I SEM

Subject: Fundamentals of Algebra and Calculus

Code: 21BSC1C1MTL

COURSE OUTCOME STATEMENT

At the end of the course, students will be able to ….

1. Learn to solve system of linear equations.
2. Solve the system of homogeneous and non homogeneous linear of m equations in n variables by using concept of rank of matrix, finding eigen values and eigen vectors.
3. Sketch curves in Cartesian, polar and pedal equations.
4. Students will be familiar with the techniques of integration and differentiation of function with real variables.
5. Identify and apply the intermediate value theorems and L'Hospital rule.

Subject: Algebra and Calculus Lab

Code: 21BSC1C1MTP

COURSE OUTCOME STATEMENT

At the end of the course, students will be able to ….

1. Learn Free and Open Source Software (FOSS) tools for computer programming.
2. Solve problem on algebra and calculus theory studied in MATDSCT 1.1 by using FOSS software's.
3. Acquire knowledge of applications of algebra and calculus through FOSS.

II SEM

Subject: Algebra and Calculus

Code: 21BSC2C2MTL

COURSE OUTCOME STATEMENT

At the end of the course, students will be able to ….

1. Recognize the mathematical objects called Groups.
2. Link the fundamental concepts of groups and symmetries of geometrical objects.
3. Explain the significance of the notions of Cosets, normal subgroups and factor groups.
4. Understand the concept of differentiation and fundamental theorems in differentiation and various rules.
5. Find the extreme values of functions of two variables.

Subject: Practicals based on Algebra and Calculus – II
Code: 21BSC2C2MTP

COURSE OUTCOME STATEMENT

At the end of the course, students will be able to ….

1. Learn Free and Open Source Software (FOSS) tools for computer programming.
2. Solve problem on algebra and calculus theory studied in MATDSCT 1.1 by using FOSS software's.
3. Acquire knowledge of applications of algebra and calculus through FOSS.

III SEM

Subject: Ordinary Differential Equations & Real Analysis-I

Code: 21BSC3C3MTL

COURSE OUTCOME STATEMENT

At the end of the course, students will be able to ….

1. Distinguish between linear, nonlinear, partial and ordinary differential equations.
2. Recognize and solve an exact differential equation.
3. Recognize and solve a linear differential equation by use of an integrating factor.
4. Make a change of variables to reduce a differential equation to a known form.
5. Find particular solutions to initial value problems.
6. Solve basic application problems described by first order differential equations and total Differential Equations.

Subject: Practical on Ordinary Differential Equations & Real Analysis – I

Code: 21BSC3C3MTP

COURSE OUTCOME STATEMENT

At the end of the course, students will be able to ….

1. Gain hands-on experience of Free and Open Source software (FOSS) tools or computer programming.
2. Solve exact differential equations.
3. Plot orthogonal trajectories.
4. Find complementary function and particular integral of linear and homogeneous differential equations.

5. Acquire knowledge of applications of real analysis and differential equations.
6. Verify convergence/divergence of different types of series.

IV SEM

Subject: Integral Transform & Partial Differential Equations

Code: 21BSC4C4MTL

COURSE OUTCOME STATEMENT

At the end of the course, students will be able to ….

1. Solve system of first order simultaneous differential equations.
2. Find Laplace transform of some basic functions.
3. Apply Convolution theorem for solving problems.
4. Solve second order linear partial differential equations in two variables with constant Coefficients by finding complimentary function and particular integral.

Subject: Practical on Integral Transform & Partial Differential Equations.

Code: 21BSC4C4MTP

COURSE OUTCOME STATEMENT

At the end of the course, students will be able to ….

1. Learn Free and Open Source software (FOSS) tools or computer programming.
2. Solve problems on Partial Differential Equations and Integral Forms.
3. Find Laplace transform of various functions.
4. Find the Fourier Transform of periodic functions.
5. Solve differential equations by using Integral transforms.