Department of Mathematics

Course outcome		
Class	**PAPER**	**Outcome**
BSc I	**Paper I** **Algebra and Trigonometry**	• Learn to solve system of linear equation. • Learn to solve Diophantine equation. • Learn to find roots of polynomial over rational. • Introduction of group theory • Learn to solve matrix and trigonometry
	Paper II **Calculus**	• Gain Knowledge of fundamental concepts of real numbers. • Verify the value of the limit of a function at a point using the definition of the limit • Introduction to sequence and series. • Learn to check function is continuous understand the consequences of the intermediate value theorem for continuous functions. • Ordinary differential equation and integral calculus
	Paper III **Vector analysis and Geometry**	• To learn concept of vector analysis • To learn vector differentiation and integration. • To learn sphere, cone, cylinder • To learn paraboloids, central conicoids.
BSc II	**Paper I** **Advance calculus**	• Student will be understand differentiation and fundamental theorem in differentiation and various rules. • Geometrical representation and problem solving on MVT and Rolls theorem. • Finding extreme values of function.

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		• Introduction to Ordinary Differential Equation. • Gain Knowledge of fundamental concepts of real numbers in n dimensions. • Verify the value of the limit of a function at a point using the definition of the limit in R*R • Find the extreme value in 2 dimensions. Study multiple integration.
	Paper II Differential Equations	• To learn about series solution of differential equation. • Students learn the concept of Laplace Transformation. • Students learn about concept of PDEs of first order, second order and higher order. • Students learn about concept of Calculus of variation.
	Paper III Mechanics	• Understand the concept of Analytical conditions of Equilibrium. • Understand the concept of Forces in three dimensions, Null lines and planes. • Students learn about simple harmonic motion, Elastic strings. • Understand the concept of Kepler's laws of motion .
BSc III	**Paper I ANALYSIS**	• Describefundamental properties of the real numbers that lead to the formal. • Development of real analysis. Comprehend rigorous arguments developing the theory understanding

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		real analysis. • Demonstrate an understanding of limits and how they are used in sequences, series. • Construct rigorous mathematical proofs of basic results in real analysis. • Problem solving on metric spaces connected and contactless.
	Paper II **Abstract Algebra**	• Understand the concept of Automorphism and Fundamental theorems. • Students will be able to define Ring, subring, Ideals, Integral domain,Field. • Introduction to vector space and subspace • Students learn about Linear Transformation and their representation as matrices. • Students learn about concept of Inner product spaces.
	Paper III **Discrete Mathematics**	• Learn concept related to counting. • Introduction to advanced counting. • To understand and apply shortest path algorithm in real life. • To understand logical concepts and to show logical equivalences by using truth tables. • Linear algebra course outcome introduction to vector space and subspace.

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Program outcome

Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.

A student should get a relational understanding of mathematical concepts and concernedstructures, and should be able to follow the patterns involved, mathematical reasoning.

Ability to analyze a problem, identify and define the computing requirements, which may be appropriate to its solution.

Introduction to various courses like group theory, ring theory, field theory, metric spaces, number theory.

Enhancing students' overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment.

Ability to pursue advanced studies and research in pure and applied mathematical science

Program specific outcome

Think in a critical manner.
Know when there is a need for information, to be able to identify, locate,evaluate, and effectively use that information for the issue or problem at hand.
Formulate and develop mathematical arguments in a logical manner.
Acquire good knowledge and understanding in advanced areas of mathematics and statistics, chosen by the student from the given courses.
Understand, formulate and use quantitative models arising in social science, Business and other contexts.

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