Department of Mathematics
Paradip College,Paradip

CORE PAPER-1 CALCULUS

Programme Outcome:

1. The main emphasis of this course is to equip the student with necessary analytic and technical skills to handle problems of mathematical nature as well as practical problems.
2. Main target of this course is to explore the different tools for higher order derivatives.

To plot the various curves

1. To solve the problems associated with differentiation and integration of vector functions.

Programme Specific Outcome:

1. After completing the course, students are expected to be able to use Leibnitz's rule to evaluate derivatives of higher order.
2. They are able to study the geometry of various types of functions.
3. Evaluate the area, volume using the techniques of integrations.
4. They are able to identify the difference between scalar and vector, acquired knowledge on some of the basic properties of vector functions.

CORE PAPER-II DISCRETE MATHEMATICS

Programme Outcome:

1. This is a preliminary course for the basic courses in mathematics and all its applications.
2. The objective is to acquaint students with basic counting principles,
3. The objective is to acquaint students with set theory and logic,
4. To accrue knowledge of matrix theory and graph theory.

Programme Specific Outcome:

1. The acquired knowledge will help students in simple mathematical modeling.
2. They can study advance courses in mathematical modeling.
3. They can study computer science, statistics, physics, chemistry etc.

CORE PAPER-III REAL ANALYSIS

Programe Outcome:

1. The objective of the course is to have the knowledge on basic properties of the field of real numbers.
2. Studying Bolzano-Weierstrass Theorem , sequences and convergence of sequences,
3. Series of real numbers and its convergence etc.
4. This is one of the core courses essential to start doing mathematics.

Programe Specific Outcome:

1.On successful completion of this course, students will be able to handle fundamental properties of the real numbers that lead to the formal development of real analysis

2.Understand limits and their use in sequences, series, differentiation and integration.

3.Students will appreciate how abstract ideas and rigorous methods in mathematical analysis can be applied to important practical problems.

CORE PAPER-IV DIFFERENTIAL EQUATIONS

Programe Outcome:

1. Differential Equations introduced by Leibnitz in 1676 models almost all Physical, Biological, Chemical systems in nature.
2. The objective of this course is to familiarize the students with various methods of solving differential equations and to have a qualitative applications through models.
3. The students have to solve problems to understand the methods.

Programe Specific Outcome:

1.A student completing the course is able to solve differential equations and is able to model problems in nature using Ordinary Differential Equations.

2.This is also prerequisite for studying the course in Partial Differential Equations and models dealing with Partial Differential Equations.

CORE PAPER-V THEORY OF REAL FUNCTIONS

Programe Outcome:

1. The objective of the course is to have knowledge on limit theorems on functions.