

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES (COs)

COURSE OUTCOMES (COs)

Course Code: MAT1SK

Course Name: Differential Equations

Upon completion of this course, the student will be able to:	
CO 1	Solve linear differential equations. Convert non-exact homogeneous equations to exact differential equations by using integrating factors.
CO 2	Know the methods of finding solutions of differential equations of the first order but not of the first degree.
CO 3	Solve higher-order linear differential equations, both homogeneous and nonhomogeneous, with constant coefficients.
CO 4	Understand the concept and apply appropriate methods for solving differential equations.

Course Code: MAT2SK

Course Name: Three-Dimensional Analytical Solid Geometry

Upon completion of this course, the student will be able to:	
CO 1	Get the knowledge of planes.
CO 2	Basic idea of lines, sphere and cones.
CO 3	understand the properties of planes, lines, spheres and cones.
CO 4	express the problems geometrically and then to get the solution.

Course Code: MAT3SK

Course Name: Abstract Algebra

Upon completion of this course, the student will be able to:	
CO 1	Acquire the basic knowledge and structure of groups, subgroups and cyclic groups. Get the significance of the notation of a normal subgroup.
CO 2	Get the behavior of permutations and operations on them. study the homomorphisms and isomorphisms with applications
CO 3	Understand the ring theory concepts with the help of knowledge in group theory and to prove the theorems.
CO 4	understand the applications of ring theory in various fields.

Course Code: MAT4SKA

Course Name: Real Analysis

Upon completion of this course, the student will be able to:	
CO 1	Get clear idea about the real numbers and real valued functions.
CO 2	Obtain the skills of analyzing the concepts and applying appropriate methods for testing convergence of a sequence/ series.
CO 3	Test the continuity and differentiability and Riemann integration of a function.
CO 4	Know the geometrical interpretation of mean value theorems.

Course Code: MAT4SKB

Course Name: Linear Algebra

Upon completion of this course, the student will be able to:	
CO 1	Understand the concepts of vector spaces, subspaces, basis's, dimension and their properties
CO 2	understand the concepts of linear transformations and their properties
CO 3	Apply Cayley- Hamilton theorem to problems for finding the inverse of a matrix and higher powers of matrices without using routine methods
CO 4	Learn the properties of inner product spaces and determine orthogonality in inner product spaces.

Course Code: MAT6A

Course Name: NUMERICAL METHODS

Upon completion of this course, the student will be able to:	
CO 1	Students can able to Understand the subject of various numerical methods that are used to obtain approximate solutions
CO 2	Students can able to learn various finite difference concepts and interpolation methods.
CO 3	Students can able to analyze and work out numerical differentiation and integration whenever and wherever routine methods are not applicable.
CO 4	Students can able to Find numerical solutions of ordinary differential equations by using various numerical methods.
CO5	Students can able to Analyze and evaluate the accuracy of numerical methods

Course Code: MAT7A

Course Name: Integral transforms with Applications

Upon completion of this course, the student will be able to:	
CO 1	Evaluate Laplace transforms of certain functions, find Laplace transforms of derivatives and of integrals. Determine properties of Laplace transform which may be solved by application of special functions namely Dirac delta function, error function, Bessel function and periodic function.
CO 2	Understand properties of inverse Laplace transforms, find inverse Laplace transforms of derivatives and of integrals.
CO 3	Solve ordinary differential equations with constant/ variable coefficients by using Laplace transform method.
CO 4	Comprehend the properties of Fourier transforms and solve problems related to finite Fourier transforms.