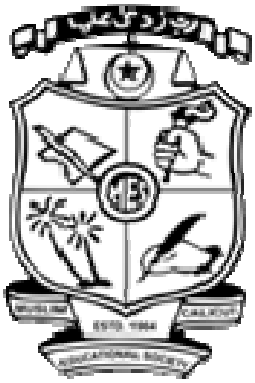
MES College Nedumkandam

Affiliated to Mahatma Gandhi University, Kottayam and Accredited by NAAC



Course Outcome- Mathematics

For 2020-21 Academic year

Chembalam PO, Idukki District, Kerala

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B Sc Mathematics

Semester: 1			
Course code	**Course Title**	**Course Outcome**	
MM1CRT01	Foundation of Mathematics	CO1	To understand Mathematical Logics.
		CO2	To understand the basic principles and technique of reasoning
		CO3	Explain basic concepts and prove basic facts about ordinals and well-ordered sets
		CO4	Criterion for determining a polynomial equation can be solved by a process involving rational operations
		CO5	To develops a new and in greater detail various various fundamental ideas of polynomials
MM1CMT01	Partial Differentiation, Matices, Trigonometry & Numerical Methods	CO1	To understand elementary row operations and elementary matrices
		CO2	Be familiar with the modeling assumptions and derivations that lead to PDEs
		CO3	To develop the row reduced echolon form of matrix and study their application.
		CO4	To understand the concept of rank of a matrix.
		CO5	Explain how to determine the square root of a real number by N-R method
Semester 2			
Course code	**Course Title M1**	**Course Outcome**	
MM2CRT02	Aanalytic Geometry, Trignometry and Differential Equations	CO1	To understand conic sections and their characteristics
		CO2	To understand the polar coordinates of conics
		CO3	Study the formulas involving Trigonometrical identities
		C04	Methods for solving Ordinary differeential equations
Course code	**Course Title C1P1**	**Course Outcome**	
MM2 CMTO2	Integral Calculus and Differential	CO1	To understand ordinary differential equations and various methods to solve them
		CO2	Study the application of integration with examples
		CO3	Various methods to calculate Volume of solid

	Equations	CO4	Explain the Surfaces Curves in three dimensions
Semester 2			
Course code	**Course Title BCA1**	**Course Outcome**	
	Discrete Mathematics II	CO1	Understand Graph terminology and Types of Graphs
		CO2	Study application of trees
		CO3	Representing Boolean Functions
		CO4	Application of Caley Hamiltonian Theorem
Semester: 3			
Course code	**Course Title**	**Course Outcome**	
MM3CRT01	Calculus	CO1	To understand the consequences of various mean value theorems for differentiable functions.
		CO2	To Understand the consequences of First Derivative Test for Extreme Values.
		CO3	To understand the a nalysis of basic concepts and a deep insight of Integral Calculus.
		CO4	Acquire and apply the knowledge in Maclaurin's and Taylor's Theorm
		CO5	Understand radius of curvature, evolutes and asymptotes
MM3CMT01	Vector Calculus, Analytic Geometry and Abstract Algebra	CO1	Getting an idea of curves in space and associated concepts
		CO2	Able to calculate directional derivatives and to find gradient vectors
		CO3	Understands the importance of line integral and will be able to identify where it can be applied and how it is evaluated
		CO4	Able to calculate surface area and surface integral
		CO5	Identifies conic sections and their properties
		CO6	Get an understanding in basic concepts in group theory
Semeter : 4			
Course code	**Course Title**	**Course Outcome**	
MM4CMT04	C2P2	CO1	To understand Laplace Transforms and inverse Laplace Transforms and their applications
	Fourier Series , Laplace	CO2	To understand complex integration
		CO3	Understand the basic properties of Complex numbers.

	Tranforms and Complex Analysis	CO4	Understand how to solve Differential equations using power series method.
	M2	CO1	Recognize various properties of congruence.
MM4CRT04	Vector calculus Theory of numbers and Laplace Transform	CO2	Able to apply Fermat's theorem and Wilson's Theorem for finding solutions of problems in number theory.
		CO3	Acquire the ability of solving Differential equations using Laplace Transform
		CO4	
Semester: 5			
Course code	**Course Title**	**Course Outcome**	
MM5CRT01	Mathematical Analysis	CO1	Understand the basic ideas of counting
		CO2	Understand the essential properties of real number system
		CO3	Understand algebraic and order properties of eal number system
		CO4	Undestand basic ideas of sequences as well as series and their convergence
MM5CRT02	Differential Equations	CO1	Understand various methods of finding solution of differential equation
		CO2	Evaluating the role of Differential equations in other subjects
		CO3	Able to apply the knowledge in life situations or for doing projects
MM5CRT03	Abstract Algebra	CO1	Understand basic ideas of algebraic system
		CO2	Develop the basic concepts of group , ring and field and their properties
		CO3	Contribution of algebraic systems to the world of sciene
		CO4	Develop the ideas of finite fields and their application to the modern world
	Human rights and Mathemat	CO1	Acquiring Knowledge about the enviornment and it allied Problems
		CO2	Understand the necessity of Environmental protection and improvement for sustainable development

	ics for Environmental Studies	CO3	Able to analyse the various environmental problems and can motivate public for solving it.
		CO4	Acquire a knowledge in Human rights
MM5OPT02	Applicable Mathematics	CO1	To Illustrate Vennn diagrams to bring out relationship in sets and their use in simple logical problems.
		CO2	Able to solve problems and graphical representation of variables.
		CO3	Detailed study and analysis of Geometry.
		CO4	To Study of algebric terms and functions.
Course code	**Course Title M3**	**Course Outcome**	
Open Course	Operations Research	CO1	Study the Nature and Uses of OR
		CO2	Formulate the problem in a LPP FORM
		CO3	Methods for solving LPP
		CO4	Understand the theory of games and economic behaviour
Semester: 6			
Course Code	**Course Title**	**Course Outcome**	
MM6CRT12	M3	CO1	To understand algebra and some applications of matrices
	Linear Algebra	CO2	To understand systemd of linear equations
		CO3	To understand vector spaces and their basic properties,
		CO4	To understand linear transformations and their applications
Course code	**Course Title**	**Course Outcome**	
MM6CRT09	M3	CO1	To undestsnd continuous functions and their applications
	Real Analysis	CO2	To understand derivatives and their applications
		CO3	To understand Reimann Integration
		CO4	To understand sequences and series of functions
Course code	**Course Title**	**Course Outcome**	
	M3	CO1	Understand complex functions and its properties [continuity, convergence, differentiability etc.]
	Complex	CO2	Able to recognize analytic functions and its role in complex

	Analysis		Analysis.
		CO3	Able to apply Cauchy's theorem and Liouvilles theorem for finding integral of complex functions.
		CO4	Able to apply the knowledge of residues and poles in integration of improper integrals.
Course code	**Course Title**	**Course Outcome**	
	M3	CO1	Acquire the knowledge of metric spaces, open sets and closed sets.
	Graph Theory and Metric Spaces	CO2	Understand various properties related to continuity and convergence of functions in a metric space
		CO3	Acquire the knowledge in Graphs .
		CO4	Able to apply the knowledge in graphs for finding solution of life problems.