

Academic Year	2022-23
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**B.P.H.E. Society's
Ahmednagar College, Ahmednagar
Internal Quality Assurance Cell
CO, PO, and PSO Attainment Sheet**

Department Name	Mathematics
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Program Name	M.Sc.
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Program Outcomes(PO)

PO1	To take care of fast development in the knowledge of mathematics.
PO2	To enhance the quality and standards of Mathematics Education.
PO3	To provide a broad common frame work, for exchange, mobility and free dialogue across the Indian Mathematical and associated community.
PO4	Capable of analyzing the results critically and applying acquired knowledge to solve the problems
PO5	Capable to identify, formulate, investigate and analyze the scientific problems and innovatively design and create product solutions to professional and real life problems.
PO6	Able to develop a research aptitude and apply knowledge to find the solution of burning research problems in the concerned and associated fields at global level.
PO7	Able to Learn interdisciplinary and multidisciplinary skill sets and advanced techniques to apply them for better livelihood of mankind.
PO8	Able to learn and work in a groups and capable of leading a team even.
PO9	Able to acquire lifelong learning skills which will lead important to better opportunities and improve quality of life.
PO10	To create and aptitude for Mathematics in those students who show a promise for higher studies and creative work in Mathematics.
PO11	
PO12	

Program Specific Outcome(PSO)

PSO1	Will have a strong foundation in both pure and applied mathematics.
PSO2	Will have the knowledge of the fundamental axioms in mathematics and capability of developing ideas based on them and inculcate mathematical reasoning.
PSO3	Will be able to apply mathematical skills for solving problems and can prepare himself for various competitive exams.

Academic Year :	2022-23
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Class		M.Sc.I	Course Outcomes	Program Outcomes										PSOs		
Subject Code		MTUT111		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Linear Algebra	CO1	2	1	1	1	2	1	1	1	2	2	2	1	
Semester No		I	CO2	2	1	1	2	1	2	2	1	2	2	1	2	1
Teacher Name		P.R.Kale	CO3	1	1	2	3	1	2	1	1	2	2	1	2	1
Course Outcomes			CO4	3	2	1	3	3	2	1	1	1	2	2	3	1
	CO1	Can imagine the results of basic operations on vectors in geometrically and differentiate between Finite and Infinite Dimensional Vector Spaces	CO5													
	CO2	Can differentiate between Eigen Values and Eigen Vectors along with its Applications along with real life examples of the difference between Linear and Non – Linear Transformation	Average	2.00	1.25	1.25	2.25	1.75	1.75	1.25	1.00	1.50	2.00	1.50	2.25	1.00
	CO3	Can recognize the invariant and Non – invariant subspaces under the given linear operator														
	CO4	Can tell the applications of Linear Algebra to real life														
	CO5															

Class		M.Sc.I	Course Outcomes	Program Outcomes										PSOs		
Subject Code		MTUT112		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3

Subject Name	Real Analysis		CO1	1	2	1	1	2	1	1	1	1	1	1	1	2
Semester No	I		CO2	1	1	2	2	1	2	1	1	2	1	1	2	1
Teacher Name	R.R.Devadhe		CO3	1	1	2	3	2	2	1	1	2	2	1	2	2
Course Outcomes			CO4	3	2	1	3	3	2	1	1	1	2	2	1	1
	CO1	The successful completion of this course students will able to find the measure of sets	CO5													
	CO2	The successful completion of this course students will able to evaluate derivative and integration of functions defined on R^n	Average	1.50	1.50	1.50	2.25	2.00	1.75	1.00	1.00	1.50	1.50	1.25	1.50	1.50
	CO3	Students can apply the theory in the course to solve a variety of problems at an appropriate level of difficulty														
	CO4															
	CO5															

Class	M.Sc.I	Course Outcomes	Program Outcomes										PSOs			
Subject Code	MTUT113		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	
Subject Name	Group Theory	CO1	1	2	1	1	2	1	1	1	1	1	1	2	1	
Semester No	I	CO2	2	1	1	3	1	3	2	3	2	2	3	2	3	
Teacher Name	A.E.Lagad	CO3	1	1	2	1	1	2	1	1	3	2	1	1	2	
Course Outcomes			CO4	2	2	2	1	2	2	1	1	1	1	2	1	
	CO1	Recognize the mathematical objects that are groups, and classify them as abelian, cyclic and permutation groups, etc.	CO5													
	CO2	Identify the various algebraic structures with their corresponding binary operations.	Average	1.50	1.50	1.50	1.50	1.50	2.00	1.25	1.50	1.75	1.50	1.50	1.75	1.75
	CO3	Learn about structure preserving maps between groups and their consequences.														

	CO4	Apply Sylow theorems for groups of finite orders.
	CO5	

Class		M.Sc.I	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUT114	Advanced Calculus		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Semester No	I		CO1	1	3	2	1	2	1	1	1	1	1	2	1	
Teacher Name	S.B.Gandhale		CO2	2	1	1	2	2	2	3	2	2	2	2	2	
Course Outcomes			CO3	2	1	2	1	1	3	1	1	2	1	1	2	
			CO4	2	2	2	1	2	2	2	1	1	1	1	2	
	CO1	Be able to define and differentiate scalar and vector fields.	CO5													
	CO2	Be able to calculate directional derivatives, partial derivatives, and higher-order partial derivatives.	Average	1.75	1.75	1.75	1.25	1.75	2.00	1.50	1.50	1.50	1.25	1.25	1.50	1.75
	CO3	Be able to define and evaluate double integrals.														
	CO4	Be able to define and calculate surface integrals.														
	CO5															

Class		M.Sc.I	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUT115	Ordinary Differential Equations		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Semester No	I		CO1	1	2	2	1	1	1	1	1	1	1	1	2	
Teacher Name	S.B.Karale		CO2	2	1	1	2	2	2	2	2	2	2	2	2	
Course Outcomes			CO3	2	1	2	1	1	2	2	1	2	1	2	2	
			CO4	1	2	1	1	2	2	2	1	1	1	1	1	
	CO1	Students are able to find solutions of linear equations of first order.	CO5													

	CO2	Students can find solutions for homogeneous and non-homogeneous equations of second order.	Average	1.50	1.50	1.50	1.25	1.50	1.75	1.75	1.25	1.50	1.25	1.50	1.50	1.75
	CO3	Understand the Existence and Uniqueness of solutions.														
	CO4	Students learn a system of differential equations.														
	CO5															

Class		M.Sc.I	Course Outcomes	Program Outcomes										PSOs			
Subject Code	MTUT 121	Subject Name		Complex Analysis	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Semester No	II	Teacher Name	U.M.Patare	CO1	1	2	2	1	2	1	1	1	1	3	2	2	
Course Outcomes		CO2		CO2	2	1	1	2	2	2	2	2	2	2	2	2	
		CO3		CO3	2	2	2	1	1	2	2	1	2	2	2	2	
		CO4		CO4	1	2	1	1	2	2	2	1	1	1	1	1	
	CO1	Understand the significance of differentiability of complex functions leading to the understanding of Cauchy-Riemann equations.	CO5														
	CO2	Evaluate the contour integrals and understand the role of Cauchy-Goursat theorem and the Cauchy integral formula.	Average		1.50	1.75	1.50	1.25	1.75	1.75	1.75	1.25	1.50	1.50	2.00	1.75	1.75
	CO3	Expand some simple functions as their Taylor and Laurent series, classify the nature of singularities, find residues and apply Cauchy Residue theorem to evaluate Integrals															
	CO4	Represent functions as Taylor, power and Laurent series, classify singularities and poles, find residues and evaluate complex integrals using the residue theorem.															
	CO5																

Class		M.Sc.I	Course Outcomes	Program Outcomes										PSOs		
Subject Code		MTUT 122		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		General Topology	CO1	2	2	2	1	1	1	1	1	1	1	1	2	
Semester No		II	CO2	2	1	1	2	2	2	2	1	1	2	1	1	
Teacher Name		R.R.Devadhe	CO3	2	1	2	1	1	2	1	1	2	1	2	2	
Course Outcomes			CO4	1	2	2	1	1	2	2	1	1	1	2	1	1
	CO1	Understand terms, definitions and theorems related to topological spaces	CO5													
	CO2	Demonstrate knowledge and understanding of concepts such as open and closed sets, interior, closure and boundary, connectedness, compactness, countability and separation axioms.	Average	1.75	1.50	1.75	1.25	1.25	1.75	1.50	1.25	1.25	1.00	1.75	1.25	1.50
	CO3	Create new topological spaces from existing topological spaces.														
	CO4	Understand difference and interrelationship between Metric Spaces and Topological Space														
	CO5															

Class		M.Sc.I	Course Outcomes	Program Outcomes										PSOs		
Subject Code		MTUT 123		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name		Ring Theory	CO1	2	2	2	1	1	1	1	2	1	2	1	2	
Semester No		II	CO2	2	1	1	2	2	3	2	2	1	2	1	1	
Teacher Name		P.R.Kale	CO3	1	1	2	1	1	2	1	1	2	1	2	2	1
Course Outcomes			CO4													

	CO1	Students understand the fundamental concept of Rings, Fields, subrings, integral domains and the corresponding Homomorphism's.	CO5														
	CO2	Students learn in detail about polynomial rings. Matrix ring and group ring.	Average	1.67	1.33	1.67	1.33	1.33	2.00	1.33	1.33	1.67	1.00	2.00	1.33	1.33	
	CO3	Students are able to determine or classify rings into UFD, PID and ED															
	CO4																
	CO5																

Class	M.Sc.I	Course Outcomes	Program Outcomes										PSOs			
Subject Code	MTUT 124		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	
Subject Name	Advanced Numerical Analysis	CO1	1	2	2	2	1	1	1	1	1	1	1	1	1	
Semester No	II	CO2	2	1	1	2	2	2	2	2	1	1	2	1	1	
Teacher Name	S.B.Karale	CO3	2	1	2	1	1	2	1	1	2	1	1	2	2	
Course Outcomes		CO4	1	2	3	1	1	2	2	1	1	1	2	1	1	
	CO1	Solve the root finding problems with an arbitrary nonlinear function.	CO5													
	CO2	Use the direct and iterative techniques for the solution of systems of linear algebraic equations.	Average	1.50	1.50	2.00	1.50	1.25	1.75	1.50	1.25	1.25	1.00	1.50	1.25	1.25
	CO3	Determine the value of the interpolating polynomial at a single value of the independent variable.														

	CO4	Apply the numerical techniques of differentiation and integration for engineering problems.
	CO5	

Class		M.Sc.I	Course Outcomes	Program Outcomes										PSOs			
Subject Code	Subject Name	Semester No		Teacher Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
MTUT 125	Partial Differential Equations	II	S.A.Ghule	CO1	2	2	2	1	1	1	1	1	1	1	1	1	1
				CO2	1	1	1	2	2	2	2	2	1	1	2	1	1
				CO3	2	1	2	1	1	1	1	2	1	2	2	2	2
				CO4	1	1	1	1	1	2	2	1	1	2	1	1	1
	CO1	Students can formulate, classify and transform partial differential equations into canonical form.		CO5													
	CO2	They can solve linear partial differential equations using various methods and	Average		1.50	1.25	1.50	1.25	1.25	1.50	1.50	1.25	1.25	1.25	1.50	1.25	1.25
	CO3	They apply these methods in solving some physical problems. Solve Laplace equations using various analytical methods demonstrate uniqueness of															
	CO4	Students able to solve Laplace equations using various analytical methods demonstrate uniqueness of solutions of certain kinds of these equations															
	CO5																

Academic Year :	2022-23
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Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUT 131			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Functional Analysis		CO1	2	1	1	2	2	2	2	2	1	1	2	1	1
Semester No	III		CO2	2	1	2	1	1	2	1	1	2	1	2	2	2
Teacher Name	R.R.Devadhe		CO3	1	2	2	1	1	2	2	1	1	1	2	1	1
Course Outcomes			CO4													
	CO1	To learn normed linear spaces,Hahn-Banach theorem.	CO5													
	CO2	To understand Orthonormal sets., the conjugate space H^* ,the adjoint of an operator	Average	1.67	1.33	1.67	1.33	1.33	2.00	1.67	1.33	1.33	1.00	2.00	1.33	1.33
	CO3	To learn Normal and unitary operators.														
	CO4															
	CO5															

Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUT 132			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Field Theory		CO1	2	2	2	1	1	1	1	1	1	1	1	1	2
Semester No	III		CO2	2	1	1	2	2	2	2	2	1	1	2	1	1
Teacher Name	P.R.Kale		CO3	2	1	2	1	1	2	1	1	2	1	2	2	2
Course Outcomes			CO4	1	2	2	1	1	2	2	1	1	1	2	1	1
	CO1	To learn algebraic Extension of fields	CO5													
	CO2	To understand normal extensions, multiple roots, finite fields, separable extensions.	Average	1.75	1.50	1.75	1.25	1.25	1.75	1.50	1.25	1.25	1.00	1.75	1.25	1.50
	CO3	To learn Galois Theory														
	CO4	To understand applications of Galois theory to classical problems														
	CO5															

Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUT 133			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Programming with Python		CO1	2	2	2	1	1	1	1	1	1	1	1	2	
Semester No	III		CO2	2	1	1	2	2	2	2	2	1	1	2	1	
Teacher Name	U.M.Patare		CO3	2	1	2	1	1	2	1	1	2	1	2	2	
Course Outcomes			CO4	1	2	2	1	1	2	2	1	1	1	2	1	
	CO1	Inculcate and apply various skills in problem solving.	CO5													
	CO2	Choose most appropriate Programming constructs and features to solve the problems in diversified domains.	Average	1.75	1.50	1.75	1.25	1.25	1.75	1.50	1.25	1.25	1.00	1.75	1.25	
	CO3	Exhibit the Programming skills for the problems those require the writing of well-documented Programmes including use of the logical constructs of language, Python.														
	CO4	Demonstrate significant experience with the Python Programme development environment.														
	CO5															

Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUTO 134			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Discrete Mathematics		CO1	1	2	2	2	1	1	1	1	1	1	1	1	
Semester No	III		CO2	2	1	1	2	2	2	2	2	1	1	2	1	
Teacher Name	S.B.Gandhale		CO3	2	1	2	1	1	2	1	1	2	1	1	2	
Course Outcomes			CO4	1	2	3	1	1	2	2	1	1	1	2	1	
	CO1	To learn general counting methods for arrangements and selection.	CO5													
	CO2	Students will able to use generating functions and recurrence relations to solve problems .	Average	1.50	1.50	2.00	1.50	1.25	1.75	1.50	1.25	1.25	1.00	1.50	1.25	
	CO3	Understanding of fundamental concepts: Students should have a strong understanding of the fundamental concepts of graph theory, including vertices, edges, paths, cycles,connectivity, and isomorphism. They should be able to analyze and manipulate graphsusing these concepts.														

	CO4	Graph Theory Applications: Students should be able to apply graph theory concepts and algorithms to solve real-world problems in various domains.
	CO5	

Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUTO 137			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Integral Equations		CO1	1	2	2	1	1	1	1	1	1	1	1	2	
Semester No	III		CO2	2	1	1	2	2	2	2	2	2	2	2	2	
Teacher Name	S.B.Karale		CO3	2	1	2	1	1	2	2	1	2	1	2	2	
Course Outcomes			CO4	1	2	1	1	2	2	2	1	1	1	1	1	
	CO1	Students who succeeded in this course; □ Will be able to classify integral equations.	CO5													
	CO2	They Will be able to apply functional analytic methods on operators and integral equations.	Average	1.50	1.50	1.50	1.25	1.50	1.75	1.75	1.25	1.50	1.25	1.50	1.75	
	CO3	Students Will be able to analyse the methods such as integral transforms, Green’s function, the concept of resolvent, uniqueness theorems, Fredholm Theory														
	CO4	They Will be able to apply the theory of integral equations to other disciplines like applied mathematics, science and engineering.														
	CO5															

Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUT 141			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Fourier Series and Boundary Value Problem		CO1	2	1	1	1	2	1	1	1	2	2	2	1	
Semester No	IV		CO2	2	1	1	2	1	2	2	1	2	1	2	1	
Teacher Name	R.R.Devadhe		CO3	1	1	2	3	1	2	1	1	2	1	2	1	
Course Outcomes			CO4	3	2	1	3	3	2	1	1	2	2	3	1	
	CO1	Upon successful completion of this course, students will be able : To understand the Fourier series representation of periodic functions.	CO5													

	CO2	To provide standard method for solving differential equations.	Average	2.00	1.25	1.25	2.25	1.75	1.75	1.25	1.00	1.50	2.00	1.50	2.25	1.00
	CO3	To demonstrate how differential equation can be useful in many types of problems likes heat equations ,wave equations.														
	CO4	To understand how the wave and diffusion partial differential equations can be used to model certain systems.														
	CO5															

Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUT 142			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Differential Geometry		CO1	2	2	2	1	1	1	1	1	1	1	1	2	
Semester No	IV		CO2	2	1	1	2	2	2	2	2	1	1	2	1	
Teacher Name	S.B.Gandhale		CO3	2	1	2	1	1	2	1	1	2	1	2	2	
Course Outcomes			CO4	1	2	2	1	1	2	2	1	1	1	2	1	
	CO1	Upon successful completion of this course, students : Will have the knowledge and skills to explain the concepts and language of differential geometry and its role in modern mathematics	CO5													
	CO2	Students can apply differential geometry techniques to specific research problems in mathematics or other fields	Average	1.75	1.50	1.75	1.25	1.25	1.75	1.50	1.25	1.25	1.00	1.75	1.25	1.50
	CO3	Students will be able to compute quantities of geometric interest such as integral curves, geodesics, orientation .														
	CO4	Students can understand the topic curvature which helps student for understanding the shape of curve and surfaces.														
	CO5															

Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUT 143			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3

Subject Name	Introduction to Data Science		CO1	1	2	2	1	2	1	1	1	1	3	2	2	
Semester No	IV		CO2	2	1	1	2	2	2	2	2	2	2	2	2	
Teacher Name	U.M.Patare		CO3	2	2	2	1	1	2	2	1	2	2	2	2	
Course Outcomes			CO4	1	2	1	1	2	2	2	1	1	1	1	1	
	CO1	Understand the need, benefits, and applications of data science in the context of big data.	CO5													
	CO2	Recognize the importance of mathematics and statistics as foundational disciplines for data science.	Average	1.50	1.75	1.50	1.25	1.75	1.75	1.75	1.25	1.50	1.50	2.00	1.75	1.75
	CO3	Develop skills in data pre processing, including handling missing values, data wrangling, and data visualization														
	CO4	Learn various supervised and unsupervised machine learning techniques for predictive modelling.														
	CO5															

Class	M.Sc.II	Course Outcomes	Program Outcomes										PSOs			
Subject Code	MTUTO 144		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3	
Subject Name	Number Theory	CO1	1	2	1	1	2	1	1	1	1	1	1	1	2	
Semester No	IV	CO2	1	1	2	2	1	2	1	1	2	1	1	2	1	
Teacher Name	P.R.Kale	CO3	1	1	2	3	2	2	1	1	2	2	1	2	2	
Course Outcomes			CO4	3	2	1	3	3	2	1	1	1	2	2	1	1
	CO1	Upon successful completion of this course, students : Effectively express the concepts and results of Number Theory.	CO5													
	CO2	Students can construct mathematical proofs of statements and find counterexamples to false statements in Number Theory.	Average	1.50	1.50	1.50	2.25	2.00	1.75	1.00	1.00	1.50	1.50	1.25	1.50	1.50
	CO3	Students can collect and use numerical data to form conjectures about the integers.														
	CO4	Students understand the logic and methods behind the major proofs in Number Theory.														

	CO5	Upon successful completion of this course, students : Effectively express the concepts and results of Number Theory.
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Class		M.Sc.II	Course Outcomes	Program Outcomes										PSOs		
Subject Code	MTUTO 147			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2	PSO3
Subject Name	Coding Theory		CO1	1	2	1	1	2	1	1	1	1	1	2	1	
Semester No	IV		CO2	2	1	1	3	1	3	2	3	2	2	3	2	3
Teacher Name	S.B.Karale		CO3	1	1	2	1	1	2	1	1	3	2	1	1	2
Course Outcomes			CO4	2	2	2	1	2	2	1	1	1	1	1	2	1
	CO1	Upon successful completion of this course : Knowledge. The student has knowledge of properties of and algorithms for coding and decoding of linear block codes, cyclic codes and convolution codes. The student has an overview of arithmetic in finite fields, linear algebra over finite fields, and rings of power series.	CO5													
	CO2	Skills. The student masters arithmetic in finite fields and linear algebra over finite fields. The student is able to apply various algorithms and techniques for coding and decoding.	Average	1.50	1.50	1.50	1.50	1.50	2.00	1.25	1.50	1.75	1.50	1.50	1.75	1.75
	CO3	Students Understand and explain the basic concepts of information theory,source coding, channel and channel capacity, channel coding and relation among them.														
	CO4	They describe the real life applications based on the fundamental theory.														
	CO5															

CO-PO Mapping

		Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
FY	FY	1 MTUT111	2.00	1.25	1.25	2.25	1.75	1.75	1.25	1.00	1.50	2.00
		2 MTUT112	1.50	1.50	1.50	2.25	2.00	1.75	1.00	1.00	1.50	1.50
		3 MTUT113	1.50	1.50	1.50	1.50	1.50	2.00	1.25	1.50	1.75	1.50
		4 MTUT114	1.75	1.75	1.75	1.25	1.75	2.00	1.50	1.50	1.50	1.25
		5 MTUT115	1.50	1.50	1.50	1.25	1.50	1.75	1.75	1.25	1.50	1.25
		6 MTUT 121	1.50	1.75	1.50	1.25	1.75	1.75	1.75	1.25	1.50	1.50
		7 MTUT 122	1.75	1.50	1.75	1.25	1.25	1.75	1.50	1.25	1.25	1.00
		8 MTUT 123	1.67	1.33	1.67	1.33	1.33	2.00	1.33	1.33	1.67	1.00
		9 MTUT 124	1.50	1.50	2.00	1.50	1.25	1.75	1.50	1.25	1.25	1.00
		10 MTUT 125	1.50	1.25	1.50	1.25	1.25	1.50	1.50	1.25	1.25	1.25
SY	SY	1 MTUT 131	1.67	1.33	1.67	1.33	1.33	2.00	1.67	1.33	1.33	1.00
		2 MTUT 132	1.75	1.50	1.75	1.25	1.25	1.75	1.50	1.25	1.25	1.00
		3 MTUT 133	1.75	1.50	1.75	1.25	1.25	1.75	1.50	1.25	1.25	1.00
		4 MTUTO 134	1.50	1.50	2.00	1.50	1.25	1.75	1.50	1.25	1.25	1.00
		5 MTUTO 137	1.50	1.50	1.50	1.25	1.50	1.75	1.75	1.25	1.50	1.25
		6 MTUT 141	2.00	1.25	1.25	2.25	1.75	1.75	1.25	1.00	1.50	2.00
		7 MTUT 142	1.75	1.50	1.75	1.25	1.25	1.75	1.50	1.25	1.25	1.00
		8 MTUT 143	1.50	1.75	1.50	1.25	1.75	1.75	1.75	1.25	1.50	1.50
		9 MTUTO 144	1.50	1.50	1.50	2.25	2.00	1.75	1.00	1.00	1.50	1.50
		10 MTUTO 147	1.50	1.50	1.50	1.50	1.50	2.00	1.25	1.50	1.75	1.50

CO-PO ATTAINMENT

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
0.82667	0.51667	0.51667	0.93	0.72333	0.72333	0.51667	0.41333	0.62	0.82667
0.78	0.78	0.78	1.17	1.04	0.91	0.52	0.52	0.78	0.78
0.78	0.78	0.78	0.78	0.78	1.04	0.65	0.78	0.91	0.78
0.91	0.91	0.91	0.65	0.91	1.04	0.78	0.78	0.78	0.65
0.3	0.3	0.3	0.25	0.3	0.35	0.35	0.25	0.3	0.25
0.7	0.81667	0.7	0.583333333	0.81667	0.81667	0.81667	0.58333	0.7	0.7
0.91	0.78	0.91	0.65	0.65	0.91	0.78	0.65	0.65	0.52
0.86667	0.69333	0.86667	0.693333333	0.69333	1.04	0.69333	0.69333	0.86667	0.52
0.78	0.78	1.04	0.78	0.65	0.91	0.78	0.65	0.65	0.52
0.78	0.65	0.78	0.65	0.65	0.78	0.78	0.65	0.65	0.65
0.86667	0.69333	0.86667	0.693333333	0.69333	1.04	0.86667	0.69333	0.69333	0.52
0.53667	0.46	0.53667	0.383333333	0.38333	0.53667	0.46	0.38333	0.38333	0.30667
1.75	1.5	1.75	1.25	1.25	1.75	1.5	1.25	1.25	1
0.78	0.78	1.04	0.78	0.65	0.91	0.78	0.65	0.65	0.52
0.46	0.46	0.46	0.383333333	0.46	0.53667	0.53667	0.38333	0.46	0.38333
1.04	0.65	0.65	1.17	0.91	0.91	0.65	0.52	0.78	1.04
0.91	0.78	0.91	0.65	0.65	0.91	0.78	0.65	0.65	0.52
1.5	1.75	1.5	1.25	1.75	1.75	1.75	1.25	1.5	1.5
0.78	0.78	0.78	1.17	1.04	0.91	0.52	0.52	0.78	0.78
0.7	0.7	0.7	0.7	0.7	0.93333	0.58333	0.7	0.81667	0.7

Percentage CO-PO ATTAINMENT

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
41.3333	41.3333	41.3333	41.3333	41.3333	41.3333	41.3333	41.3333	41.3333	41.3333
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
20	20	20	20	20	20	20	20	20	20
46.6667	46.6667	46.6667	46.6667	46.6667	46.6667	46.6667	46.6667	46.6667	46.6667
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
30.6667	30.6667	30.6667	30.6667	30.6667	30.6667	30.6667	30.6667	30.6667	30.6667
100	100	100	100	100	100	100	100	100	100
52	52	52	52	52	52	52	52	52	52
30.6667	30.6667	30.6667	30.6667	30.6667	30.6667	30.6667	30.6667	30.6667	30.6667
52	52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52	52
100	100	100	100	100	100	100	100	100	100
52	52	52	52	52	52	52	52	52	52
46.6667	46.6667	46.6667	46.6667	46.6667	46.6667	46.6667	46.6667	46.6667	46.6667

CO-PSO MAPPING

	Course	PSO1	PSO2	PSO3
1	MTUT111	1.50	2.25	1.00
2	MTUT112	1.25	1.50	1.50
3	MTUT113	1.50	1.75	1.75
4	MTUT114	1.25	1.50	1.75
5	MTUT115	1.50	1.50	1.75
6	MTUT 121	2.00	1.75	1.75
7	MTUT 122	1.75	1.25	1.50
8	MTUT 123	2.00	1.33	1.33
9	MTUT 124	1.50	1.25	1.25
10	MTUT 125	1.50	1.25	1.25
1	MTUT 131	2.00	1.33	1.33
2	MTUT 132	1.75	1.25	1.50
3	MTUT 133	1.75	1.25	1.50
4	MTUTO 134	1.50	1.25	1.25
5	MTUTO 137	1.50	1.50	1.75
6	MTUT 141	1.50	2.25	1.00
7	MTUT 142	1.75	1.25	1.50
8	MTUT 143	2.00	1.75	1.75
9	MTUTO 144	1.25	1.50	1.50
10	MTUTO 147	1.50	1.75	1.75

CO-PSO ATTAINMENT

	Course	PSO1	PSO2	PSO3
	MTUT111	0.62	0.93	0.41333
	MTUT112	0.65	0.78	0.78
	MTUT113	0.78	0.91	0.91
	MTUT114	0.65	0.78	0.91
	MTUT115	0.3	0.3	0.35
	MTUT 121	0.93333	0.81667	0.81667
	MTUT 122	0.91	0.65	0.78
	MTUT 123	1.04	0.69333	0.69333
	MTUT 124	0.78	0.65	0.65
	MTUT 125	0.78	0.65	0.65
	MTUT 131	1.04	0.69333	0.69333
	MTUT 132	0.53667	0.38333	0.46
	MTUT 133	1.75	1.25	1.5
	MTUTO 134	0.78	0.65	0.65
	MTUTO 137	0.46	0.46	0.53667
	MTUT 141	0.78	1.17	0.52
	MTUT 142	0.91	0.65	0.78
	MTUT 143	2	1.75	1.75
	MTUTO 144	0.65	0.78	0.78
	MTUTO 147	0.7	0.81667	0.81667

Percentage CO-PSO ATTAINMENT

	Course	PSO1	PSO2	PSO3
	MTUT111	41.3333	41.3333	41.3333
	MTUT112	52	52	52
	MTUT113	52	52	52
	MTUT114	52	52	52
	MTUT115	20	20	20
	MTUT 121	46.6667	46.6667	46.6667
	MTUT 122	52	52	52
	MTUT 123	52	52	52
	MTUT 124	52	52	52
	MTUT 125	52	52	52
	MTUT 131	52	52	52
	MTUT 132	30.6667	30.6667	30.6667
	MTUT 133	100	100	100
	MTUTO 134	52	52	52
	MTUTO 137	30.6667	30.6667	30.6667
	MTUT 141	52	52	52
	MTUT 142	52	52	52
	MTUT 143	100	100	100
	MTUTO 144	52	52	52
	MTUTO 147	46.6667	46.6667	46.6667

FY

SY