M. Sc. (Mathematics)

SEMESTER I
Advanced Algebra
Advanced Real Analysis
Ordinary Differential Equations
Stochastic Process
Mathematics Lab
Elective I
Cultural Education

SEMESTER II
Advanced Complex Analysis
Advanced Topology
Partial Differential Equations
Measure Theory
Numerical Analysis
Numerical Computations Lab
Amrita Values Programme

SEMESTER III
Advanced Graph Theory
Functional Analysis
Basic Fluid Dynamics
Elective II
Elective III
Seminar
Live-in-Lab / Open Elective

SEMESTER IV
Operator Theory
Elective IV
Dissertation

ELECTIVES (any one Stream)

Algebra Stream
Algebraic Geometry
Algebraic Topology
Coding Theory
Commutative Algebra

Lie Algebra
Theory of Manifolds
Linear Algebra and its Applications

Analysis Stream
Fixed Point Theory
Fractals
Harmonic Analysis
Nonlinear Partial Differential Equations
Wavelet Analysis
Mathematical Physics

Statistics Stream
Queuing Theory and Inventory Control Theory
Statistical Pattern Classifications
Statistical Quality Control and Six Sigma Quality Analysis
Theory of Sampling and Design of Experiments
Time Series Analysis
Statistical Techniques for Data Analytics

Fluid Mechanics Stream
Advance Boundary Layer Theory
Computational Fluid Dynamics
Finite Element Methods
Magneto-Hydro Dynamics
Mathematical Foundations of Incompressible Fluid Flow
Introduction to Fluid Dynamics

COMPUTER STREAM
Data Structures & Algorithms
Algorithms For Advanced Computing
Computer Aided Design of VLSI Circuits
Cryptography
Fuzzy Sets and its Applications
Introduction to Soft Computing
Object-Oriented Programming and Python