Department of Mathematics (UG)
Programme Outcomes (PO)

PO No.	Upon completion of B.Sc. Degree programme, the graduates will be able to:
PO-1	Pursue their post graduation and research activities.
PO-2	Enhance their employability for government jobs, subsequent carriers and educational programme.
PO-3	Acquire the skills in a broad range of analytic, scientific, government, financial, health, technical and other positions.
PO-4	Recognize and appreciate the connections between theory and applications.
PO-5	Identify suitable existing method of analysis, if any and assess their strengths and weaknesses in the context of the problem being considered.
PO-6	Analyze test and interpret technical arguments and form independent judgments.

Programme Specific Outcomes (PSO)

PSO No.	Upon completion of B.Sc. Mathematics Degree programme, the graduates will be able to:	Mapping
PSO-1	Explain accurately abstract and physical phenomena.	PO-3
PSO-2	Recognize the importance and value of Mathematical thinking, training and approach to problems solving on a diverse variety of disciplines.	PO-1
PSO-3	Restate an investigative questions in terms of a statistical model or algorithm and demonstrate the ability to communicate statistical result verbally and in writing to both technical and non-technical.	PO-4
PSO-4	Apply the knowledge of geometry in various daily life applications such as surveying, astronomy and navigation.	PO-5
PSO-5	Inculate the knowledge of basic properties of real numbers and convergence in finding approximate solutions to theoretical and practical problems.	PO-3
PSO-6	Calculate word problems using combinatorics and solve complex problems by critical undertaking analysis and synthesis.	PO-3
PSO-7	Solve problems in classical mechanics and celestial mechanics.	PO-3
PSO-8	Acquire good knowledge and understanding in advance area of Mathematics	PO-1
PSO-9	Comprehend the fuzzy logic and the concept of fuzziness involved in various system and fuzzy set theory.	PO-3
PSO-10	Construct conditional and iterative statement to write C-program and Perform power point presentation, accounting operations and documentation.	PO-2
PSO-11	Apply the concepts of Mathematics to real life problems.	PO-3

<div align="center">**Course Outcomes (CO)**</div>

	I SEMESTER		
DSC 1	**CALCULUS**		**18UCMA11**
Hrs/Week : 5	**Hrs/Sem : 75**	**Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Apply their knowledge in polar curves, pedal equation of a curve and asymptotes.	PSO 7	Applying
CO-2	Understand the curvature, radius of curvature in cartesian and polar coordinates.	PSO 7	Understanding
CO-3	Solve the problems in evolutes and calculate circle and centre of curvature.	PSO 7	Applying
CO-4	Evaluate a definite integral using integration by parts and Jacobian method.	PSO 2, 7	Applying
CO-5	Evaluate integral using Beta and Gamma functions, Fourier series, sine and cosine series.	PSO 2	Applying

	I SEMESTER		
DSC 2	**THEORY OF EQUATIONS**		**18UCMA12**
Hrs/Week : 5	**Hrs/Sem : 75**	**Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the fundamental concepts of algebra.	PSO 1	Understanding
CO-2	Evaluate the sum of the rth power of the roots using Newton's theorem.	PSO 8	Applying
CO-3	Solve the equation using transformation and reciprocal equation.	PSO 2,5	Applying
CO-4	Find the positive roots of equation using Newton's and Horner's method.	PSO 2,5	Remembering
CO-5	Outline the roots of the cubic and biquadratic equation using Cardon's and Ferrari's method.	PSO 2	Understanding

I SEMESTER			
AI- I	**STATISTICS**		**18UAST11**
Hrs/Week : 6	**Hrs/Sem : 90**	**Hrs/Unit : 18**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the basic terms of statistics such as measures of central tendency and dispersion of the data.	PSO 3	Understanding
CO-2	Estimate the degree of association between two variables using the concept of correlation and regression.	PSO 11	Evaluating
CO-3	Comprehend the qualitative data in statistics using the concept of theory of attributes.	PSO 3	Applying
CO-4	Plan the claim of the population through the concept of testing of hypothesis for large samples.	PSO 3,11	Applying
CO-5	Test the hypothesis for small samples using the concept of student's t-distribution and f distribution.	PSO 3,11	Analyzing

II SEMESTER			
DSC 3	**ANALYTICAL GEOMETRY OF 3D AND TRIGONOMETRY**		**18UCMA21**
Hrs/Week : 5	**Hrs/Sem : 75**	**Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the basic concepts of direction cosines and direction numbers.	PSO 4	Understanding
CO-2	Find the length of the perpendicular to the planes and to obtain the bisectors of two planes.	PSO 4	Remembering
CO-3	Solve the equation of a shortest distance between two lines and image of a line.	PSO 2,5	Applying
CO-4	Apply their knowledge in the concept of the sphere.	PSO 4	Applying
CO-5	Evaluate the summation of series using Euler's method.	PSO 4	Evaluating

	II SEMESTER	
DSC 4	DIFFERENTIAL EQUATIONS AND VECTOR CALCULAS	18UCMA22
Hrs/Week : 5	Hrs/Sem : 75	Hrs/Unit : 15	Credits : 4

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the various types of higher order linear ODE's for which exact solutions may be obtained.	PSO 2	Understanding
CO-2	Solve homogeneous equations, linear differential equation.	PSO 2,11	Applying
CO-3	Apply the concept of Laplace transform in solving linear equations.	PSO 2, 11	Applying
CO-4	Solve homogeneous equations, linear differential equation using inverse Laplace transform.	PSO 2, 11	Applying
CO-5	Understand concept of the integrals of functions and vector fields over parameterized surfaces and compute them in simple examples.	PSO 2, 11	Understanding, Evaluating

	II SEMESTER	
AI – II	PROBABILITY THEORY	18UAST21
Hrs/Week : 6	Hrs/Sem : 90	Hrs/Unit : 18	Credits : 4

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the basic concepts of probability, conditional probability and independent events.	PSO 3	Understanding
CO-2	Apply the Baye's theorem to find the conditional probability.	PSO 3, 11	Applying
CO-3	Recall the concept of random variables and distribution function.	PSO 3	Remembering
CO-4	Evaluate mathematical expectation and derive moment generating function and characteristic functions of the data.	PSO 3, 11	Evaluating
CO-5	Measure the Skewness and kurtosis of the given curve.	PSO 2, 3, 11	Evaluating
CO-6	Evaluate the probability of finite and infinite discrete random variable via the concept of binominal and Poisson distribution.	PSO 2, 3, 11	Evaluating
CO-7	Apply the normal distribution to find the probabilities of continuous random variable.	PSO 2, 3, 11	Applying

III SEMESTER		
DSC 5	SEQUENCE AND SERIES	18UCMA31
Hrs/Week : 6	Hrs/Sem : 90	Hrs/Unit : 18	Credits : 4

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Find the l.u.b and g.l.b of the sequence.	PSO 1, 5	Remembering
CO-2	Relate the concepts of convergent, divergent and oscillating sequences.	PSO 5	Understanding
CO-3	Test the convergence of sequence and series.	PSO 5	Analyzing, Creating
CO-4	Apply the root test, comparison test and Kummer's test for the convergence of series.	PSO 5	Applying
CO-5	Evaluate the limit of the sequence and series.	PSO 1, 5	Applying

III SEMESTER		
DSE 1A	NUMBER THEORY	18UEMA3A
Hrs/Week : 4	Hrs/Sem : 60	Hrs/Unit : 12	Credits : 4

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the results involving divisibility and greatest common divisors and solve systems of linear congruences.	PSO 2, 11	Understanding
CO-2	Analyze and interpret the concepts of divisibility, congruence, greatest common divisor, prime, and prime-factorization.	PSO 2, 11	Analyzing
CO-3	Apply Euler-Fermat's theorem to prove relations involving prime numbers.	PSO 1, 2	Evaluating
CO-4	Apply the Wilson's theorem, Wolstenholm theorem, Fermat's theorem and Euler-Fermat theorem.	PSO 1	Applying
CO-5	Apply the law of quadratic reciprocity and other methods to classify numbers as primitive roots, quadratic residues, and quadratic non-residues.	PSO 1, 2	Applying

	III SEMESTER	
DSE 1B	**OFFICE AUTOMATION**	**18UEMA3B**
Hrs/Week : 4	**Hrs/Sem : 60** **Hrs/Unit : 12**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the basics of office automation.	PSO 10	Understanding
CO-2	Illustrate a graphical object and create a table in word document.	PSO 10	Understanding
CO-3	Create an excel workbook and to add the data using auto fill.	PSO 10	Creating
CO-4	Construct chart layout, chart style and chart type.	PSO 10	Creating, Applying
CO-5	Create the power point presentation using animation and transition effects.	PSO 10	Creating

	III SEMESTER		
NME I	**MATHEMATICS FOR COMPETITIVE EXAMINATION – I**		**18UNMA31**
Hrs/Week : 2	**Hrs/Sem : 30**	**Hrs/Unit : 6**	**Credits : 2**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Recall the important concepts, formulae, tricks to solve mathematical problems.	PSO 11	Remembering
CO-2	Understand the language, symbols and notation of mathematics.	PSO 11	Understanding
CO-3	Develop abstract, logical and critical thinking and the ability to reflect critically upon their work.	PSO 11	Applying, Creating
CO-4	Make use of appropriate mathematical concepts and skills to solve problems in both familiar and unfamiliar situations including those in real-life contexts.	PSO 11	Applying
CO-5	Solve with ease all types of entrance examinations.	PSO 11	Creating

	IV SEMESTER		
DSC 6	**ABSTRACT ALGEBRA**		**18UCMA41**
Hrs/Week :6	**Hrs/Sem : 90**	**Hrs/Unit : 18**	**Credits : 4**

CO No	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the concept of relations and functions, Properties of groups.	PSO 1, 8	Understanding
CO-2	Determine the given subsets of a group or cyclic and normal subgroup.	PSO 1, 8	Understanding
CO-3	Evaluate the order of an element of the group and order of the permutation.	PSO 1, 6	Evaluating
CO-4	Apply the Lagrange's Theorem to check the given subset is a subgroup of a group or not.	PSO 1, 8	Applying
CO-5	Derive the condition for the group Z_n to be an integral Domain and Field and find the Characteristic of the Ring, Integral Domain and Field.	PSO 1, 8	Evaluating

	IV SEMESTER		
DSE 2A	**LINEAR PROGRAMMING**		**18UEMA4A**
Hrs/Week : 4	**Hrs/Sem : 60**	**Hrs/Unit : 12**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Formulate the LPP and solve the LPP with two variables using graphical methods.	PSO 2, 11	Creating
CO-2	Solve the LPP using Simplex method.	PSO 2, 11	Applying
CO-3	Evaluate minimization problem using Big 'M' Method and formulate the dual problem from primal	PSO 2, 11	Evaluating
CO-4	Formulate a dual problem and solve it.	PSO 2	Applying
CO-5	Solve the LPP using Dual Simplex method.	PSO 2	Applying

	IV SEMESTER		
DSE 2B	FUZZY MATHEMATICS		18UEMA4B
Hrs/Week : 4	Hrs/Sem : 60	Hrs/Unit : 12	Credits : 4

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the lattices and Boolean algebra.	PSO 9	Understanding
CO-2	Acquire the knowledge of operation on fuzzy subset.	PSO 9	Understanding
CO-3	Apply the knowledge of fuzzy relation.	PSO 9	Applying
CO-4	Demonstrate the fundamental concepts of fuzzy rings.	PSO 9	Understanding
CO-5	Provide in-depth knowledge about fuzzy fields.	PSO 9	Applying

	IV SEMESTER		
NME II	MATHEMATICS FOR COMPETITIVE EXAMINATION - II		18UNMA41
Hrs/Week : 2	Hrs/Sem : 30	Hrs/Unit : 6	Credits : 2

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Recall the important concepts, formulae, tricks to solve mathematical problems.	PSO 11	Remembering
CO-2	Understand the language, symbols and notation of mathematics.	PSO 11	Understanding
CO-3	Develop abstract, logical and critical thinking and the ability to reflect critically upon their work.	PSO 11	Applying, Creating
CO-4	Make use of appropriate mathematical concepts and skills to solve problems in both familiar and unfamiliar situations including those in real-life contexts.	PSO 11	Applying
CO-5	Solve with ease all types of entrance examinations.	PSO 11	Creating

	I SEMESTER		
A II – I	**STATISTICS AND CALCULUS**		**18UAMA21**
Hrs/Week : 6	**Hrs/Sem : 90**	**Hrs/Unit : 18**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the basic terms of statistics such as measures of central tendency and dispersion of the data.	PSO 3	Understanding
CO-2	Estimate the degree of association between two variables using the concept of correlation and regression.	PSO 11	Evaluating
CO-3	Analyze the qualitative data in statistics using rank correlation.	PSO 3	Analyzing
CO-4	Solve problems in evolutes and calculate circle and centre of curvature.	PSO 7	Creating, Applying
CO-5	Apply integral using Beta and Gamma functions, Fourier series, sine and cosine series.	PSO 2	Applying

	II SEMESTER		
A II – II	**ALGEBRA AND DIFFERENTIAL EQUATIONS**		**18UAMA22**
Hrs/Week : 6	**Hrs/Sem : 90**	**Hrs/Unit : 18**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the fundamental concepts of Algebra.	PSO 11	Understanding
CO-2	Solve the equation using transformation and reciprocal equation.	PSO 2	Creating, Applying
CO-3	Find the positive roots of equation using Newton's and Horner's method.	PSO 2,8	Applying
CO-4	Solve first order linear differential equations.	PSO 2,8	Creating, Applying
CO-5	Solve second order linear differential equations.	PSO 2,8	Creating, Applying

V SEMESTER		
DSC 7	**LINEAR ALGEBRA**	**18UCMA51**
Hrs/Week : 5	**Hrs/Sem : 75** / **Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the basic concepts of vector space and subspaces.	PSO 8	Understanding
CO-2	Calculate the dimension of the vector space.	PSO 2	Applying
CO-3	Determine the rank and nullity of the space and matrix of Linear transformation.	PSO 2	Applying
CO-4	Construct the orthonormal basis using Gram Schmidt orthogonalisation process.	PSO 8	Creating
CO-5	Evaluate the Eigen values and Eigen Vectors of the matrix.	PSO 2, 8	Creating

V SEMESTER		
DSC 8	**REAL ANALYSIS**	**18UCMA52**
Hrs/Week : 5	**Hrs/Sem : 75** / **Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the notion of countable, uncountable sets, metric space, open sets and interior of sets.	PSO 5, 8	Understanding
CO-2	State and Prove the Cantor's intersection theorem and Baire's category theorem.	PSO 2, 8	Evaluating
CO-3	Outline equivalent conditions for the function to be continuous.	PSO 2, 8	Understanding
CO-4	Recognize the concepts of connected metric space and contraction mapping.	PSO 2, 8	Understanding
CO-5	Summarize the concepts of compact metrics space and derive equivalent characterization for compactness.	PSO 2, 8	Understanding

	V SEMESTER		
DSC 9	**COMBINATORIAL MATHEMATICS**		**18UCMA53**
Hrs/Week : 5	**Hrs/Sem : 75**	**Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Solve problems using permutation and combination.	PSO 2,6, 11	Creating
CO-2	Apply their knowledge for assigning a job to suitable person using assignment problem.	PSO 2,6, 11	Applying
CO-3	Solve recurrence relation problem using generating functions.	PSO 2,6, 11	Creating
CO-4	Solve mathematical problems using inclusion and exclusion principle.	PSO 2,6, 11	Creating
CO-5	Understand the concept of finite projections planes and their properties.	PSO 2,6, 11	Understanding

	V SEMESTER		
DSC 10	**OPERATIONS RESEARCH**		**18UCMA54**
Hrs/Week : 5	**Hrs/Sem : 75**	**Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Find the initial basic feasible solution using various methods.	PSO 2,11	Evaluating
CO-2	Solve the test for optimality using stepping stone method.	PSO 2,11	Applying
CO-3	Formulate the assignment problem and to obtain the solution of assignment problem using Hungarian method.	PSO 2,11	Applying
CO-4	Identify the optimal strategies for the players in a two person zero sum game.	PSO 2,11	Analyzing
CO-5	Apply minimal spanning tree problem and shortest route problems in solving network problems.	PSO 2,11	Applying

	V SEMESTER		
DSC 11	**ASTRONOMY**		**18UCMA55**
Hrs/Week : 4	**Hrs/Sem : 60**	**Hrs/Unit : 12**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Describe and explain the observed daily and long-term motion of objects in celestial spheres.	PSO 1, 2, 4, 8, 11	Understanding
CO-2	Identify the locations of sun, moon and planets to assess perpetual day and night, international date line, dip and shortest twilight.	PSO 2, 4, 11	Understanding
CO-3	Interpret the concept of refraction and parallax.	PSO 2, 4, 8	Understanding
CO-4	Verify the Kepler's law and deduct Newton's law.	PSO 2, 4, 8	Applying
CO-5	Determine the sidereal period, synodic period and angle subtended at the sun when two planes are stationary.	PSO 2, 4, 11	Evaluating

	V SEMESTER		
DSE 3A	**STATICS**		**18UEMA5A**
Hrs/Week : 4	**Hrs/Sem : 60**	**Hrs/Unit : 12**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Find the resultant of two forces acting at a point.	PSO 2,7,8,11	Remembering
CO-2	Extend the resultant for parallel forces.	PSO 2,7,8,11	Understanding
CO-3	Solve the equilibrium of three forces acting on a body.	PSO 2,7,8,11	Applying, Creating
CO-4	Discuss the law of friction and their properties.	PSO 2,7,8,11	Creating
CO-5	Define the common catenaries and tension at a point.	PSO 2,7,8,11	Remembering

	V SEMESTER		
DSE 3B	**PROGRAMMING IN C – I**		**18UEMA5B**
Hrs/Week : 4	**Hrs/Sem : 60**	**Hrs/Unit : 12**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand basic structure of the C-programming, constants and usage of variables.	PSO 3,8,10	Understanding
CO-2	Develop the C-programs using operators.	PSO 2, 3,8,10	Creating
CO-3	Examine files concept for managing input and output operations.	PSO 3,8,10	Analyzing
CO-4	Execute a segment of a program repeatedly using control statements.	PSO 3,8,10	Applying
CO-5	Develop concise program containing repetitive processes using methods of looping.	PSO 2, 3,8,10	Analyzing

	V SEMESTER		
SEC - I	**NUMERICAL ABILITY – I**		**18USMA51**
Hrs/Week : 2	**Hrs/Sem : 30**	**Hrs/Unit : 6**	**Credits : 2**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Recall the important concepts, formulas, tricks to solve mathematical problems.	PSO 2, 11	Remembering
CO-2	Take part in making reasoned decision and to solve problems.	PSO 2, 11	Analyzing
CO-3	Analyze the positions that require number sense in profit and loss.	PSO 2, 11	Analyzing
CO-4	Solve logical reasoning questions and answer with explanations.	PSO 2, 11	Applying, Creating
CO-5	Identify with ease all types of questions and solve problems in entrance examinations.	PSO 2, 11	Applying

	VI SEMESTER		
DSC 12	**COMPLEX ANALYSIS**		**18UCMA61**
Hrs/Week : 6	**Hrs/Sem : 90**	**Hrs/Unit : 18**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Summarize the basic concepts of complex analysis like analytic functions and harmonic functions.	PSO 2, 8	Understanding
CO-2	Explain bilinear transformation and compute fixed points of bilinear transformation.	PSO 2, 8	Understanding
CO-3	Determine the integrals of features using Cauchy's theorem and Cauchy integral formula.	PSO 2, 8	Evaluating
CO-4	Solve problems using Taylors and Laurent's series expansion and find singularities of the function.	PSO 2, 8	Applying, Creating
CO-5	Evaluate definite integrals using type – I, type – II methods.	PSO 2, 8	Evaluating

	VI SEMESTER		
DSC 13	**GRAPH THEORY**		**18UCMA62**
Hrs/Week : 5	**Hrs/Sem : 75**	**Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand graph theory in coherent and technically accurate manner.	PSO 4, 8	Understanding
CO-2	Find out degree sequence and connectivity in graph theory.	PSO 4, 8	Creating
CO-3	Define how various types of graphs stand as models for solving many standard problems.	PSO 2,4, 8,11	Remembering
CO-4	Assess and evaluate matching in bipartite and planar graphs.	PSO 4, 6, 8, 11	Evaluating
CO-5	Apply combination of theoretical knowledge and independent mathematical thinking in creative investigation of questions in graph theory.	PSO 2, 4, 6, 8, 11	Applying

	VI SEMESTER		
DSC 14	**NUMERICAL METHODS**		**18UCMA63**
Hrs/Week : 5	**Hrs/Sem : 75**	**Hrs/Unit : 15**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the fundamental concepts of finite differences.	PSO 2,11	Understanding
CO-2	Apply certain formula to solve problems in numbers.	PSO 2,5,11	Applying
CO-3	Find out the first and second derivatives formulae for numerical differentiation to solve problems.	PSO 2,5,11	Remembering
CO-4	Derive quadrature formulae and to deduce various rule in numerical integration to solve problem.	PSO 2,5,11	Creating
CO-5	Solve ordinary differential equations using various methods.	PSO 2,5,11	Applying, Creating

	VI SEMESTER		
DSE 4A	**DYNAMICS**		**18UEMA6A**
Hrs/Week : 4	**Hrs/Sem : 60**	**Hrs/Unit : 12**	**Credits : 4**

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the path of projectiles and characteristics of a motion of projectiles.	PSO 7, 11	Understanding
CO-2	Analyze the concept of collusion of elastic bodies and law of impact.	PSO 7, 11	Analyzing
CO-3	Derive the formula for simple harmonic motion and solve real life problems using simple harmonic motion.	PSO 7, 11	Creating
CO-4	Evaluate Velocity and acceleration in Polar coordinates	PSO 7, 11	Evaluating
CO-5	Find out the pedal equation of central orbit.	PSO 7, 11	Remembering

	VI SEMESTER		
DSE 4B	PROGRAMMING IN C – II		18UEMA6B
Hrs/Week : 4	Hrs/Sem : 60	Hrs/Unit : 12	Credits : 4

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Understand the concept of arrays.	PSO 3, 8, 10	Understanding
CO-2	Develop the programs using character arrays and strings.	PSO 3, 8, 10	Creating
CO-3	Modify the programs by user-defined functions.	PSO 3, 8, 10	Creating
CO-4	Define the data types including structures and unions to solve problems.	PSO 3, 8, 10	Remembering
CO-5	Construct the programs using pointers to access arrays, strings and functions.	PSO 2, 3, 8, 10	Applying

	VI SEMESTER		
SEC - II	NUMERICAL ABILITY – II		18USMA61
Hrs/Week : 2	Hrs/Sem : 30	Hrs/Unit : 6	Credits : 2

CO No.	Upon completion of this course, students will be able to:	PSO addressed	Blooms taxonomy classification
CO-1	Develop abstract, logical and critical thinking in solving problems.	PSO 2,11	Applying
CO-2	Discuss and solve the problems reality time and distance.	PSO 2,11	Creating
CO-3	Solve problems on trains.	PSO 2,11	Applying, Creating
CO-4	Solve the problems which are related to logarithmic functions.	PSO 2,11	Applying, Creating
CO-5	Compute the problems using heights and distance.	PSO 2,11	Evaluating