PROGRAMME OUTCOMES, PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES
DEPARTMENT OF MATHEMATICS
PROGRAM- BSc, MATHEMATICS

Program outcomes :

1. Inculcate critical thinking to carry out specific investigation objectively without being biased with preconceived notions.
2. Equip the students with skills to analyze problems, formulate an hypothesis, evaluate and validate results, and draw reasonable conclusions thereof.
3. Imbibe effective scientific and/or technical communication in both oral and writing.
4. Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences.
5. Create awareness to become an enlightened citizen with commitment to deliver one's responsibilities within the scope of bestowed rights and privileges.

Program specific outcomes :

1. Understanding of the fundamental axioms in mathematics and capability of developing ideas based on them.
2. Inculcate mathematical reasoning.
3. Provide knowledge of a wide range of mathematical techniques and application of mathematical methods in other scientific engineering domains.
4. Provide advanced knowledge on topics in pure mathematics, empowering the students to pursue higher degree at reputed academic institutions.
5. Good understanding of number theory which can be used in modern online cryptographic technologies.

COURSE OUTCOME

SN	Name Of Course	Name Of Sub./Paper	Course Outcome
1	B.Sc. 1st	Algebra & Trigonometry - 1	1. To Give The Student Of First-Hand Knowledge Of Matrix. 2. To Develop In Students Application Of Linear Equation . 3. To Give Knowledge Of Major Mathematians Of Their Contribution. 4. To Give The Students On Knowledge Of Mappings And Homomorphism. 5.To Understand Permutation Group. 6. Knowledge Of Trigonometrical Functions. 7. Understand Group And Its Properties.
2	B.Sc. 1st	Elementary Calculus - 2	1. Knowledge Of Limit Of Function Asymptotes. 2. Understand Of Curvature & Tracing Of Curves. 3. Understand Of Integration Of Transcendental Functions. 4. Knowledge Of Degree And Order Offer Differential Equation. 5. Knowledge Of Linear Differential Equation.
3	BSc. I	Vector Analysis & Geometry - 3	1. Knowledge Of Is Scalar And Vector Product. 2. Understand Vector Integration In Theorem Of Gauss And Green Stocks. 3. Understand System Of Conics And Polar Equation Of Conic. 4. Understand Plane, Sphere And Cone.
4	BSc. II	Advanced Calculus - 1	1. Understand Sequence And Series. 2. Understand Continuity Of Function And It's Properties. 3. Understand Beta And Gamma Functions And Its Theorem. 4. Understand The Euler Theorem On Homogeneous Function. 5. Understand Envelops Maxima And Minima Lagrange's Multiplier Method.
5	BSc. II	Differential Eqaution - 2	1. Understand The Power Series Method Bessel And Legendre Functions. 2. Understand Laplace Transformation And It's Existence Theorem. 3. Understand The Lagrange's Solution And Charpit Method.

			4. Understand Variational Problem With Fixed Boundaries Eulers Equation For Functional Containing First Order Derivatives.
6	BSc. II	Mechanics - 3	1. Understand Equilibrium Of Coplanar Forces Stable And Unstable Equilibrium And Virtual Work. 2. Understand Forces In Three Dimensions Poinsot's Central Axis And Null Lines And Planes. 3. Knowledge Of Simole Harmonic Motion And Hooke's Law. 4. Understand Velocities And Acceleration Along Radial And Transverse Directions. 5. Knowledge Of Kepler's Law Of Motion (Planetary Motion).
7	BSc. III	Analysis - 1	1. To Give The Student A First Hand Knowledge Of Series Of Arbitrary Term Double Series And Implicit Function. 2. Understand The Riemann Integral And The Fundamental Theorem Of Integral Calculus. 3. Knowledge Of Matric Space And Limit Points. 4. Understand Complex Numbers As Ordered Pair And Analytic Function. 5. Understand Baire Category Theorem And Extension Theorem.
8	BSc. III	Abstract Algebra - 2	1. To Give The Student A Knowledge Of Group Automorphism A Normalizer. 2. Understand Ring Theory And Homomorphism And Isomorphism Theorem. 3. To Give The Student A Knowledge Of Vector Space And Their Basic Properties Basis. 4. To Give The Student A Knowledge Of Linear Transformation And Diagonalization. 5. Understand Inner Product Space And Cauchy Schwarz Inequality.
9	BSc. III	Discrete Mathematics - 3	1. Understand Phrase Structure Grammars And Langauges. 2. Knowledge Of Relation And Function Graph. 3. Understand Finite State Machine And Equivalent Machine. 4. Understand Recurrence Relation And Homogeneous. 5. Understand Boolean Algebra (Lattice) And Boolean Function 6. Knowledge Of Switching Circuits.

PROGRAM- MSc., MATHEMATICS

PROGRAM OUTCOME

1. Inculcate critical thinking to carry out specific investigation objectively without being biased with preconceived notions.

2. Equip the students with skills to analyze problems, formulate an hypothesis, evaluate and validate results, and draw reasonable conclusions thereof.

3. Imbibe effective scientific and/or technical communication in both oral and writing.

4. Continue to acquire relevant knowledge and skills appropriate to professional activities and demonstrate highest standards of ethical issues in mathematical sciences.

5. Create awareness to become an enlightened citizen with commitment to deliver one's responsibilities within the scope of bestowed rights and privileges.

PROGRAM SPECIFIC OUTCOME

PS01 - Understand All Branches Of Maths.
PS02 - Know The Computer Langauge and Computer Software.
PS03 - Appear For Competitive Examination.
PS04 - Understand For Electrical and Engineering Technique.
PS05 - Develop Research and Development Management.
PS06 - Understand Teaching Career In School and College, University
       Level.
PS07 - In Depth Knowledge Helps To Quality In Competative Exams.
PS08 - Understand The Signal Analysis.

COURSE OUTCOME

SN	Name Of Course	Name Of Sub./Paper	Course Outcome
1	M.Sc. 1st, 2nd	Advanced Abstract	1. Understand Permutation Group, Isomorphism Theory.

	SEM.	Algebra - 1	2. Understand Normal Series, Solvable Group And Jordan-Holder Theorem. 3. Understand Rings and Modules Zorn's Lemma. 4. Understand Modules, Vector Space and Rank Nullity Theorem . 5.Understand Field Theory, Neothetherian and Artinian Modules.
2	M.Sc. 1st, 2nd SEM.	Real Analysis - 2	1. Understand The Riemann Stieljes Integral and Fundamental Theory Of Calculus. 2. Understand Function Of Several Variable (Linear Transformation). 3. Understand Sequence and Series Of Function and Its Theorem . 4. Understand Power Series and Abel's Theorem. 5. Understand Measurable Sets and Functions Riesz Theorem. 6. Understand Lebesque Integral and Lebesque LP Spaces.
3	M.Sc. 1st, 2nd SEM.	Topology - 3	1. Understand Topological Spaces, Closed Sets. 2. Understand Separation Axioms and Its Basic Properties. 3. Understand Countable Spaces and Tietz Extension Theory. 4. Understand Compactness and Its Basic Properties. 5. Understand Connected Spaces and Connectedness (Tychonoff's Theorem).
4	M.Sc. 1st, 2nd SEM.	Complex Analysis - 4	1. Understand Complex Integration, Cauchy Goursat Theorem And Cauchy's Integral Formula. 2. Understand Meromorphic Functions and Inverse Function Theorem. 3. Understand Residues and Cauchy Residue Theorem. 4. Understand Bilinear Transformation, Their Properties and Classification. 5. Understand Entire Functions, Gamma Function and Its Properties. 6. Understand Canonical Product and Jensen's Formula.
5	M.Sc. 1st, 2nd SEM.	Advanced Discrete Mathematics - 5	1.Knowledge Connectives, Truth Table and Tautology. 2. Knowledge Algebraic Structure and Basic Homomorphism Theorem. 3. Understand Lattices(Posets) and It's Properties .

			4. Understand The Karnaugh Map Method.
			5. Understand Grammar and Language Finite State Machines.
			6. Knowledge Graph Theory, Degree Of Vertex and Trees.
6	M.Sc. 3rd, 4th Sem.	Integration Theory & Functional Analysis - 1	1. To Give The Student a First-Hand Knowledge Of Signed Measure, Hahn Decomposition Theory. 2. To Provide Them With Knowledge Of Inner Product Spaces, Orthonormal Sets, Bessel's Inequality . 3. To Develop In Student The Basic Knowledge Of Uniform Boundedness Theorem . 4. To Give The Students a Knowledge Of Lebesque Stieltjes Integral, Product Measure and Hausdroff Measure .
7	M.Sc. 3rd, 4th Sem.	Partial Differential Eqaution	1. Understand Fundamental Solution Of Laplace's Equation, Mean Value Theorem and Properties Of Harmonic Function. 2. Understand Heat Equation, Mean Value Formulae and Properties Of Solution. 3. Understand Laplace and Fourier Transforms and Their Application . 4. Understand Hamilton Canonical Equations and Routh's Equations. 5. To Give The Students Knowledge Of Potential Of Rod, Spherical Shell, Surface and Solid Harmonics .
8	M.Sc. 3rd, 4th Sem.	Fuzzy Sets & Their Application - 3	1. Understand Fuzzy Sets α - Cut and Basic Properties On Fuzzy Sets . 2. To Give The Student a First-Hand Knowledge Of Fuzzy Numbers and Fuzzy Equation . 3. Knowledge Of Fuzzy Relation Of Fuzzy Sets and Fuzzy Morphism. 4. Understand Possibility Theory - Fuzzy Measure. 5. Knowledge Of Fuzzy Control Controllers Fuzzyfication. 6. To Develop In Students Decision Making In Fuzzy Environment, Individual Decision Making.
9	M.Sc. 3rd, 4th Sem.	Operation Research - 4	1. Understand Operation Research and Its Scope . 2. Knowledge Of Simplex Method and Big M Method Of Solution To LPP. 3. Understand Network Analysis - Shortest Path Problem and Maximum Flow / Problem. 4. Knowledge Of Game Theory - Two Person and Games With Mix Strategies. 5. Understand Of Quequeing System Deterministic Quequeing System.
10	M.Sc. 3rd, 4th Sem.	Fluid Mechanics	1. Understand Kinematics - Lagrangian and Eulerian Method. 2. Understand Equation Of Motion - Euler's Dynamical Equation and Incompressible Fluids.

| | | | 3. Understand Languages Stream Function and Stoke's Stream Function. |
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