

Department:- Mathematics

Sr. No.	Course	Course Code	Level	Syllabi	Weightage	No. of classes/week	Course specific outcome	Program specific outcome
1	Algebra & Trigonometry	AB-126	UG	View Document	65	3	After completion of the course the student is able to understand the basics of algebra and formulation of different algebraic structures.	After completing T.D.C. Students of Mathematics are able to understand basic algebraic structures, tracing of various curves, formulating differential equations and concepts of equilibrium of rigid body under various forces in three dimensions.
2	Calculus	AB-127	UG		65	3	The students are able to trace different curves and find areas, surface area and volume of different shapes.	
3	Geometry & Vectors	AB-128	UG		70	3	After completion the course student will be able to understand geometrical figures in three dimensions. The student also learns about projection of different shapes on different planes.	
4	Linear Algebra & Matrices	AB-226	UG		65	3	The students are able to formulate matrices for different problems in linear algebra and conduct various operations on them.	
5	Differential Equations & Integral Transforms	AB-227	UG		65	3	This course introduces students to formulation of differential equations. After the completion of this course, the student is able to formulate problem of practical world to mathematical model.	
6	Mechanics	AB-228	UG		70	3	Basics of dynamics and statics are taught as part of this course. The students are able to understand the forces under which a particular body is worked upon. Equilibrium of different forces working on rigid bodies is studied as part of this course.	

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1	Abstract Algebra	H1049	PG	View Document	100	6	Students are able to formulate different algebraic structures and apply operations on those structures.	After completing Post Graduation course in Mathematics, the students are able to conduct research in different domains of the subject. After this course, they are expected to apply mathematical concepts in different areas of subjects other than mathematics and conduct interdisciplinary research.
2	Real Analysis	H1050	PG		100	6	After this course, students are able to understand concepts of pure mathematics like uniform continuity, uniform convergence of functions.	
3	Differential Equations	H1051	PG		100	6	After completion of this course, students are able to formulate different types of equations and boundary value problems.	
4	Metric Spaces	H1052	PG		100	6	Students are able to apply concepts of analysis on different spaces.	
5	Topology		PG		100	6	This course enables students to understand various phenomena of pure mathematics in different spaces of Universe.	
6	Measure and		PG		100	6	After completion of this course,	

	Integration						the students are able to formulate measures of sets and intervals. Students are enabled to define different types of measures of algebraic structures.	
7	Advanced Discrete Mathematics	H2051	PG		100	6	The students learn about graph theory, applications of graphs in practical scenario, finite state machines and algebraic structure like lattices.	
8	Operations Research		PG		100	6	The basics of optimization of resources, queuing theory, inventory management, replacement problems are taught in this course.	
9	Complex Analysis	H3050	PG		100	6	Students learn about complex variables and its functions. They learn to draw such functions on 2D plane and singularity of these functions on complex plane.	
10	Mathematical Methods		PG		100	6	Students learn about mathematical formulation of various problems in different streams.	
11	Numerical Analysis	H	PG		100	6	The students able to solve problems using numerical techniques and compare those solutions with exact solution to find error to analyze.	
12	Lattice Theory	H3057	PG		100	6	Students learn to formulate lattices as algebraic structure and	

							apply different operations on them.
13	Number Theory		PG		100	6	Students learn basics of number theory and various operations on numbers. They learn to play with numbers using equations.
14	Fluid Dynamics		PG		100	6	Students learn flow of different types of fluids in different conditions. Motion of fluid is governed by continuity equation. Students learn to solve this equation.
15	Functional Analysis	H4052	PG		100	6	Students learn about Banach and Hilbert spaces. Concepts of pure mathematics on real line are explained in these two spaces.
16	Differential Geometry		PG		100	6	Students learn about curves in different domains and their geometry is taught in this course.