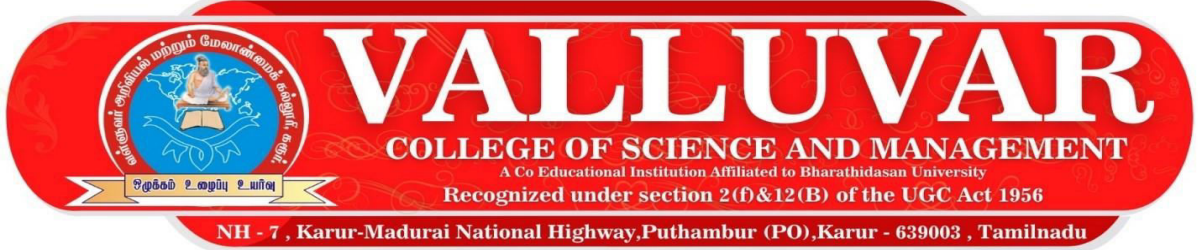
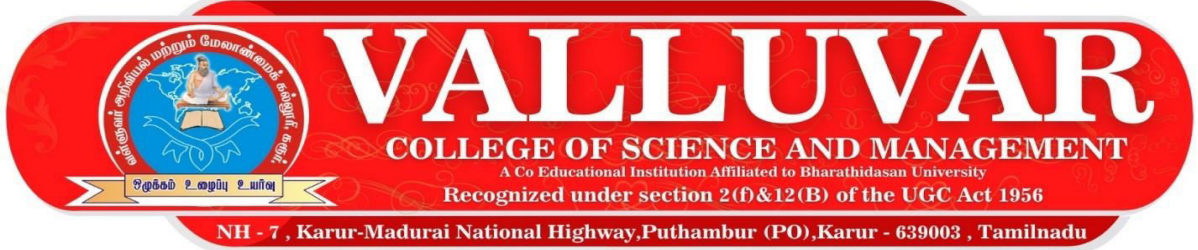


**DEPARTMENT OF MATHEMATICS**  
**COURSE OUTCOMES OF UNDER GRADUATE PROGRAMMES**  
**(2016 – 2017 onwards)**

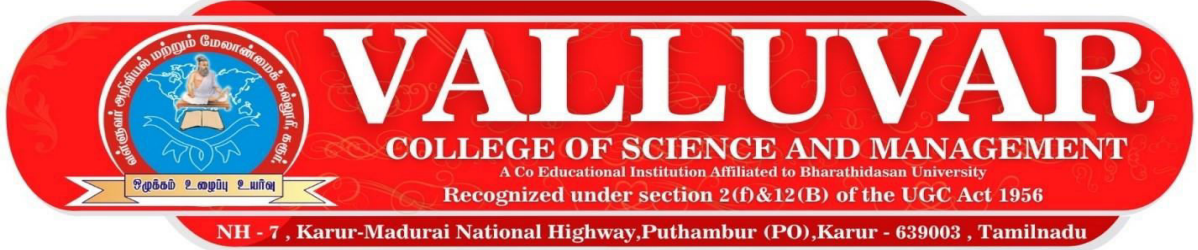
Name of the Programme: B.Sc., Mathematics		Semester – I	
Course Code	Name of the Course	Course Outcomes	
16SCCMM1	<b>DIFFERENTIAL CALCULUS AND TRIGONOMETRY</b>	<b>CO 1</b>	Discuss partial derivatives of higher derivatives and total differential coefficient.
		<b>CO 2</b>	Explain Jacobians method and understand the necessary and sufficient conditions.
		<b>CO 3</b>	Derive polar coordinates and pedal equations and solve problems.
		<b>CO 4</b>	Explain curvature and radius of curvature and problems.
		<b>CO 5</b>	Discuss sufficient conditions for envelope of the one parameter family of curves.
16SCCMM2	<b>INTEGRAL CALCULUS</b>	<b>CO 1</b>	Compute Double and triple integral in Cartesian coordinates.
		<b>CO 2</b>	Recall and relate beta and gamma function and their properties.
		<b>CO 3</b>	Application of double and triple integrals to area, volume and centroid.
		<b>CO 4</b>	Compute line integral surface and volume integral.
		<b>CO 5</b>	Solve Fourier series, Fourier expansions of periodic functions with period 2.



Name of the Programme: B.Sc., Mathematics		Semester – II	
Course Code	Name of the Course	Course Outcomes	
16SCCMM3	DIFFERENTIAL EQUATIONS AND LAPLACE TRANSFORMS	CO 1	How to Solve first-order ordinary differential equations
		CO 2	How to Solve higher order differential equations
		CO 3	How to Solve Laplace Transforms
		CO 4	How to Solve the Higher order differential equations using methods of variation of parameter.
		CO 5	How to Solve partial differential equations us in Lagrange's Method.
16SCCMM4	ANALYTICAL GEOMETRY (3D)	CO 1	Gain knowledge about the regular geometrical figures and their properties.
		CO 2	Analyze condition of tangency and find the tangent plane to the sphere.
		CO 3	Examine the condition for the general equation of the cone
		CO 4	Understand the concept of quadric cone and its properties
		CO 5	Acquire the basic knowledge of tangents and conicoid.



Name of the Programme: B.Sc., Mathematics		Semester – III	
Course Code	Name of the Course	Course Outcomes	
16SCCMM5	SEQUENCES AND SERIES	CO 1	To understand about bounded sequences, monotonic sequences
		CO 2	How to Solve Algebra of Limits
		CO 3	To learned about Cauchy sequences and its applications
		CO 4	To understand and theorem and test of convergence using comparison test
		CO 5	How to Solve Cauchy's root test problems
16SCCMM6	CLASSICAL ALGEBRA AND THEORY OF NUMBERS	CO 1	How to Solve Relation between roots & coefficients of Polynomial Equations
		CO 2	Understand the concept of Newton's theorem on the sum of the power of the roots
		CO 3	To learned about form of an equation whose roots are any power
		CO 4	How to Solve Geometric & Arithmetic means problems
		CO 5	To understand about Theory of Numbers



Name of the Programme: B.Sc., Mathematics		Semester – IV	
Course Code	Name of the Course	Course Outcomes	
16SCCMM7	<b>VECTOR CALCULUS AND FOURIER SERIES</b>	<b>CO 1</b>	To understanding the basic knowledge of vector differentiation & vector integration
		<b>CO 2</b>	How to Solve the types of integral.
		<b>CO 3</b>	How to solve vector differentiation & integration problems
		<b>CO 4</b>	How to approach the Fourier Series
		<b>CO 5</b>	How to Solve the different types of series.
16SCCMM8	<b>LINEAR ALGEBRA</b>	<b>CO 1</b>	To understood a better of vector space
		<b>CO 2</b>	To know the concepts of base and dimension of vector space
		<b>CO 3</b>	How to express vector spaces in different dimensions.
		<b>CO 4</b>	How to explain some functions defined between vector spaces
		<b>CO 5</b>	How to find kernel and image spaces of a linear transformation

Name of the Programme: B.Sc., Mathematics		Semester – V	
Course Code	Name of the Course	Course Outcomes	
16SCCMM9	<b>NUMERICAL METHODS WITH MATLAB PROGRAMMING</b>	CO 1	To learned basic knowledge of the exciting world of programming to the students through numerical methods
		CO 2	Students will have a working knowledge of techniques of MATLAB programming
		CO 3	How to solve numerical problems using MATLAB
		CO 4	To know the concepts of Linear and parabolic curves by the method of least squares principle
		CO 5	How to Solve Interpolation problems
16SCCMM10	<b>REAL ANALYSIS</b>	CO 1	Understand the real number system and countable concepts in real number system
		CO 2	To Provide a Comprehensive idea about the real number system
		CO 3	To understood the concepts of Continuity, Differentiation and Riemann Integrals
		CO 4	To Learn Rolle's Theorem and apply the Rolle's theorem concepts
		CO 5	Students will be able to Fundamental Theorem of Calculus
16SCCMM11	<b>STATICS</b>	CO 1	To understood the Condition of equilibrium
		CO 2	To provide the basic knowledge of equilibrium of a particle
		CO 3	To develop a working knowledge to handle practical problems
		CO 4	Students will have a working knowledge of Equilibrium of a particle on a rough inclined plane
		CO 5	To developed a working knowledge to handle practical problems on Equilibrium of strings
16SMBEMM1:1	<b>OPERATIONS RESEARCH</b>	CO 1	To Understood the various techniques of Operations Research
		CO 2	How to Solve Linear programming problem
		CO 3	How to Solve simplex method problem
		CO 4	How to Solve Transportation problem
		CO 5	To make the students solve real life problems in Business and Management



# VALLUVAR

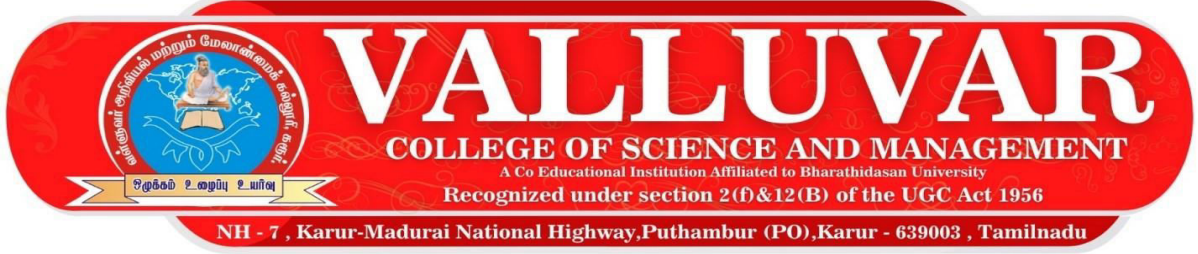
**COLLEGE OF SCIENCE AND MANAGEMENT**

A Co Educational Institution Affiliated to Bharathidasan University

Recognized under section 2(f)&12(B) of the UGC Act 1956

NH - 7 , Karur-Madurai National Highway,Puthambur (PO),Karur - 639003 , Tamilnadu

Name of the Programme: B.Sc., Mathematics		Semester – VI	
Course Code	Name of the Course	Course Outcomes	
16SCCMM12	ABSTRACT ALGEBRA	CO 1	To understand the concept of Algebra from the basic set theory and Functions, etc.
		CO 2	Students will be able to construct substructures.
		CO 3	To learned the concept of Group theory and Rings.
		CO 4	Students will have a working knowledge of mathematical concepts of definition of a group, order of a finite group and order of an element.
		CO 5	Students will be introduced to and have knowledge of many mathematical concepts studied in abstract mathematics such as permutation groups, factor groups and Abelian groups.
16SCCMM13	COMPLEX ANALYSIS	CO 1	To Understood the functions of complex variables, continuity and differentiation of complex variable functions, $C - R$ equations of analytic functions.
		CO 2	To Learned about elementary transformation concepts in complex variable
		CO 3	To Learned about complex Integral functions with Cauchy's Theorem, power series expansions of Taylor's and Laurant's series
		CO 4	To Understood the singularity concepts and residues, solving definite integrals using the residue concepts
		CO 5	How to describe conformal mappings between various plane regions. Present the central ideas in the solution of Dirichlets problem
16SCCMM14	DYNAMICS	CO 1	To learned basic knowledge of the behaviour of objects in motion
		CO 2	To developed a working knowledge to handle practical problems
		CO 3	How to solve mechanics problems in one dimension that involves one or more of the forces of gravity, friction and air resistance.
		CO 4	How to understand and use basic terms for the description of the motion of particles, vector functions and the fundamental laws of Newtonian mechanics



		<b>CO 5</b>	How to solve problems relating to the motion of a projectile in the absence of air resistance.
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<b>16SMBEMM2:1</b>	<b>GRAPH THEORY</b>	<b>CO 1</b>	To learned about the notion of graph theory and its applications
		<b>CO 2</b>	To learned the techniques of combinatorics in Graph Theory
		<b>CO 3</b>	The students will be able to apply principles and concepts of graph theory in practical situations
		<b>CO 4</b>	How to apply graph theory-based tools in solving practical problems
		<b>CO 5</b>	To understood and apply the fundamental concepts in graph theory
<b>16SMBEMM3:1</b>	<b>ASTRONOMY</b>	<b>CO 1</b>	To understood the exciting world of astronomy to the students
		<b>CO 2</b>	To know the study spherical trigonometry in the field of astronomy.
		<b>CO 3</b>	To understood the movements of the celestial objects.
		<b>CO 4</b>	Students will be able to identify, classify and compare the objects in the Universe
		<b>CO 5</b>	The aim of teaching is to understand astrophysical processes and systems, ranging from our own sun to stars, galaxies and the whole universe