SIR C R REDDY COLLEGE FOR WOMEN

Affiliated to Adikavi Nannaya University,Rajamahendravaram

B.Sc

DEPARTMENT OF MATHEMATICS

COURSE OUTCOMES

B.Sc	Semester-I	Credits:4
Course:1	**DIFFERENTIAL EQUATIONS**	Hrs:75

COURSE OUTCOMES:

CO 1:

Solve linear differential equations.

CO 2:

Convert non exact homogeneous equations to exact differential equations

by using integrating factors.

CO 3:

Know the methods of finding solutions of differential equations of the first

order but not of the first degree.

CO 4:

Solve higher order linear differential equations, both homogeneous and

non homogeneous, with constant coefficients.

CO 5:

Understand the concept and apply appropriate methods for solving

differential equations.

B.Sc	**Semester-II**	Credits:4
Course:2	**THREE DIMENSIONAL ANALYTICAL SOLID GEOMETRY**	**Hrs:75**

COURSE OUTCOMES:

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.

CO 5:

To study how to trace the curve.

B.Sc	Semester-III	Credits:4
Course:3	**ABSTRACT ALGEBRA**	**Hrs:75**

COURSE OUTCOMES:

CO 1:

Acquire the basic knowledge and structure of groups, subgroups and

cyclic groups.

CO 2:

Get the significance of the notation of a normal subgroup.

CO 3:

Get the behavior of permutations and operations on them.

CO 4:

Study the homomorphism's and isomorphism's with applications.

CO 5:

Understand the ring theory concepts with the help of knowledge in group

theory and to prove the theorems.

CO 6:

Understand the applications of ring theory in various fields.

B.Sc	Semester-IV	Credits:4
Course:4	**MATHEMATICS REAL ANALYSIS**	Hrs:75

COURSE OUTCOMES:

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

functions.

CO 4:

Know the geometrical interpretation of mean value theorems.

CO 5:

To study mean – value theorems.

B.Sc	Semester-IV	Credits:4
Course:5	**LINEAR ALGEBRA**	**Hrs:75**

COURSE OUTCOMES:

CO 1:

Understand the concepts of vector spaces, subspaces, basis dimension
and their properties.

CO 2:

Understand the concepts of linear transformations and their properties.

CO 3:

Find the eigen values and eigen vectors.

CO 4:

Apply Cayley- Hamilton theorem to problems for finding the inverse of a
matrix and higher powers of matrices without using routine methods.

CO 5:

Learn the properties of inner product spaces and determine orthogonally in
inner product spaces.

B.Sc	Semester–V(Skill Enhancement Course-Elective)	Credits:4
Course:6A	**NUMERICAL METHODS**	Hrs:75

COURSE OUTCOMES:

CO 1:

Understand the subject of various numerical methods that are used to obtain approximate solutions.

CO 2:

Understand various finite different concepts and interpolation methods.

CO 3:

Work out numerical differentiation and integration whenever and were Ever routine methods are not applicable.

CO 4:

Find numerical solutions of ordinary differential equations by using various numerical methods.

CO 5:

Analyze and evaluate the accuracy of numerical methods.

B .Sc	Semester–V(Skill Enhancement Course-Elective)	Credits:4
Course:7A	MATHEMATICAL SPECIAL FUNCTIONS	Hrs:75

COURSE OUTCOMES:

CO 1:

Understand the Beta and Gamma functions, their properties and relation between these two functions, understand the orthogonal properties of chebyshev polynomials and recurrence relations.

CO 2:

Find power series solutions of ordinary differential equations.

CO 3:

Solve Hermit equation and write the Hermit polynomial of order (degree) n, also find the generating function for Hermit polynomials, study the orthogonal properties of Hermit polynomials and recurrence relations.

CO 4:

Solve Legendre equations and write the Legendre equation of first kind, find the generating function for Legendre polynomials, understand the orthogonal properties of Legendre polynomials.

CO 5:

Solve Bessel's equations and write the Bessel's equation of first kind of order n, also find the generating function for Bessel's functions understand the orthogonal properties of Bessel's functions.