

Department of Mathematics (S.F)									
1.1.2 Details of courses offered by the institution that focus on employability/ entrepreneurship/ skill development during the year.									
S.No.	Name of the Course	Course Code	Em	Activities Focusing on Employability	En	Activities Focusing on Entrepreneurship	SD	Activities Focusing on Skill Development	Outcome
2023-2024									
1	Major Core VII: Linear Algebra	MC2051	<input checked="" type="checkbox"/>	Preparation of Quiz Questions on Basis and Dimension, Rank and Nullity			<input checked="" type="checkbox"/>	Preparation of Quiz Questions on Basis and Dimension, Rank and Nullity	To introduce the algebraic system of vector Spaces, inner product spaces and to use the related study in various physical applications.
2	Major Core VIII: Real Analysis II	MC2052	<input checked="" type="checkbox"/>	1.Demonstration on Continuous and Discontinuous Functions with examples 2.Solving exercise problems in Uniform Continuity of real valued functions, Connected Metric Spaces			<input checked="" type="checkbox"/>	1.Demonstration on Continuous and Discontinuous Functions with examples 2.Solving exercise problems in Uniform Continuity of real valued functions, Connected Metric Spaces	To introduce metric spaces and the concepts of completeness, continuity, connectedness and compactness and to use these concepts in higher studies.
3	Major Core IX: Computer Oriented Numerical Methods	MC2053			<input checked="" type="checkbox"/>	Assignment on Increment and Decrement Operators, Conditional Operators	<input checked="" type="checkbox"/>	Preparation of multiple choice questions on Arithmetic Operators, Relational Operators	To provide suitable and effective numerical methods, for computing approximate numerical values of certain raw data and to lay foundation of programming techniques to solve mathematical problems.
4	Major - Project	MC2054					<input checked="" type="checkbox"/>		To develop the attitude of studying a topic in depth independently.
5	Elective I: a) Graph Theory	MC2055	<input checked="" type="checkbox"/>	Group discussion on Cycles in graphs, Cut-vertices and cut-edges			<input checked="" type="checkbox"/>	Online Quiz application of Eulerian and Hamiltonian graphs	To introduce graphs and the concepts of connectedness, matchings, planarity and domination and to apply these concepts in research.
6	Elective I: b) Fuzzy Mathematics	MC2056	<input checked="" type="checkbox"/>	Open book test on Fuzzy Systems and Genetic Algorithm			<input checked="" type="checkbox"/>	Group discussion on types of fuzzy sets	To understand fuzzy concepts of sets and operations and to apply the fuzzy concepts in image processing, machine learning and artificial intelligence.
7	Elective I: c) Object Oriented Programming with C++	MC2057	<input checked="" type="checkbox"/>	Hands on training on compiling and linking on More statements, Creating the source file	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To learn and write programmes in C++ Language and to enhance job opportunities.
8	Major Core X: Complex Analysis	MC2061	<input checked="" type="checkbox"/>	Solving problems on Singularities, Residues			<input checked="" type="checkbox"/>	Group Discussion on Cauchy's integral formula, Maximum modulus theorem	To introduce the basic concepts of differentiation and integration of complex functions and to apply the related concepts in higher studies.
9	Major Core XI: Mechanics	MC2062					<input checked="" type="checkbox"/>	Preparation of Quiz questions on Problems on friction, Projectiles	To visualize the application of mathematics in physical sciences and to develop the capacity to predict the effects of force and motion.
10	Major Core XII: Number Theory	MC2063	<input checked="" type="checkbox"/>	Preparing Multiple choice questions on Basic properties of congruence, Linear congruences			<input checked="" type="checkbox"/>	1.Solve problems in linear congruences 2.Assignment on Division Algorithm	To introduce the fundamental principles and concepts in Number Theory and to apply these principles in other branches of Mathematics.
11	Major Core XIII: Linear Programming	MC2064	<input checked="" type="checkbox"/>	Solve the transportation problems, Mathematical formulation of transportation problems			<input checked="" type="checkbox"/>	Solve the problems in Simplex method, Big M method	To formulate real life problems into mathematical problems and to solve life oriented and decision making problems by optimizing the objective function.
12	Elective II: a) Astronomy	MC2065	<input checked="" type="checkbox"/>	Peer teaching on Perpetual Day and Perpetual night, Terrestrial latitude and longitude			<input checked="" type="checkbox"/>	Solve problems on maximum and minimum	To introduce space science and to familiarize the important features of the planets, sun, moon and stellar universe and to predict lunar and solar eclipses and study the seasonal changes.

13	Elective II: b) Boolean Algebra	MC2066	<input checked="" type="checkbox"/>	Creating MCQ on Lattice homomorphism, Modular lattice, The chain conditions			<input checked="" type="checkbox"/>	Discussing about Partially ordered sets, Chain, Upper and lower bounds	To introduce the algebraic structures like lattices and Boolean algebra and to apply these concepts in various branches of Mathematics.
14	Elective II: c) Web Designing with HTML	MC2067	<input checked="" type="checkbox"/>	Assignment on Head and Body Sections, Header Sections, Title, Prologue, Links	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To understand the importance of the web as a medium of communication and to create an effective web page with graphic design principles.
15	Skill Enhancement Course: Mathematics for Competitive Examinations	SEM203	<input checked="" type="checkbox"/>	Solving TNPSC, bank and Railway exam questions.	<input checked="" type="checkbox"/>	Assignment on Chain Rule, Time and Work	<input checked="" type="checkbox"/>	Solve the problems using shortcut techniques and collection of all formulas	To gain deeper knowledge in differential equations, differentiation and integration of vector functions and to apply the concepts in higher mathematics and physical sciences.
16	Core Course I: Algebraic Structures	MP231CC1	<input checked="" type="checkbox"/>	Quiz on Finite abelian groups, Demonstration on Decomposition of Vector space, Seminar on Trace and transpose, Assignment on Linear Transformations			<input checked="" type="checkbox"/>	1.Quiz on Finite abelian groups 2.Seminar on Trace and transpose	To introduce the concepts and to develop working knowledge on class equation, solvability of groups and to understand the concepts of finite abelian groups, linear transformations, real quadratic forms.
17	Core Course II: Real Analysis I	MP231CC2	<input checked="" type="checkbox"/>	1.Demonstration through PPT on Sequences of Functions, Riemann Stieltjes Integrals 2.Quiz Competition on Riemann - Stieltjes Integral, Sequences of Functions			<input checked="" type="checkbox"/>	1.Demonstration through PPT on Sequences of Functions, Riemann Stieltjes Integrals 2.Quiz Competition on Riemann - Stieltjes Integral, Sequences of Functions	To develop strong background on finding solutions to linear differential equations with constant and variable coefficients and also with singular points.
18	Core Course III: Ordinary Differential Equations	MP231CC3	<input checked="" type="checkbox"/>	Seminar on Linear equations with constant coefficients, The Legendre equation			<input checked="" type="checkbox"/>	Quiz on Topic Linear Equation with variable coefficients-wronskian and linear independence	To develop strong background on finding solutions to linear differential equations with constant and variable coefficients and also with singular points.
19	Elective Course I: a) Number theory and Cryptography	MP231EC1	<input checked="" type="checkbox"/>	Assignment on Public key Cryptography, Concepts of public key Cryptography			<input checked="" type="checkbox"/>	Discussion on Divisibility and Euclidean algorithm, Congruences	To gain deep knowledge about Number theory and to know the concepts of Cryptography.
20	Elective Course I: b) Graph Theory and Applications	MP231EC2	<input checked="" type="checkbox"/>	Discussion on Trees, Cut Edges and Bonds, Cut Vertices, Connectivity			<input checked="" type="checkbox"/>	Open book test on Euler's Formula, The Five Colour Theorem and Four Colour Conjecture	To help students to understand various parameters of Graph Theory with applications and to stimulate the analytical mind of the students, enable them to acquire sufficient knowledge and skill in the subject that will make them competent in various areas of mathematics.
21	Elective Course I: c) Programming in C++	MP231EC3	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To apply mathematical concepts in programming and to create programs and applications.
22	Elective Course II: a) Discrete Mathematics	MP231EC4	<input checked="" type="checkbox"/>	1.Solving problems on Linear recurrence relations with constant coefficients 2.Seminar on Solution by the technique of generating functions	<input checked="" type="checkbox"/>	1.Demonstration using powerpoint presentation on the principle of inclusion and exclusion 2.Preparation of multiple choice questions.Permutations and combinations	<input checked="" type="checkbox"/>	1.Demonstration using powerpoint presentation on the principle of inclusion and exclusion 2.Preparation of multiple choice questions.Permutations and combinations	To learn the concepts of Permutations, Combinations, Boolean Algebra and Lattices and to motivate the students to solve practical problems using Discrete mathematics.
23	Elective Course II: b) Analytic Number Theory	MP231EC5					<input checked="" type="checkbox"/>	Solve the problems in Fuzzy relations	To understand Dirichlet multiplication, a concept which helps clarify inter relationship between various arithmetical functions and to understand some equivalent forms of the prime number theorem.

24	Elective Course II: c) Fuzzy Sets and their Applications	MP231EC6				<input checked="" type="checkbox"/>	Assignment on Fuzzy Graphs, Fuzzy Relations, Fuzzy Logic	To study about Fuzzy sets and their relations, Fuzzy graphs, Fuzzy Relations and to gain knowledge on Fuzzy logic and laws of Fuzzy compositions.
25	Core Course IV: Advanced Algebra	MP232CC1	<input checked="" type="checkbox"/>	Discussion on finite extension, algebraic number, roots of polynomial		<input checked="" type="checkbox"/>	1.Quiz on Extension Fields, 2.Seminar on solvability by radicals	To study field extension, roots of polynomials, Galois Theory, finite fields, division rings, solvability by radicals and to develop computational skill in abstract algebra.
26	Core Course V: Real Analysis II	MP232CC2	<input checked="" type="checkbox"/>	1.Peer teaching on Fourier Series and Fourier Integrals, Riemann's localization theorem, 2.Online assignment on Measurable sets, Measurable Function		<input checked="" type="checkbox"/>	1.Preparation of MCQ on Fourier Series and Fourier Integrals 2.Assignment on Multivariable Differential Calculus	To introduce measure on the real line, Lebesgue measurability and integrability, Fourier Series and Integrals and to get the in-depth study in multivariable calculus.
27	Core Course VI: Partial Differential Equations	MP232CC3	<input checked="" type="checkbox"/>	Assignment on Boundary Value Problem, Solution by Separation of variables		<input checked="" type="checkbox"/>	1.Assignment on problems on singular integral 2.Peer teaching on Partial Differential Equations with constant coefficients	To formulate and solve different forms of partial differential equations and to solve the related application-oriented problems.
28	Elective Course III: a) Mathematical Statistics	MP232EC1	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		To enhance knowledge in mathematical statistics and acquire basic knowledge about various distributions and to understand about mathematical expectations, moment generating function technique and the Central Limit Theorem.
29	Elective Course III: b) Statistical Data Analysis using R Programming	MP232EC2	<input checked="" type="checkbox"/>	Analyze the dataset for Health care and prepare a case study		<input checked="" type="checkbox"/>	1.Installation of R Studio 2.Create a histogram for new voters from the Voter's list	To equip individuals with the skills to proficiently analyze data, employ statistical methods, and utilize R programming for effective data interpretation and decision-making in various fields.
30	Elective Course III: c) Programming in C++ Practical	MP232EC3	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		To introduce a higher level language C++ for hands-on experience on computers and Adhere to best practices and coding standards in C++ programming.
31	Elective Course IV: a) Operations Modeling	MP232EC4	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		To analyze different situations in the industrial/business scenario involving limited resources and to finding the optimal solution within constraints.
32	Elective Course IV: b) Mathematical Python	MP232EC5	<input checked="" type="checkbox"/>	Group Discussion on function modulus, General expression and Comments	<input checked="" type="checkbox"/>	Discussion on Numpy – Array creation, Array properties, Indexing with integer Arrays and Boolean Arrays.	Discussion on Numpy – Array creation, Array properties, Indexing with integer Arrays and Boolean Arrays.	To familiarize the students with Python programming for Mathematics and to train them to develop programs and create functions for Mathematics in Python.
33	Elective Course IV: c) Neural Networks	MP232EC6				<input checked="" type="checkbox"/>		To know the main fundamental principles and techniques of neural network systems and investigate the principal neural network models and applications.
34	Skill Enhancement I – Modeling and Simulation with Excel	MP232SE1	<input checked="" type="checkbox"/>	Hands on training on basic operations in MS excel		<input checked="" type="checkbox"/>	1.Quiz on Preparation and Analysis of Quantitative Data 2.Seminar presentation on Presentation of Quantitative and Qualitative data	To know about modifying a spreadsheet and workbook and to understand the concept of data analysis tools and data analysis for two data sets.

35	Core IX: Field Theory and Lattices	PM2031	<input checked="" type="checkbox"/>	1.Group Discussion on finite extension and algebraic extension 2.Peer teaching Galois groups over the rationals, Finite fields		<input checked="" type="checkbox"/>	1.Demonstration on Wedderburns Theorem 2.Quiz on Extension Fields	To learn in depth the concepts of Field Theory , Galois Theory and Lattices and to pursue research in pure Mathematics.
36	Core X: Topology	PM2032	<input checked="" type="checkbox"/>	1.Seminar on Separable spaces, Countability axioms 2.Assignment on Closed sets and Continuous function		<input checked="" type="checkbox"/>	1.Assignment on continuous function 2.Seminar on product Topology	To distinguish spaces by means of simple topological invariants and to lay the foundation for higher studies in Geometry and Algebraic Topology.
37	Core XI: Measure Theory and Integration	PM2033	<input checked="" type="checkbox"/>	1.Group Discussion on Lebesgue Measure, Outer measure, Measurable sets 2.Assignment on The Riemann Integral, Differentiation and integration		<input checked="" type="checkbox"/>	1.Demonstration using powerpoint presentation 2.Preparation of multiple choice questions.	To generalize the concept of integration using measures and to develop the concept of analysis in abstract situations.
38	Elective III: a) Algebraic Number Theory and Cryptography	PM2034	<input checked="" type="checkbox"/>	Assignment on encryption and decryption in cryptography		<input checked="" type="checkbox"/>	1.Preparation of Multiple Choice Questions and conducting Quiz Competitions on public key cryptosystem and RSA cryptography. 2.Creating Puzzles using Cryptography.	To gain deep knowledge about Number theory and to study the relation between Number theory and Abstract and to know the concepts of Cryptography.
39	Elective III: b) Stochastic Process	PM2035	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		To understand the stochastic models and to relate the models studied to real life probabilistic situations.
40	Major: Project	PM20PR				<input checked="" type="checkbox"/>		To develop the attitude of studying a topic in depth independently.
41	Self Learning Course: Algebra for SET/CSIR-NET Exam	PM20S1	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR - NET/SET Exams.
42	Core XII: Complex Analysis	PM2041	<input checked="" type="checkbox"/>	1.Solving problems on Removable singularities 2. Group Discussion on Taylor's theorem, Zeros and poles		<input checked="" type="checkbox"/>	Solve problems using Cauchy's integral formula	To impart knowledge on complex functions and to facilitate the study of advanced mathematics.
43	Core XIII: Functional Analysis	PM2042	<input checked="" type="checkbox"/>	1.Online assignment on Banach spaces, Hilbert spaces 2.Seminar on Adjoint of an operator, Self adjoint operators		<input checked="" type="checkbox"/>	Solving NET/ SET exam questions in Functional Analysis	To study the three structure theorems of Functional Analysis and to introduce Hilbert Spaces and Operator theory and to enable the students to pursue research.
44	Core XIV:Operations Research	PM2043	<input checked="" type="checkbox"/>	Assignment on Elements of the DP Model, Solution of Linear Programming by Dynamic programming		<input checked="" type="checkbox"/>	1.Draw arrow network diagrams 2.Assignment on the critical path	To learn optimizing objective functions and to solve life oriented decision making problems.
45	Core XV: Algorithmic Graph Theory	PM2044				<input checked="" type="checkbox"/>	1.Demonstration on Analyze the algorithms using PPT 2. Quiz on Elementary Graph Algorithms,	To instill knowledge about algorithms and to write innovative algorithms for graph theoretical problems.
46	Elective IV : a) Combinatorics	PM1745	<input checked="" type="checkbox"/>	1.Preparation on MCQ on Generating functions, Partitions of integers 2.Seminar on Polya's theory of counting		<input checked="" type="checkbox"/>	1.Quiz on Permutations and Combinations 2.Online Assignment on The principle of inclusion and exclusion, Polya's theory of counting	To do an advanced study of permutations and combinations and to solve related real life problems.

47	Elective IV : b)Coding Theory	PM1746	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	1.Assignment on Krawtchouk Polynomials, Combinatorial theory 2.Online Quiz on idempotent of a cyclic code.	To learn the different procedures of coding and decoding and to avail job opportunities in a number of detective agencies.
48	Self Learning Course: Analysis for SET/CSIR-NET Exam	PM20S2	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR-NET/SET Exams.
49	Non Major Elective Course (NME): Quantitative Aptitude I	MNM201	<input checked="" type="checkbox"/>	1.Assignment on percentage 2.Solving exercise problem on population	<input checked="" type="checkbox"/>	Solving problems using BODMAS rule	<input checked="" type="checkbox"/>	Solving problems using BODMAS rule	To develop the quantitative aptitude of the students and to solve problems required for various competitive examinations.
50	Non Major Elective Course (NME): Quantitative Aptitude II	MNM202	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Solving problems on Compound Interest, different rates for different years	<input checked="" type="checkbox"/>	Solving problems on Compound Interest, different rates for different years	To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
51	Major Core III: Differential Equations and Vector Calculus	MC2031	<input checked="" type="checkbox"/>	1.Group study on formation of PDE 2. Solving exercise problem of Charpit method	<input checked="" type="checkbox"/>	Verify Green's, Stoke's and Gauss divergence theorems, Assignment	<input checked="" type="checkbox"/>	Verify Green's, Stoke's and Gauss divergence theorems, Assignment	To gain deeper knowledge in differential equations, differentiation and integration of vector functions and to apply the concepts in higher mathematics and physical sciences.
52	Major Core IV: Real Analysis I	MC2032	<input checked="" type="checkbox"/>	Solve problems in Finite and infinite sets			<input checked="" type="checkbox"/>	1.Brainstorming on various types of tests for checking convergent and divergent series 2.Solving problems in supremum, infimum, convergent and divergent sequence	To introduce the primary concepts of sequences and series of real numbers and to develop problem solving skills.
53	Allied III: Probability Theory and Distributions	MA2031	<input checked="" type="checkbox"/>	1.Solve problems on Probability Moment generating function 2.Assignment on Fitting of Normal distribution by area method and ordinate method	<input checked="" type="checkbox"/>	1.Solving problems on relation between Binomial and Poisson distribution 2. Assignment on the application of Bay's theorem	<input checked="" type="checkbox"/>	Brainstorming on probability, Online Quiz	To impart knowledge on the basic concepts of Probability theory and Probability distributions and to apply the theory in real life situations.
54	Self-Learning Course: Discrete Mathematics I	MC20S1					<input checked="" type="checkbox"/>		To develop the interest of self learning in subject oriented courses.
55	Major Core V: Groups and Rings	MC2041	<input checked="" type="checkbox"/>	1.Collect the examples of groups 2.Group study on normal subgroups			<input checked="" type="checkbox"/>	Assignment on Cosets and Lagrange's theorem, Rings	To introduce the concepts of Group theory and Ring theory and to gain more knowledge essential for higher studies in Abstract Algebra.
56	Major Core VI: Analytical Geometry of 3 Dimensions	MC2042	<input checked="" type="checkbox"/>	1.Practice finding the equation of a plane in different forms 2.Assignment on the angle between the lines in which a plane cuts the cone			<input checked="" type="checkbox"/>	Solving problems on direction cosines	To gain deeper knowledge in three dimensional Analytical Geometry 2D and to develop creative thinking, innovation and synthesis of information.
57	Allied IV: Applied Statistics	MA2041	<input checked="" type="checkbox"/>	Group discussion on Rank correlation			<input checked="" type="checkbox"/>	Problem solving in correlation and rank correlation	To acquire the knowledge of correlation theory and testing hypothesis and to solve research and application oriented problems.
58	Self-Learning Course: Discrete Mathematics II	MC20S2					<input checked="" type="checkbox"/>	1.Solving multiple choice questions and analyze problems in NET/SET exam question papers 2.Organised National Seminar for research 3.Presentation on basic definitions and examples through powerpoint and videos	To develop the interest of self learning in subject oriented courses.

59	Major Core VII: Linear Algebra	MC2051	<input checked="" type="checkbox"/>	1.Assignment on Linear independence, rank and nullity 2.Prepare quiz on Bilinear forms, Quadratic forms 3.Group discussion on Modular lattices, Boolean algebra			<input checked="" type="checkbox"/>	Determine rank and nullity of a vector space, peer review writing	To introduce the algebraic system of Vector Spaces, inner product spaces and to use the related study in various physical applications.
60	Major Core VIII: Real Analysis II	MC2052	<input checked="" type="checkbox"/>	1.Solving problems on bounded sets 2.Assignment on dense sets			<input checked="" type="checkbox"/>	1.Peer teaching on Limit point, Complete metric space 2.Brainstorming on Connectedness and continuity	To introduce Metric Spaces and the concepts of completeness, continuity, connectedness and compactness and to use these concepts in higher studies.
61	Major Core IX: Computer Oriented Numerical Methods	MC2053			<input checked="" type="checkbox"/>	1.Seminar on Newton's Interpolation formulae 2.Open book test on Lagrange's Interpolation formula, Numerical differentiation	<input checked="" type="checkbox"/>	Programming on Basis structure of C programs	To provide suitable and effective numerical methods, for computing approximate numerical values of certain raw data and to lay foundation of programming techniques to solve mathematical problems.
62	Major - Project	MC2054					<input checked="" type="checkbox"/>		To develop the attitude of studying a topic in depth independently.
63	Elective I: a) Graph Theory	MC2055	<input checked="" type="checkbox"/>	1.Draw different standard graphs and find degree, cut vertices cycles 2.Assignment on vertex coloring, edge coloring			<input checked="" type="checkbox"/>	Quiz on Domination in graphs	To introduce graphs and the concepts of connectedness, matchings, planarity and domination and to apply these concepts in research.
64	Elective I: b) Fuzzy Mathematics	MC2056	<input checked="" type="checkbox"/>	1.Peer Teaching on Fuzzy Measure, Evidence Theory 2.Brain storming on evidence theory			<input checked="" type="checkbox"/>	1.Describe types of fuzzy sets 2. Assignments on Possibility Theory, Possibility Theory versus Probability Theory	To understand Fuzzy concepts of sets and operations and to apply the Fuzzy concepts in image processing, machine learning and artificial intelligence.
65	Elective I: c) Object Oriented Programming with C++	MC2057	<input checked="" type="checkbox"/>	1. Assignment on Creating the source file, Compiling and linking 2.Group discussion on Tokens, Keywords, Identifiers and constants	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To learn and write programmes in C++ Language and to enhance job opportunities.
66	Major Core X: Complex Analysis	MC2061	<input checked="" type="checkbox"/>	1.Group discussion on residues 2.Solving the problems of singularities			<input checked="" type="checkbox"/>	1. Solve multiple choice questions and NET/ SET exam questions	To introduce the basic concepts of differentiation and integration of Complex functions and to apply the related concepts in higher studies.
67	Major Core XI: Mechanics	MC2062					<input checked="" type="checkbox"/>	1.Gave basic definitions and examples through powerpoint presentation 2.Explain frictions through models and internal assesment	To visualize the application of Mathematics in Physical Sciences and to develop the capacity to predict the effects of force and motion.
68	Major Core XII: Number Theory	MC2063	<input checked="" type="checkbox"/>	1.Solving problems on Diophantine equation 2.Assignment on Basic properties of congruence			<input checked="" type="checkbox"/>	Peer teaching on The greatest common divisor	To introduce the fundamental principles and concepts in Number Theory and to apply these principles in other branches of Mathematics.
2022-2023									
69	Major Core XIII: Linear Programming	MC2064	<input checked="" type="checkbox"/>	Assignment on Two phase method-Phase I, Solving auxiliary LPP using Simplex method			<input checked="" type="checkbox"/>	Find the solution of LPP using Simplex method and Big-M Method, Online Quiz	To formulate real life problems into mathematical problems and to solve life oriented and decision making problems by optimizing the objective function.
70	Elective II: a) Astronomy	MC2065	<input checked="" type="checkbox"/>	Industrial visit, Assignment on Motion of a planet with respect to the Sun			<input checked="" type="checkbox"/>	Assignment on the System of coordinates	To introduce space science and to familiarize the important features of the planets, sun, moon and stellar universe and to predict lunar and solar eclipses and study the seasonal changes.

71	Elective II: b) Boolean Algebra	MC2066	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Assignment on greatest and least upper bound	To introduce the algebraic structures like lattices and Boolean algebra and to apply these concepts in various branches of Mathematics.
72	Elective II: c) Web Designing with HTML	MC2067	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To understand the importance of the web as a medium of communication and to create an effective web page with graphic design principles.
73	Skill Enhancement Course: Mathematics for Competitive Examinations	SEM203	<input checked="" type="checkbox"/>	Solving problems on Time and Work	<input checked="" type="checkbox"/>	Assignment on Profit and Loss, Ratio and Proportion, Quiz on Problems on ages	<input checked="" type="checkbox"/>	Assignment on Profit and Loss, Ratio and Proportion, Quiz on Problems on ages	To gain deeper knowledge in differential equations, differentiation and integration of vector functions and to apply the concepts in higher mathematics and physical sciences.
74	Core I: Algebra I	PM2011	<input checked="" type="checkbox"/>	Role Play on conjugate classes, Solve problems using third part of Sylow's theorem			<input checked="" type="checkbox"/>	Determine the irreducibility of a polynomial using Eisenstein Criterion, Seminar	To study abstract Algebraic systems and to know the richness of higher Mathematics in advanced application systems.
75	Core II: Analysis I	PM2012	<input checked="" type="checkbox"/>	Group discussion on convergent sequences and cauchy sequences			<input checked="" type="checkbox"/>	Assignment on Basic topology, Metric spaces, Open and closed sets	To understand the basic concepts of analysis and to formulate a strong foundation for future studies.
76	Core III: Probability and Statistics	PM2013	<input checked="" type="checkbox"/>	1.Solve the problems using Binomial and Poisson distribution 2.Group discussion on real application of Poisson , Normal distributions			<input checked="" type="checkbox"/>	Assignment on necessary and sufficient conditions for stochastic independence	To upgrade the knowledge in Probability theory and to solve NET / SET related Statistical problems.
77	Core IV: Ordinary Differential Equations	PM2014	<input checked="" type="checkbox"/>	Find the solutions of first order linear equation, group discussion on Bessel functions			<input checked="" type="checkbox"/>	Find the general solution using variation of parameter	To study mathematical methods for solving differential equations and to Solve dynamical problems of practical interest.
78	Elective I: a) Numerical Analysis	PM2015					<input checked="" type="checkbox"/>	Brain storming on Direct Methods, Gauss elimination, Gauss - Jordan method	To study the various behaviour pattern of numbers and to study the various techniques of solving applied scientific problems.
79	Elective I: b) Fuzzy Sets and Fuzzy Logic	PM2016					<input checked="" type="checkbox"/>	Group Discussion on Extension principle for Fuzzy sets, Operations on Fuzzy sets	To understand Fuzzy logic and to apply Fuzzy concepts in other branches of Mathematics.
80	Core V: Modules and Vector Spaces	PM2021	<input checked="" type="checkbox"/>	Discussion on Linear independence and Dependence			<input checked="" type="checkbox"/>	1.Solve problems on trace and Transpose of a matrix 2.Online Assignment on The Algebra of Linear Transformations, Characteristic Roots	To understand the concept of Modules and the advanced forms of Matrices related to Linear Transformations.
81	Core VI: Analysis II	PM2022	<input checked="" type="checkbox"/>	Peer review writing on the necessary and sufficient condition for a function to be Riemann Stieltjes integrable			<input checked="" type="checkbox"/>	Brainstorming on Sequences and series of functions, Assignment on Power series	To make the students understand the advanced concepts of Analysis and to pursue research in Analysis related subjects.
82	Core VII: Partial Differential Equations	PM2023	<input checked="" type="checkbox"/>	Solve problems using non linear partial differential equations of order one, Charpit's method			<input checked="" type="checkbox"/>	Solve the problems on singular integral, Partial Differential Equations with constant coefficients	To formulate and solve different forms of partial differential equations and to Solve the related application oriented problems.
83	Core VIII: Graph Theory	PM2024	<input checked="" type="checkbox"/>	Assignment on blocks of various graphs, Group study on edge connectivity			<input checked="" type="checkbox"/>	Determine Connectivity, Cut vertices and The Domination Number of a Graph	To introduce the important notions of graph theory and to Develop the skill of solving application oriented problems.
84	Elective II: a) Classical Dynamics	PM2025		Seminar on Hamilton's principle function			<input checked="" type="checkbox"/>	Assignment on Virtual work	To gain deep insight into concepts of Dynamics and to do significant contemporary research.
85	Elective II: b)Differential Geometry	PM2026					<input checked="" type="checkbox"/>	Solve problems on General surfaces of revolution, Helicoids, Orthogonal trajectories	To study coordinate free geometry and to apply the theory in Tensors and theory of relativity.
86	Core IX: Field Theory and Lattices	PM2031	<input checked="" type="checkbox"/>	Find the roots of the polynomial , Group discussion on Galois groups over the rationals			<input checked="" type="checkbox"/>	Find the degree of the splitting field of the polynomial	To learn in depth the concepts of Field Theory , Galois Theory and Lattices and to pursue research in pure Mathematics.

87	Core X: Topology	PM2032	<input checked="" type="checkbox"/>	Seminar on First and Second countable spaces, Group discussion on Countability axioms			<input checked="" type="checkbox"/>	Group Discussion on order topology, Stone Cechcompactifications	To distinguish spaces by means of simple topological invariants and to lay the foundation for higher studies in Geometry and Algebraic Topology.
88	Core XI: Measure Theory and Integration	PM2033	<input checked="" type="checkbox"/>	Group discussion on measurable sets and measurable functions			<input checked="" type="checkbox"/>	Seminar on Littlewood's three principles	To generalize the concept of integration using measures and to develop the concept of analysis in abstract situations.
89	Elective III: a) Algebraic Number Theory and Cryptography	PM2034	<input checked="" type="checkbox"/>	Analyze main applications of public key cryptosystem and RSA cryptography.			<input checked="" type="checkbox"/>	1.Solve problems in Quadratic residues and Pythagorean Triangles 2.Analyze the difference between Legendre symbol and Jacobi symbol	To gain deep knowledge about Number theory and to study the relation between Number theory and Abstract and to know the concepts of Cryptography.
90	Elective III: b) Stochastic Process	PM2035	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Seminar on Markov chain, Transition probabilities, Random walk and Assignment on Higher transition probabilities, Classification of states and chains.	To understand the stochastic models and to relate the models studied to real life probabilistic situations.
91	Major - Project	PM20PR					<input checked="" type="checkbox"/>		To develop the attitude of studying a topic in depth independently.
92	Self Learning Course: Algebra for SET/CSIR-NET Exam	PM20S1	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR - NET/SET Exams.
93	Core XII: Complex Analysis	PM2041	<input checked="" type="checkbox"/>	Solve the problems using queueing models			<input checked="" type="checkbox"/>	Assignment on queueing models	To impart knowledge on complex functions and to facilitate the study of advanced mathematics.
94	Core XIII: Functional Analysis	PM2042	<input checked="" type="checkbox"/>	Assignment on Application of Banach space and Hilbert space in real life, Group discussion on projection			<input checked="" type="checkbox"/>	Solving multiple choice questions and analyze problems in NET/SET exam question papers Organised National Seminar for research	To study the three structure theorems of Functional Analysis and to introduce Hilber Spaces and Operator theory and to enable the students to pursue research.
95	Core XIV: Operations Research	PM2043	<input checked="" type="checkbox"/>	List out the real application of queueing models, Seminar on tandem series			<input checked="" type="checkbox"/>	Draw arrow network diagrams, Find the critical path, peer teaching	To learn optimizing objective functions and to solve life oriented decision making problems.
96	Core XV: Algorithmic Graph Theory	PM2044					<input checked="" type="checkbox"/>	Analyze the algorithms, Class Test on BFS and DFS	To instill knowledge about algorithms and to write innovative algorithms for graph theoretical problems.
97	Elective IV : a) Combinatorics	PM2045	<input checked="" type="checkbox"/>	Solve problems in Equivalence classes of function, Open book test on Equivalence classes under a permutation group			<input checked="" type="checkbox"/>	Solving linear recurrence relations with constant coefficients	To do an advanced study of permutations and combinations and to Solve related real life problems.
98	Elective IV : b) Coding Theory	PM2046	<input checked="" type="checkbox"/>	Constructing codes from other codes and solve problems on Reed-Muller code			<input checked="" type="checkbox"/>	Solving Krawtchouk Polynomials, Online Quiz on idempotent of a cyclic code.	To learn the different procedures of coding and decoding and to avail job opportunities in a number of detective agencies.
99	Self Learning Course: Analysis for SET/CSIR-NET Exam	PM20S2	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR-NET/SET Exams.
100	Major Core I: Differential Calculus and Trigonometry	MC2011		1.Solve problems in Curvature, Parametric and polar co-ordinates, 2.Assignment on p-r equation of a curve	<input checked="" type="checkbox"/>	Online Quiz on Radius of curvature in Cartesian coordinates	<input checked="" type="checkbox"/>	Online Quiz on Radius of curvature in Cartesian coordinates	To impart knowledge on applications of Differential Calculus and important concepts of Trigonometry and to enhance problem solving skills.
101	Non Major Elective Course (NME): Quantitative Aptitude I	MNM201	<input checked="" type="checkbox"/>	Solve problems in Simplification, solve competitive exam questions	<input checked="" type="checkbox"/>	Quiz on Percentage	<input checked="" type="checkbox"/>	Quiz on Percentage	To develop the quantitative aptitude of the students and to solve problems required for various competitive examinations.

102	Major Core II: Classical Algebra and Integral Calculus	MC2021		Solve the cosine and sine series problems, Group discussion on Evaluation of integrals	<input checked="" type="checkbox"/>	Assignment on Relations between roots and coefficients	<input checked="" type="checkbox"/>	Assignment on Relations between roots	To give a sound knowledge in Classical Algebra and to solve problems in applications of Integral Calculus.
103	Non Major Elective Course (NME): Quantitative Aptitude II	MNM202	<input checked="" type="checkbox"/>	Solve the problems on Compound interest, Assignment on Problems on Trains	<input checked="" type="checkbox"/>	Quiz on Problems on numbers, problems on trains	<input checked="" type="checkbox"/>	Quiz on Problems on numbers, problems on trains	To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
104	Major Core III: Differential Equations and Vector Calculus	MC2031	<input checked="" type="checkbox"/>	Peer teaching on Laplace Transformation, Quiz on Formation of partial differential equations	<input checked="" type="checkbox"/>	Find the relation between the Laplace and Inverse Laplace Transform	<input checked="" type="checkbox"/>	Find the solution of linear differential equation using Laplace Transform, Assignment on divergence and curl	To gain deeper knowledge in differential equations, differentiation and integration of vector functions and to apply the concepts in higher mathematics and physical sciences.
105	Major Core IV: Real Analysis I	MC2032	<input checked="" type="checkbox"/>	Analyse various types of tests for checking convergent and divergent sequences			<input checked="" type="checkbox"/>	Brainstorming on Convergent sequence, PPT presentation on The upper and lower limits of a sequence,	To introduce the primary concepts of sequences and series of real numbers and to develop problem solving skills.
106	Allied III: Probability Theory and Distributions	MA2031	<input checked="" type="checkbox"/>	Solve problems in probability	<input checked="" type="checkbox"/>	Calculate the conditional properties in probability	<input checked="" type="checkbox"/>	Seminar on Discrete and continuous random variables, Assignment on Poisson distribution	To impart knowledge on the basic concepts of Probability theory and Probability distributions and to apply the theory in real life situations.
107	Self-Learning Course: Discrete Mathematics I	MC20S1					<input checked="" type="checkbox"/>		To develop the interest of self learning in subject oriented courses.
108	Major Core V: Groups and Rings	MC2041	<input checked="" type="checkbox"/>	Assignment on Isomorphism of rings, Peer teaching on subgroups, Permutation.			<input checked="" type="checkbox"/>	Online Quiz on Cyclic groups, Brainstorming on Rings	To introduce the concepts of Group theory and Ring theory and to gain more knowledge essential for higher studies in Abstract Algebra.
109	Major Core VI: Analytical Geometry of 3 Dimensions	MC2042	<input checked="" type="checkbox"/>	Group discussion on properties of 3-dimensional object like sphere, cone and analyze its real life applications			<input checked="" type="checkbox"/>	Solve problems in Projection ,Online Quiz on Tangent plane and normal.	To gain deeper knowledge in three dimensional Analytical Geometry 2D and to develop creative thinking, innovation and synthesis of information.
110	Allied IV: Applied Statistics	MA2041	<input checked="" type="checkbox"/>	Solve the problems in Sampling			<input checked="" type="checkbox"/>	Distinguish between the practical purpose of a large and small samples	To acquire the knowledge of correlation theory and testing hypothesis and to solve research and application oriented problems.
111	Self-Learning Course: Discrete Mathematics II	MC20S2					<input checked="" type="checkbox"/>		To develop the interest of self learning in subject oriented courses.
112	Major Core VII: Linear Algebra	MC1751	<input checked="" type="checkbox"/>	Brainstorming on Vector spaces, Solve problems on basis and dimension of a vector space			<input checked="" type="checkbox"/>	Assignment on Subspaces, Seminar on Basis and Dimension	To compute quantities that deal with linear systems and eigenvalue problems.
113	Major Core VIII: Real Analysis	MC1752	<input checked="" type="checkbox"/>	Think, pair and share activity on Bounded sets, Open ball, Open sets			<input checked="" type="checkbox"/>	Differentiate between Continuous and Uniformly Continuous function	To introduce Metric Spaces and the concepts of completeness, continuity, connectedness, compactness and uniform convergence and to use these concepts in higher studies.
114	Major Core IX: Graph Theory	MC1753	<input checked="" type="checkbox"/>	Finding the degree sequences of graphs, Group discussion on Eulerian Graphs, Hamiltonian Graphs			<input checked="" type="checkbox"/>	Find the degrees of graphs	To introduce graphs, directed graphs and the concepts of connectedness and labelings and to apply these concepts in research.
115	Major - Project	MC1754					<input checked="" type="checkbox"/>		To develop the attitude of studying a topic in depth independently.
116	Elective I: a) Numerical Methods	MC1755	<input checked="" type="checkbox"/>	Solve the problems using Trapezoidal rule, Assignment on Newton's Interpolation formulae, Lagrange's Interpolation formula			<input checked="" type="checkbox"/>	Solving algebraic and transcendental equations	To study Numerical differentiation and Numerical integration using different formulae and to develop various methods for solving applied scientific problems.

117	Elective I: b) Fuzzy Mathematics	MC1756	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	Assignment on Classical Logic, Logical Connectives, Truth Values and Truth Tables	To understand Fuzzy concepts of sets and operations and to apply the Fuzzy concepts in image processing, machine learning and artificial intelligence.	
118	Elective I: c) Object Oriented Programming with C++	MC1757	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		To learn and write programmes in C++ Language and to enhance job opportunities.	
119	Mathematics for Competitive Examination - I	MSK175	<input checked="" type="checkbox"/>	Solve problems in Percentage, Time , average and speed, Analyze competitive exam questions	<input checked="" type="checkbox"/>	Quiz on Conversion of decimal into percentage and vice versa, Problems on Population and Depreciation, Partnership	<input checked="" type="checkbox"/>	Solving problems on Pipes and Cisterns, Problems related to inlet and outlet of the tank	To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
120	Major Core X: Complex Analysis	MC1761	<input checked="" type="checkbox"/>	Find the poles and singularities of analytic function, Preparation of MCQ on Cauchy Riemann equations, Analytic functions			<input checked="" type="checkbox"/>	Assignment on Cross ratio, Complex integration- Definite Integral	To introduce the basic concepts of differentiation and integration of Complex functions and to apply the related concepts in higher studies.
121	Major Core XI: Mechanics	MC1762		Solving problems in coplanar forces, parallel forces			<input checked="" type="checkbox"/>	Group discussion on real life applications on Lamis theorem, moments, Analyze various types of forces	To study the application of Mathematics in Physical Sciences and to solve related problems.
2021-2022									
122	Major Core XII: Number Theory	MC1763	<input checked="" type="checkbox"/>	Solve problems using linear congruences and the Chinese remainder theorem			<input checked="" type="checkbox"/>	Assignment on The sum and number of divisors, The greatest integer function	To introduce the fundamental principles and concepts in Number Theory and to apply these principles in other branches of Mathematics.
123	Major Core XIII: Operations Research	MC1764	<input checked="" type="checkbox"/>	Assignment on Formulation of L.P.P, Solution of L.P.P, Graphical method			<input checked="" type="checkbox"/>	Solve problems using Simplex method, Big-M Method	To formulate real life problems into mathematical problems and to solve life oriented and decision making problems by optimizing the objective function.
124	Elective II: a) Astronomy	MC1765	<input checked="" type="checkbox"/>	Solving exercise problems on Zones of the earth, Perpetual Day and Perpetual night, Terrestrial latitude and longitude			<input checked="" type="checkbox"/>	Assignment on Geocentric parallax, Horizontal parallax	To identify, classify and compare the stars and the large scale structures of our Universe.
125	Elective II: b) Boolean Algebra	MC1766	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Assignment on Lattice homomorphism, Modular lattice, Boolean Algebras	To introduce the algebraic structures like lattices and Boolean algebra and to apply these concepts in various branches of Mathematics.
126	Elective II: c) Web Designing with HTML	MC1767	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To understand the importance of the web as a medium of communication and to create an effective web page with graphic design principles.
127	Skill Based Course: Mathematics for Competitive Examination - II	MSK176	<input checked="" type="checkbox"/>	Solve problems on Trains, Compound Interest and Cylinder	<input checked="" type="checkbox"/>	Group discussion on Clocks, Stocks and Shares	<input checked="" type="checkbox"/>	Solving problems on Volume and Surface Areas- Cuboid, Cube, Cylinder Peer teaching on Counting Odd Days	To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
128	Core I: Algebra I	PM2011	<input checked="" type="checkbox"/>	Solve problems using Sylow's theorems			<input checked="" type="checkbox"/>	Seminar on Polynomial Rings over Co	To study abstract Algebraic systems and to know the richness of higher Mathematics in advanced application systems.

129	Core II: Analysis I	PM2012	<input checked="" type="checkbox"/>	Solve the problems using metric spaces, Assignment on Power series, Summation by parts		<input checked="" type="checkbox"/>	Brainstorming on Continuity, Limits of function, Seminar on Differentiation of vector valued functions	To understand the basic concepts of analysis and to formulate a strong foundation for future studies.
130	Core III: Probability and Statistics	PM2013	<input checked="" type="checkbox"/>	Solve the problems using Binomial distribution		<input checked="" type="checkbox"/>	Peer teaching on Limiting distributions	To upgrade the knowledge in Probability theory and to solve NET / SET related Statistical problems.
131	Core IV: Ordinary Differential Equations	PM2014	<input checked="" type="checkbox"/>	Solve the problems in homogeneous linear systems with constant coefficients, Group Discussion on Problems in Legendre polynomials		<input checked="" type="checkbox"/>	Seminar on Bessel's functions, The gamma function	To study mathematical methods for solving differential equations and to Solve dynamical problems of practical interest.
132	Elective I: a) Numerical Analysis	PM2015				<input checked="" type="checkbox"/>	Solve problems using Newton's formulae for Interpolation	To study the various behaviour pattern of numbers and to study the various techniques of solving applied scientific problems.
133	Elective I: b) Fuzzy Sets and Fuzzy Logic	PM2016				<input checked="" type="checkbox"/>	Seminar on Crisp versus Fuzzy relations, Projections, Binary Fuzzy relations	To understand Fuzzy logic and to apply Fuzzy concepts in other branches of Mathematics.
134	Core V: Modules and Vector Spaces	PM2021	<input checked="" type="checkbox"/>	Solving problems on Characteristic Roots, Matrices		<input checked="" type="checkbox"/>	Group discussion on the concepts of linear independence and dependence	To understand the concept of Modules and the advanced forms of Matrices related to Linear Transformations.
135	Core VI: Analysis II	PM2022	<input checked="" type="checkbox"/>	Differentiate between pointwise and uniform convergence, seminar on Power series, The contraction principle		<input checked="" type="checkbox"/>	Assignment on Differentiation, Partial derivatives	To make the students understand the advanced concepts of Analysis and to pursue research in Analysis related subjects.
136	Core VII: Partial Differential Equations	PM2023	<input checked="" type="checkbox"/>	Solve problems using non linear partial differential equations of order one, Complete integral, Particular integral		<input checked="" type="checkbox"/>	Group Discussion on Compatible system of first order equations, Charpit's method	To formulate and solve different forms of partial differential equations and to Solve the related application oriented problems.
137	Core VIII: Graph Theory	PM2024	<input checked="" type="checkbox"/>	Find tournament of graphs, Assignment on Strong graphs, Quiz on Cut vertices, Blocks		<input checked="" type="checkbox"/>	Peer teaching on Kuratowski's Theorem, Vertex Coloring, Brook's Theorem, Edge Coloring	To introduce the important notions of graph theory and to Develop the skill of solving application oriented problems.
138	Elective II: a) Classical Dynamics	PM2025				<input checked="" type="checkbox"/>	Solve problems using Lagrange's equation	To gain deep insight into concepts of Dynamics and to do significant contemporary research.
139	Elective II: b) Differential Geometry	PM2026				<input checked="" type="checkbox"/>	Solve problems on Geodesics on a surface, Developable surfaces	To study coordinate free geometry and to apply the theory in Tensors and theory of relativity.
140	Core IX: Field Theory and Lattices	PM2031	<input checked="" type="checkbox"/>	Solve the problems in Algebraic extension		<input checked="" type="checkbox"/>	Quiz on Roots of polynomials	To learn in depth the concepts of Field Theory , Galois Theory and Lattices and to pursue research in pure Mathematics.
141	Core X: Topology	PM2032	<input checked="" type="checkbox"/>	Assignment on Subbasis, Online Quiz on Connected spaces		<input checked="" type="checkbox"/>	Seminar on Compact spaces, Compact subspaces of the Real Line, Uniform Continuity theorem	To distinguish spaces by means of simple topological invariants and to lay the foundation for higher studies in Geometry and Algebraic Topology.
142	Core XI: Measure Theory and Integration	PM2033	<input checked="" type="checkbox"/>	Solve problems in Lebesgue Measure		<input checked="" type="checkbox"/>	Group Discussion Functions of bounded variation and Measurable functions	To generalize the concept of integration using measures and to develop the concept of analysis in abstract situations.

143	Elective III: a) Algebraic Number Theory and Cryptography	PM2034	<input checked="" type="checkbox"/>	Group discussion on encryption and decryption in cryptography and main applications of public key cryptosystem			<input checked="" type="checkbox"/>	Peer teaching on RSA –Discrete logarithm	To gain deep knowledge about Number theory and to study the relation between Number theory and Abstract and to know the concepts of Cryptography.
144	Elective III: b) Stochastic Process	PM2035	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Assignment on Markov process with discrete state space, Poisson process, Poisson Cluster process	To understand the stochastic models and to relate the models studied to real life probabilistic situations.
145	Major - Project	PM20PR					<input checked="" type="checkbox"/>		To develop the attitude of studying a topic in depth independently.
146	Self Learning Course: Algebra for SET/CSIR-NET Exam	PM20S1	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR - NET/SET Exams.
147	Core XII: Complex Analysis	PM2041	<input checked="" type="checkbox"/>	Solve problems on Cauchy's theorem of a rectangle			<input checked="" type="checkbox"/>	Solve problems on Zeros and poles, Complex Integration	To impart knowledge on complex functions and to facilitate the study of advanced mathematics.
148	Core XIII: Functional Analysis	PM2042	<input checked="" type="checkbox"/>	Assignment on Banach space and Hilbert space			<input checked="" type="checkbox"/>	Group discussion on the difference between Banach space and Hilbert space	To study the three structure theorems of Functional Analysis and to introduce Hilbert Spaces and Operator theory and to enable the students to pursue research.
149	Core XIV: Operations Research	PM2043	<input checked="" type="checkbox"/>	Group Discussion on Queueing Models of Types : (M/G/1): (GD/ ∞ / ∞)			<input checked="" type="checkbox"/>	Quiz on Construction of the time chart and resource levelling	To learn optimizing objective functions and to solve life oriented decision making problems.
150	Core XV: Algorithmic Graph Theory	PM2044					<input checked="" type="checkbox"/>	Group discussion on The role of algorithms in computing, Seminar on Shortest paths and matrix multiplication	To instill knowledge about algorithms and to write innovative algorithms for graph theoretical problems.
151	Elective IV: a) Combinatorics	PM2045	<input checked="" type="checkbox"/>	Assignment on Generating functions, Generating functions for combinations			<input checked="" type="checkbox"/>	Quiz on Partitions of integers, The fermers graph	To do an advanced study of permutations and combinations and to Solve related real life problems.
152	Elective IV: b) Coding Theory	PM2046	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Assignment on Reed-Muller code, Kerdock codes, The Gilbert bound, Upper bounds	To learn the different procedures of coding and decoding and to avail job opportunities in a number of detective agencies.
153	Self Learning Course: Analysis for SET/CSIR-NET Exam	PM20S2	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR-NET/SET Exams.
154	Major Core I: Differential Calculus and Trigonometry	MC2011			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Solve problems in – equation of a curve, Assignment on Asymptotes of polar curves. p^r	To impart knowledge on applications of Differential Calculus and important concepts of Trigonometry and to enhance problem solving skills.
155	Non Major Elective Course (NME): Quantitative Aptitude I	MNM201	<input checked="" type="checkbox"/>	Solving problems on profit or loss percentage, Calculating the ratio of division of gains among the partners	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To develop the quantitative aptitude of the students and to solve problems required for various competitive examinations.
156	Major Core II: Classical Algebra and Integral Calculus	MC2021			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Determining the Sum of rth power of the roots	To give a sound knowledge in Classical Algebra and to solve problems in applications of Integral Calculus.
157	Non Major Elective Course (NME): Quantitative Aptitude II	MNM202	<input checked="" type="checkbox"/>	Analyse relation between a train and stationary/moving body, Solve problems onCompound Interest.	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
158	Major Core III: Differential Equations and Vector Calculus	MC1731	<input checked="" type="checkbox"/>	Solving linear differential equations and simultaneous equations of first order using Laplace transform	<input checked="" type="checkbox"/>	Solving linear differential equations and simultaneous equations of first order using Laplace transform	<input checked="" type="checkbox"/>	Solve the problems in inverse Laplace Transform, Quiz on Green's, Stoke's and Gauss divergence theorems.	To gain deeper knowledge in differential equations, differentiation and integration of vector functions and to apply the concepts in higher mathematics and physical sciences.

159	Major Core IV: Sequences and Series	MC1732	<input checked="" type="checkbox"/>	Compare different types of sequences such as Bounded, Monotonic, Convergent, Oscillating and divergent sequences.		<input checked="" type="checkbox"/>	Differentiate Convergent, Divergent and oscillating sequences.	To introduce the primary concepts of sequences and series of real numbers and to develop problem solving skills.	
160	Allied III: Probability Theory and Distributions	MA1731	<input checked="" type="checkbox"/>	Solving exercise problems on Probability density function, Distribution function, Mean and variance	<input checked="" type="checkbox"/>	Assignment on Probability density function, Distribution function	<input checked="" type="checkbox"/>	Class test on Samples , Events Probability density function & Distribution function.	To impart knowledge on the basic concepts of Probability theory and Probability distributions and to apply the theory in real life situations.
161	Self-Learning Course: Discrete Mathematics I	MC17S1					<input checked="" type="checkbox"/>		To develop the interest of self learning in diverse subjects related to mathematics and to convert real life problems into mathematical problems.
162	Major Core V: Groups and Rings	MC1741	<input checked="" type="checkbox"/>	Group discussion on Permutations, Cyclic groups.			<input checked="" type="checkbox"/>	Solve problems in Groups, Cyclic groups, Find number of subgroups using Lagranges theorem	To introduce the concepts of Group theory and Ring theory and to gain more knowledge essential for higher studies in Abstract Algebra.
163	Major Core VI: Analytical Geometry of 3 Dimensions	MC1742	<input checked="" type="checkbox"/>	Group discussion on solving problems on sphere, cone			<input checked="" type="checkbox"/>	Solve problems on Projection ,Direction cosines, Direction ratios	To gain deeper knowledge in three dimensional Analytical Geometry and to develop creative thinking, innovation and synthesis of information.
164	Allied IV: Applied Statistics	MA1741	<input checked="" type="checkbox"/>	Quiz on Regression, Equation of regression lines			<input checked="" type="checkbox"/>	Problem solving in Correlation. Quiz on Rank Correlation & Regression.	To acquire the knowledge of correlation theory and testing hypothesis and to solve research and application oriented problems.
165	Self-Learning Course: Discrete Mathematics II	MC17S2					<input checked="" type="checkbox"/>		To develop the interest of self learning in diverse subjects related to Mathematics and to convert real life problems into mathematical problems.
166	Major Core VII: Linear Algebra	MC1751	<input checked="" type="checkbox"/>	Assignment on matrix of a linear transformation			<input checked="" type="checkbox"/>	Find the Characteristic equation of a matrix, Peer teaching on Rank and Nullity	To compute quantities that deal with linear systems and eigenvalue problems.
167	Major Core VIII: Real Analysis	MC1752	<input checked="" type="checkbox"/>	Peer teaching on Countable and Uncountable sets.			<input checked="" type="checkbox"/>	Assignment on Countable and Uncountable sets. Preparing multiple choice questions in Metric Space, Bounded sets	To introduce Metric Spaces and the concepts of completeness, continuity, connectedness, compactness and uniform convergence and to use these concepts in higher studies.
168	Major Core IX: Graph Theory	MC1753	<input checked="" type="checkbox"/>	Finding the degree sequences of graphs			<input checked="" type="checkbox"/>	Group discussion on Blocks, Connectivity, Eulerian Graphs, Hamiltonian Graphs	To introduce graphs, directed graphs and the concepts of connectedness and labelings and to apply these concepts in research.
169	Major - Project	MC1754					<input checked="" type="checkbox"/>		To develop the attitude of studying a topic in depth independently.
170	Elective I: a) Numerical Methods	MC1755	<input checked="" type="checkbox"/>	Solve problems on Iteration method, Finite difference, Newton's Interpolation formulae.			<input checked="" type="checkbox"/>	Find the solution of algebraic equation using Iteration method, Assignment on Newton's Interpolation formulae.	To study Numerical differentiation and Numerical integration using different formulae and to develop various methods for solving applied scientific problems.
171	Elective I: b) Fuzzy Mathematics	MC1756	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Finding the Relations on Fuzzy set, Peer review writing on Operations on fuzzy Relation	To understand Fuzzy concepts of sets and operations and to apply the Fuzzy concepts in image processing, machine learning and artificial intelligence.
172	Elective I: c) Object Oriented Programming with C++	MC1757	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To learn and write programmes in C++ Language and to enhance job opportunities.
173	Skill Based Course: Mathematics for Competitive Examination - I	MSK175	<input checked="" type="checkbox"/>	Solving problems on Time and Distance, Average speed, Boats and Streams	<input checked="" type="checkbox"/>	Group Discussion on Problems on Population and Depreciation, Partnership	<input checked="" type="checkbox"/>		To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.

174	Major Core X: Complex Analysis	MC1761	<input checked="" type="checkbox"/>	Assignment on Cauchy Riemann equations			<input checked="" type="checkbox"/>	Solving exercise problems on Roots of complex numbers	To introduce the basic concepts of differentiation and integration of Complex functions and to apply the related concepts in higher studies.
175	Major Core XI: Mechanics	MC1762					<input checked="" type="checkbox"/>	Assignment on Two directions of projection for a given velocity.	To study the application of Mathematics in Physical Sciences and to solve related problems.
176	Major Core XII: Number Theory	MC1763	<input checked="" type="checkbox"/>	Group discussion on The fundamental theorem of arithmetic, The Sieve of Eratosthenes			<input checked="" type="checkbox"/>		To introduce the fundamental principles and concepts in Number Theory and to apply these principles in other branches of Mathematics.
177	Major Core XIII: Operations Research	MC1764	<input checked="" type="checkbox"/>	Assignment on Simplex method, Big-M Method			<input checked="" type="checkbox"/>	Solving problems on Graphical method, Simplex method, Big-M Method.	To formulate real life problems into mathematical problems and to solve life oriented and decision making problems by optimizing the objective function.
2020-2021									
178	Elective II: a) Astronomy	MC1765	<input checked="" type="checkbox"/>	Determine Perpetual Day and Perpetual night, Terrestrial latitude and longitude			<input checked="" type="checkbox"/>	Assignment on Morning, Evening stars & Circumpolar stars.	To identify, classify and compare the stars and the large scale structures of our Universe.
179	Elective II: b) Boolean Algebra	MC1766	<input checked="" type="checkbox"/>	Solve problems using Sylow's theorems and cauchy's theorem			<input checked="" type="checkbox"/>	Find the Least upper bound and greatest lower bound	To introduce the algebraic structures like lattices and Boolean algebra and to apply these concepts in various branches of Mathematics.
180	Elective II: c) Web Designing with HTML	MC1767	<input checked="" type="checkbox"/>	Group discussion on Applications on Designing a Home Page	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Design a home page, Quiz on Hyper Links,	To understand the importance of the web as a medium of communication and to create an effective web page with graphic design principles.
181	Skill Based Course: Mathematics for Competitive Examination - II	MSK176	<input checked="" type="checkbox"/>	Solve problems on finding the time taken by the train to pass a pole or an object of length, Relative Speed	<input checked="" type="checkbox"/>	Group discussion on Calendar, Counting Odd Days, Day of the Week related to Odd Days, Clocks,	<input checked="" type="checkbox"/>	Quiz on Problems on Trains, Compound Interest	To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
182	Core I: Algebra I	PM2011	<input checked="" type="checkbox"/>	Solve problems using Sylow's theorems and cauchy's theorem, Brainstorming on Characteristic of a ring			<input checked="" type="checkbox"/>	Solve problems in division algorithm, Group discussion on Conjugate classes, Ideals and Quotient rings	To study abstract Algebraic systems and to know the richness of higher Mathematics in advanced application systems.
183	Core II: Analysis I	PM2012	<input checked="" type="checkbox"/>	Solve problems using Taylor's series, Assignment on Metric spaces			<input checked="" type="checkbox"/>	Group Discussion on Continuity, Limits of function, Peer teaching on Open and closed sets	To understand the basic concepts of analysis and to formulate a strong foundation for future studies.
184	Core III: Probability and Statistics	PM2013	<input checked="" type="checkbox"/>	Solve problems in Binomial, Poisson and Normal distributions			<input checked="" type="checkbox"/>	Solve problems in marginal and conditional distributions, Preparation of multiple choice questions in NET/SET exam	To upgrade the knowledge in Probability theory and to solve NET / SET related Statistical problems.
185	Core IV: Ordinary Differential Equations	PM2014	<input checked="" type="checkbox"/>	Solve exercise problems in Homogeneous linear systems with constant coefficients			<input checked="" type="checkbox"/>	Seminar on Bessel's functions, The gamma function	To study mathematical methods for solving differential equations and to Solve dynamical problems of practical interest.
186	Elective I: a) Numerical Analysis	PM2015					<input checked="" type="checkbox"/>	Solve problems using Bisection Method, Ramanujan's Method,	To study the various behaviour pattern of numbers and to study the various techniques of solving applied scientific problems.
187	Elective I: a) Fuzzy Sets and Fuzzy Logic	PM2016					<input checked="" type="checkbox"/>	Group Discussion on Crisp set, Fuzzy complements, Peer teaching on Fuzzy compatibility relations, Fuzzy ordering relations	To understand Fuzzy logic and to apply Fuzzy concepts in other branches of Mathematics.

188	Core V: Modules and Vector Spaces	PM2021	<input checked="" type="checkbox"/>	Solve the problems in linear independence, Group Discussion on Trace and Transpose			<input checked="" type="checkbox"/>	Find the basis of vector spaces, Online Assignment on Determinants, Hermitian, Unitary and Normal Transformations	To understand the concept of Modules and the advanced forms of Matrices related to Linear Transformations.
189	Core VI: Analysis II	PM2022	<input checked="" type="checkbox"/>	Think, pair and share activity on Sequences and series of functions, Continuity			<input checked="" type="checkbox"/>	Group discussion on uniform convergence and pointwise convergence of a sequence of functions	To make the students understand the advanced concepts of Analysis and to pursue research in Analysis related subjects.
190	Core VII: Partial Differential Equations	PM2023	<input checked="" type="checkbox"/>	Group discussion on problems in Compatible system of first order equations, Charpit's method			<input checked="" type="checkbox"/>	Solve problems on singular integral, Partial Differential Equations with constant coefficients	To formulate and solve different forms of partial differential equations and to Solve the related application oriented problems.
191	Core VIII: Graph Theory	PM2024	<input checked="" type="checkbox"/>	Assignment on Connectivity, Cut vertices, edge connectivity			<input checked="" type="checkbox"/>	Brainstorming on Matchings and Factorization, Hamiltonian Factorization	To introduce the important notions of graph theory and to Develop the skill of solving application oriented problems.
192	Elective II: a) Classical Dynamics	PM2025					<input checked="" type="checkbox"/>	Assignment on Lagrange's equations	To gain deep insight into concepts of Dynamics and to do significant contemporary research.
193	Elective II: b) Differential Geometry	PM2026					<input checked="" type="checkbox"/>	Solve problems in curves of surfaces	To study coordinate free geometry and to apply the theory in Tensors and theory of relativity.
194	Core IX: Algebra III	PM1731	<input checked="" type="checkbox"/>	Solve the problems in normal extension			<input checked="" type="checkbox"/>	Find the normal extension of field, Peer teaching on Vector spaces, Quotient Modules	To learn in depth the concepts of Galois Theory, theory of modules and lattices and to pursue research in pure Mathematics.
195	Core X: Topology	PM1732	<input checked="" type="checkbox"/>	Peer teaching on Connected spaces			<input checked="" type="checkbox"/>	Assignment on Comparison of box and product topologies	To distinguish spaces by means of simple topological invariants and to lay the foundation for higher studies in Geometry and Algebraic Topology.
196	Core XI: Measure Theory and Integration	PM1733	<input checked="" type="checkbox"/>	Assignment on Lebesgue Measure, Outer measure, Measurable sets			<input checked="" type="checkbox"/>	Assignment on Riemann and Lebesgue integral	To generalize the concept of integration using measures and to develop the concept of analysis in abstract situations.
197	Elective III: a) Algebraic Number Theory	PM1734					<input checked="" type="checkbox"/>	Solve problems in Quadratic residues and Pythagorean Triangles, Analyze the difference between Legendre symbol and Jacobi symbol	To gain deep knowledge about Number theory and to study the relation between Number theory and Abstract Algebra.
198	Elective III: b) Stochastic Process	PM1735	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Solve problems in Markov chain, Transition probabilities	To understand the stochastic models and to relate the models studied to real life probabilistic situations.
199	Major - Project	PM17PR					<input checked="" type="checkbox"/>		To submit a formal report to document the outcome of the project and get practice in writing projects.
200	Self Learning Course: Algebra for SET/CSIR-NET Exam	PM20S1	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR - NET/SET Exams.
201	Core XII: Complex Analysis	PM1741	<input checked="" type="checkbox"/>	Seminar on Analytic functions, Power series			<input checked="" type="checkbox"/>	Finding the zeros and poles	To impart knowledge on complex functions and to facilitate the study of advanced mathematics.
202	Core XIII: Functional Analysis	PM1742	<input checked="" type="checkbox"/>	Peer teaching on projections, Group Discussion on Adjoint of an operator, Self adjoint operators			<input checked="" type="checkbox"/>	Assignment on Comparison of Banach spaces and Hilbert spaces	To study the three structure theorems of Functional Analysis and to introduce Hilbert Spaces and Operator theory and to enable the students to pursue research.
203	Core XIV: Operations Research	PM1743	<input checked="" type="checkbox"/>	Constructing the time chart and resource levelling, Open book test on The Pollaczek - Khintchine Formula			<input checked="" type="checkbox"/>	Problems based on Critical path, Inventory	To learn optimizing objective functions and to solve life oriented decision making problems.

204	Core XV: Algorithmic Graph Theory	PM1744					<input checked="" type="checkbox"/>	Group discussion on The role of algorithms in computing, Seminar on Shortest paths and matrix multiplication	To instill knowledge about algorithms and to write innovative algorithms for graph theoretical problems.
205	Elective IV: a) Combinatorics	PM1745	<input checked="" type="checkbox"/>	Solve problems in weights and inventories of functions, multiple choice questions in NET/ SET exam			<input checked="" type="checkbox"/>	Solve problems in permutations and combinations, Finding root polynomials	To do an advanced study of permutations and combinations and to Solve related real life problems.
206	Elective IV: b) Coding Theory	PM1746	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	Assignment on Krawtchouk Polynomials, Solve problems in Constructing codes from other codes	To learn the different procedures of coding and decoding and to avail job opportunities in a number of detective agencies.
207	Self Learning Course: Analysis for SET/CSIR-NET Exam	PM20S2	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR-NET/SET Exams.
208	Major Core I: Differential Calculus and Trigonometry	MC1711		Making models on applications in real life, Solve exercise problems in curvature, radius of curvature in Cartesian, polar co-ordinates	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Solving problems on evolute and linear asymptotes	To impart knowledge on applications of Differential Calculus and important concepts of Trigonometry and to enhance problem solving skills.
209	Non Major Elective Course (NMEC): Mathematics for Life - I	MNM171	<input checked="" type="checkbox"/>	Solve problems in HCF and LCM of numbers, Online assignment on Factorization method, Common division method	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To develop the quantitative aptitude of the students and to solve problems required for various competitive examinations.
210	Major Core II: Classical Algebra and Integral Calculus	MC1721		Assignment on Green's, Stoke's and Gauss divergence theorems	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Solve problems in double integrals and triple integrals	To give a sound knowledge in Classical Algebra and to solve problems in applications of Integral Calculus.
211	Non Major Elective Course (NME): Mathematics for Life - II	MNM172	<input checked="" type="checkbox"/>	Assignment on Problem on Ages, Making mathematical models on real life problems.	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
212	Major Core III: Differential Equations and Vector Calculus	MC1731	<input checked="" type="checkbox"/>	Making Models on applications of differential equations	<input checked="" type="checkbox"/>	Peer - led discussions on Laplace Transformation and Laplace transform	<input checked="" type="checkbox"/>	Group Discussion on linear differential equation and particular integrals	To gain deeper knowledge in differential equations, differentiation and integration of vector functions and to apply the concepts in higher mathematics and physical sciences.
213	Major Core IV: Sequences and Series	MC1732	<input checked="" type="checkbox"/>	Solving problems in sequence and limit points, Analyse various types of tests for checking convergent and divergent sequence and series			<input checked="" type="checkbox"/>	Solve problems in sequence and limit points, Analyse various types of tests for checking convergent and divergent series	To introduce the primary concepts of sequences and series of real numbers and to develop problem solving skills.
214	Allied III: Probability Theory and Distributions	MA1731	<input checked="" type="checkbox"/>	Model making on application of probability concepts in real life, Construct mathematical solutions using Baye's Theorem	<input checked="" type="checkbox"/>	Solving problems on Conditional probability	<input checked="" type="checkbox"/>	Experimental learning to acquire the knowledge of sample space, events and conditional properties	To impart knowledge on the basic concepts of Probability theory and Probability distributions and to apply the theory in real life situations.
215	Self-Learning Course: Discrete Mathematics I	MC17S1					<input checked="" type="checkbox"/>	Assignment on classification of functions	To develop the interest of self learning in diverse subjects related to mathematics and to convert real life problems into mathematical problems.
216	Major Core V: Groups and Rings	MC1741	<input checked="" type="checkbox"/>	Find number of subgroups using Lagranges theorem , Group discussion on permutation and cyclic groups			<input checked="" type="checkbox"/>	Solve problems in Groups, Cyclic groups, Find number of subgroups using Lagranges theorem	To introduce the concepts of Group theory and Ring theory and to gain more knowledge essential for higher studies in Abstract Algebra.
217	Major Core VI: Analytical Geometry of 3 Dimensions	MC1742	<input checked="" type="checkbox"/>	Find angle between two lines, angle between a line and a plane, Assignment on shortest distance between two lines			<input checked="" type="checkbox"/>	Calculate the volume of a tetrahedron, Determine the centre and radius of a sphere	To gain deeper knowledge in three dimensional Analytical Geometry and to develop creative thinking, innovation and synthesis of information.

218	Allied IV: Applied Statistics	MA1741	<input checked="" type="checkbox"/>	Solving problems in Sampling distribution			<input checked="" type="checkbox"/>	Class test on properties of correlation coefficient and Regression	To acquire the knowledge of correlation theory and testing hypothesis and to solve research and application oriented problems.
219	Self-Learning Course: Discrete Mathematics II	MC17S2					<input checked="" type="checkbox"/>		To develop the interest of self learning in diverse subjects related to Mathematics and to convert real life problems into mathematical problems.
220	Major Core VII: Linear Algebra	MC1751	<input checked="" type="checkbox"/>	Assignment on real life applications of vector space and subspace			<input checked="" type="checkbox"/>	Find basis and dimension of Linear transformation	To compute quantities that deal with linear systems and eigenvalue problems.
221	Major Core VIII: Real Analysis	MC1752	<input checked="" type="checkbox"/>	Group Discussion on Countable and Uncountable sets			<input checked="" type="checkbox"/>	Conducting Quiz competition on Closed sets, Dense sets	To introduce Metric Spaces and the concepts of completeness, continuity, connectedness, compactness and uniform convergence and to use these concepts in higher studies.
222	Major Core IX: Graph Theory	MC1753	<input checked="" type="checkbox"/>	Presentation on recent developments in graph theory (National Seminar)			<input checked="" type="checkbox"/>	Determine independence number and covering number of a graph, Identify Eulerian and Hamiltonian graphs,	To introduce graphs, directed graphs and the concepts of connectedness and labelings and to apply these concepts in research.
223	Major - Project	MC1754					<input checked="" type="checkbox"/>		To develop the attitude of studying a topic in depth independently.
224	Elective I: a) Numerical Methods	MC1755	<input checked="" type="checkbox"/>	Solve problems in Trapezoidal rule and Simpsons rule, Assignment on applications of numerical methods in real life.			<input checked="" type="checkbox"/>	Solve problems in iteration method	To study Numerical differentiation and Numerical integration using different formulae and to develop various methods for solving applied scientific problems.
225	Elective I: b) Fuzzy Mathematics	MC1756	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		To understand Fuzzy concepts of sets and operations and to apply the Fuzzy concepts in image processing, machine learning and artificial intelligence.
226	Elective I: c) Object Oriented Programming with C++	MC1757	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To learn and write programmes in C++ Language and to enhance job opportunities.
227	Skill Based Course: Mathematics for Competitive Examination - I	MSK175	<input checked="" type="checkbox"/>	Assignmens in percentage, partnership, Solving competitive exam questions	<input checked="" type="checkbox"/>	Solving problems on Working partners and sleeping partners, Pipes and Cistern	<input checked="" type="checkbox"/>	Quiz on Boats and Streams	To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
228	Major Core X: Complex Analysis	MC1761	<input checked="" type="checkbox"/>	Peer-led discussions on diferent types of residues and Conjugation and modulus			<input checked="" type="checkbox"/>	Solving problems on conjugation and modulus	To introduce the basic concepts of differentiation and integration of Complex functions and to apply the related concepts in higher studies.
229	Major Core XI: Mechanics	MC1762					<input checked="" type="checkbox"/>	Solve problems on friction, Find general solution of the SHM	To study the application of Mathematics in Physical Sciences and to solve related problems.
230	Major Core XII: Number Theory	MC1763	<input checked="" type="checkbox"/>	Quiz on the sum and number of divisors			<input checked="" type="checkbox"/>	Solve linear congruences using Chinese remainder theorem	To introduce the fundamental principles and concepts in Number Theory and to apply these principles in other branches of Mathematics.
231	Major Core XIII: Operations Research	MC1764	<input checked="" type="checkbox"/>	Finding mathematical Formulation of L.P.P problems			<input checked="" type="checkbox"/>	Solve problems in simplex method and Big M method	To formulate real life problems into mathematical problems and to solve life oriented and decision making problems by optimizing the objective function.
232	Elective II: a) Astronomy	MC1765	<input checked="" type="checkbox"/>	Assignment on real life applications of astronomy, Making models in Lunar Eclipse, Solar Eclipse.			<input checked="" type="checkbox"/>	Find the angular diameter, Assignment on systems of coordinates	To identify, classify and compare the stars and the large scale structures of our Universe.
233	Elective II: b) Boolean Algebra	MC1766	<input checked="" type="checkbox"/>	Solving problems in Boolean Algebras and assignment on Stone's theorem			<input checked="" type="checkbox"/>	Finding least upper bound and greatest lower bound	To introduce the algebraic structures like lattices and Boolean algebra and to apply these concepts in various branches of Mathematics.

2019-2020									
234	Elective II: c) Web Designing with HTML	MC1767	<input checked="" type="checkbox"/>	Designing a Home Page using HTML	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Design a home page	To understand the importance of the web as a medium of communication and to create an effective web page with graphic design principles.
235	Skill Based Course: Mathematics for Competitive Examination - II	MSK176	<input checked="" type="checkbox"/>	Solving and creating problems on Compound Interest, Assignment on Clocks, Stocks and Shares problems.	<input checked="" type="checkbox"/>	Group discussion on Problems on Trains, Crossing time of two trains	<input checked="" type="checkbox"/>	Quiz on Banker's Discount, Banker's Gain	To develop the quantitative aptitude of the students and to solve problems needed for various competitive examinations.
236	Core I: Algebra I	PM1711	<input checked="" type="checkbox"/>	Quiz on Rings			<input checked="" type="checkbox"/>	Assignment on Product of two ideals, Quotient rings	To study abstract Algebraic systems and to know the richness of higher Mathematics in advanced application systems.
237	Core II: Analysis I	PM1712	<input checked="" type="checkbox"/>	Find out the application of Weierstrass theorem, Group discussion on all types of sequence.			<input checked="" type="checkbox"/>	Peer review writing on Open, closed sets & Dense sets.	To understand the basic concepts of analysis and to formulate a strong foundation for future studies.
238	Core III: Probability and Statistics	PM1713	<input checked="" type="checkbox"/>	Solve problems in Binomial, Poisson and Normal distributions			<input checked="" type="checkbox"/>	Solve problems in marginal and conditional distributions, central limit theorem, Multiple choice questions in NET/SET exam.	To upgrade the knowledge in Probability theory and to solve NET / SET related Statistical problems.
239	Core IV: Ordinary Differential Equations	PM1714	<input checked="" type="checkbox"/>	Solve boundary value problems, Sturm Liouville problem, Assignment on Boundary value problems			<input checked="" type="checkbox"/>	Solve problems on second order linear differential equations using various methods.	To study mathematical methods for solving differential equations and to Solve dynamical problems of practical interest.
240	Elective I: a) Numerical Analysis	PM1715					<input checked="" type="checkbox"/>	Solve problems using Newton's forward, Newton's backward and iteration method	To study the various behaviour pattern of numbers and to study the various techniques of solving applied scientific problems.
241	Elective I: b) Fuzzy Sets and Fuzzy Logic	PM1716					<input checked="" type="checkbox"/>	Group Discussion on Crisp set, Fuzzy complements	To understand Fuzzy logic and to apply Fuzzy concepts in other branches of Mathematics.
242	Core V: Algebra II	PM1721	<input checked="" type="checkbox"/>	Solve problems in Subspaces and vector spaces, Assignment on Minimal polynomials, Diagonalizable operators.			<input checked="" type="checkbox"/>	Find the basis and dimensions of vector space, Online Assignment on Dual spaces, Eigen values and Eigen vectors.	To understand the concept of Extension fields and to apply the idea of advanced forms of matrices related to linear transformations in real life situations.
243	Core VI: Analysis II	PM1722	<input checked="" type="checkbox"/>	Group discussion on application of Riemann Stieltjes integrals, Assignment on sequences and series of functions			<input checked="" type="checkbox"/>	Assignment on properties of integrals, Group discussion on The inverse function theorem.	To make the students understand the advanced concepts of Analysis and to pursue research in Analysis related subjects.
244	Core VII: Partial Differential Equations	PM1723	<input checked="" type="checkbox"/>	Solve problems by separation of variables method			<input checked="" type="checkbox"/>	Solve the problems on Complete integral, Particular integral, Singular integral. Standard form I, II, III, IV	To formulate and solve different forms of partial differential equations and to Solve the related application oriented problems.
245	Core VIII: Graph Theory	PM1724	<input checked="" type="checkbox"/>	Lecture on recent research topics (National Seminar), Assignment on Geodesic sets			<input checked="" type="checkbox"/>	Determine the connectivity and edge connectivity number of a graph, Seminar on Digraphs.	To introduce the important notions of graph theory and to Develop the skill of solving application oriented problems.
246	Elective II: a) Classical Dynamics	PM1725					<input checked="" type="checkbox"/>	Solve Lagrange's equations problems in Principle of least action & Examples.	To apply D'Alembert's Principle to solve the problems involving system of particles.
247	Elective II: b) Differential Geometry	PM1726					<input checked="" type="checkbox"/>	Finding the locus of centres of spherical curvature	To study coordinate free geometry and to apply the theory in Tensors and theory of relativity.
248	Core IX: Algebra III	PM1731	<input checked="" type="checkbox"/>	Assignment on Galois groups over the rationals, Solving NET/SET exam questions.			<input checked="" type="checkbox"/>	Online Assignment on normal extension of field	To learn in depth the concepts of Galois Theory, theory of modules and lattices and to pursue research in pure Mathematics.

249	Core X: Topology	PM1732	<input checked="" type="checkbox"/>	List out the real life application of Topology , Assignment on Hausdorff spaces.			<input checked="" type="checkbox"/>	Assignment on the product topology, Group discussion on the application of Uryson lemma	To distinguish spaces by means of simple topological invariants and to lay the foundation for higher studies in Geometry and Algebraic Topology.
250	Core XI: Measure Theory and Integration	PM1733	<input checked="" type="checkbox"/>	Assignment on application of the Lebesgue Measure and the Riemann Integral, Solving problems in differentiation and integration			<input checked="" type="checkbox"/>	Think, pair and share on Lebesgue Measure	To generalize the concept of integration using measures and to develop the concept of analysis in abstract situations.
251	Elective III: a) Algebraic Number Theory	PM1734					<input checked="" type="checkbox"/>	Solving problems on partition function	To gain deep knowledge about Number theory and to study the relation between Number theory and Abstract Algebra.
252	Elective III: b) Stochastic Process	PM1735	<input checked="" type="checkbox"/>	Assignment on real life applications of queueing models and solving critical problems in M/G/1 and GI/M/1 queueing models.			<input checked="" type="checkbox"/>	Solving problems on Markov chain, Transition probabilities, Random walk	To understand the stochastic models and to relate the models studied to real life probabilistic situations.
253	Major -Project	PM17PR					<input checked="" type="checkbox"/>		To submit a formal report to document the outcome of the project and get practice in writing projects.
254	Self Learning Course: Algebra for SET/CSIR-NET Exam	PM20S1	<input checked="" type="checkbox"/>	Solving NET/SET based problems in Vector spaces and Algebra of Linear Transformations.	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR - NET/SET Exams.
255	Core XII: Complex Analysis	PM1741	<input checked="" type="checkbox"/>	Solving NET/SET based problems on complex integration			<input checked="" type="checkbox"/>	Assignment on Analytic functions, Cauchy's integral formula	To impart knowledge on complex functions and to facilitate the study of advanced mathematics.
256	Core XIII: Functional Analysis	PM1742	<input checked="" type="checkbox"/>	Assignment on different types of operators, Analyze the Banach spaces and Hilbert spaces			<input checked="" type="checkbox"/>	Assignment on continuous linear transformation	To study the three structure theorems of Functional Analysis and to introduce Hilbert Spaces and Operator theory and to enable the students to pursue research.
257	Core XIV: Operations Research	PM1743	<input checked="" type="checkbox"/>	Assignment on Construction of the time chart and resource levelling, List out the applications of all queueing models.			<input checked="" type="checkbox"/>	Group Discussion on determining critical path calculation	To learn optimizing objective functions and to solve life oriented decision making problems.
258	Core XV: Algorithmic Graph Theory	PM1744					<input checked="" type="checkbox"/>	Online Assignment on Breadth -first Search and Depth- first Search of the graphs	To instill knowledge about algorithms and to write innovative algorithms for graph theoretical problems.
259	Elective IV: a) Combinatorics	PM1745	<input checked="" type="checkbox"/>	Solving real life problems on Generating functions for combinations and Polya's theory of counting.			<input checked="" type="checkbox"/>	Solve problems in permutations and combinations, Finding rook polynomials	To do an advanced study of permutations and combinations and to Solve related real life problems.
260	Elective IV: b) Coding Theory	PM1746	<input checked="" type="checkbox"/>	Group discussion on all types of codes and its applications			<input checked="" type="checkbox"/>	Assignment on Block codes, Linear codes, Hamming codes	To learn the different procedures of coding and decoding and to avail job opportunities in a number of detective agencies.
261	Self Learning Course: Analysis for SET/CSIR-NET Exam	PM20S2	<input checked="" type="checkbox"/>	Solving NET/SET based problems on Sequences and series, Convergence, Lim sup, Lim inf	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		To enhance problem solving skills and to enable the students to clear the CSIR-NET/SET Exams.