

## Courses (M.Sc. Mathematics)

### Algebra

Linear Algebra

Abstract Algebra ( Basic Algebra, Algebra – I & II)

Algebraic Geometry

Commutative Algebra

Representation Theory of Finite Groups

### Differential Equations

Ordinary Differential Equations (ODE)

Partial Differential Equations (PDE)

Mathematical Methods

Dynamical Systems

Modern Theory of PDE

Numerical Methods for PDE

Mathematical Theory of Finite Element

### Calculus , Analysis & Topology

Real & Complex Analysis, Theory of analytic functions

Measure and Advanced Probability Theory

Fourier Analysis and Applications

General, Algebraic and Differential Topology

Multivariable Calculus

Differential Geometry

Functional Analysis

Operators on Hilbert Spaces

Spectral Approximation

Nonlinear Analysis

### Number Theory

Basic Number Theory

Algebraic Number Theory

Analytic Number Theory

### Financial Mathematics

Optimization

Numerical Analysis

Combinatorics

Introduction to Derivative Pricing

Computer : Computer Programming and Utilization (C++)