND CONICS	4	4.1 General equation of a circle and its characteristics. 4.2 To find the equation of a circle, given: 4.2.1 Centre and radius, 4.2.2 Three points lying on it 4.2.3 Coordinates of end points of a diameter

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VECTOR ALGEBRA	5	5.1 Definition notation and rectangular resolution of a vector. 5.2 Addition and subtraction of vectors.