

**A.V.V.M. SRI PUSHPAM COLLEGE (AUTONOMOUS),
POONDI-613 503, THANJAVUR**



1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific outcomes (PSOs) and Course Outcomes (COs) of the Programmes offered by the Institution

COURSE OUTCOMES

M.Sc. MATHEMATICS (2017 - 2018)

Semester	Category	Paper Code	Title of the Paper	Outcome
I	Core	17P1MAC1	Linear Algebra	<ul style="list-style-type: none"> After studying this course the student will be able to Proving and explaining concepts from advanced algebra.
	Core	17P1MAC2	Real Analysis – I	<ul style="list-style-type: none"> Demonstrate an understanding of the theory of sequences and series, continuity, differentiation and integration.
	Core	17P1MAC3	Ordinary Differential Equations	<ul style="list-style-type: none"> Teaching the theory and applications to students preparing for advanced training in applied sciences and social sciences. Presenting in easy and lucid language the results of oscillations, boundary valued Problems (BVP) and elements of control theory. Justifying the inclusion of qualitative theory to students who think that it is out of place. Emphasizing the importance of the study of Boundary value problems, both in Mathematics and in the applied sciences. Studying about the stability of stationary solutions
	Core	17P1MAC4	Stochastic Processes	<ul style="list-style-type: none"> To introduce the basic concepts of Stochastic models. To learn the real life models such as Birth- Death processes.

	Major Elective-I	17P1MAEL1A 17P1MAEL1B	Classical Dynamics (or) Fluid Dynamics	<ul style="list-style-type: none"> Classical mechanics afford the student an opportunity to master many of mathematics techniques. It is certainly true that classical mechanics today is far from being a closed subject. Alternate means exist in the curriculum for acquiring the mathematics needed in other branches. (or) <ul style="list-style-type: none"> To introduce the behavior of fluid in motion. To study the application of complex analysis in the analysis of flow of fluids.
II	Core	17P2MAC5	Algebra	<ul style="list-style-type: none"> Group Theory is the fundamental building blocks for the Abstract algebra. To study the algebraic aspects of Real and complex numbers. Module is a third algebraic Model -Applicable to geometry and physics.
	Core	17P2MAC6	Complex Analysis	<ul style="list-style-type: none"> To introduce the students to the fascinating world of complex analysis which is different from analysis of real variable. To introduce the concepts of harmonic functions and elliptic functions
	Core	17P2MAC7	Partial Differential Equations	<ul style="list-style-type: none"> To introduce notion of partial differentiated equations. To give an awareness about methods of integral transforms. To study boundary value problems
	Core	17P2MAC8	Mathematical methods	<ul style="list-style-type: none"> To introduce the notion of Fourier Transform and to study its properties To discuss the calculus of variations. To discuss linear integral equation and its application. To discuss some of the applications of ordinary differential equations.

	Core	17P3MAC9	Optimization Techniques	<ul style="list-style-type: none"> • After studying this course the student will be able to • To study the basic components of an optimization problem.
	Major Elective-II	17P2MAEL2A 17P2MAEL2B	Mathematical Probability (or) Mathematical Modeling	<ul style="list-style-type: none"> • After studying this course the student will be able to • Interact with die rolls and spinners to help predict the outcome of experiments. (or) <ul style="list-style-type: none"> • After studying this course the student will be able to Analysis specific problems and identity the appropriate mathematics.
III	Core	17P3MAC10	General Topology	<ul style="list-style-type: none"> • The subject of topology is of interest in its our right and it also serves to lay the foundations for future study in analysis, in Geometry and in Algebraic Topology. • To develop the students abilities through hard thinking. • To train the students to develop analytical thinking.
	Core	17P3MAC11	Differential Geometry	<ul style="list-style-type: none"> • Presenting the fundamental conceptions of the theory of curves and surfaces • Stressing the properties of a surface in relation to the surrounding space. • Real praising the general theory of surfaces. • Studying the intrinsic properties of the surfaces.
	Core	17P3MAC12	Real Analysis – II	<ul style="list-style-type: none"> • Describe the basic differences between the rational and the real numbers.
	Core	17P3MAC13	Programming in C++	<ul style="list-style-type: none"> • C++ is an extension of C language that is widely used on many machines. • It is a powerful modern language that combines the power, elegance and flexibility of C and the features of object oriented programming. • With its object-oriented capabilities such as data abstraction, inheritance and Polymorphism, C++ offers significant software engineering benefits over C.

	Core-Practical	17P3MACPL	Programming in C++ Practical	<ul style="list-style-type: none"> C++ is a powerful, highly flexible, and adaptable programming language that allows software engineers to organize and process information quickly and effectively. But this high-level language is relatively difficult to master, even if you already know the C programming language.
	EDC	17P3MAEDC	Extra disciplinary course - Applicable Mathematical Techniques	<ul style="list-style-type: none"> After studying this course the student will be able to student will demonstrate the ability to solve financial math problem.
IV	Core	17P4MAC14	Functional Analysis	<ul style="list-style-type: none"> General knowledge- Banach spaces and Factor spaces – Hahn Banach theorem To study about convergences, Hilbert spaces and Bessel's inequality. To study about complete orthonormal sets. To study about convergences in $L(X,Y)$–Uniform bounded ness and closed graph Theorem and Banish Algebra.
	Core	17P4MAC15	Graph Theory and its application	<ul style="list-style-type: none"> After studying this course the student will be able to theoretical knowledge Able to apply theoretical knowledge acquired to solve realistic problem in real life.
	Core	17P4MAC16	Cryptography	<ul style="list-style-type: none"> To provide Techniques for keeping information secret. To provide Techniques for determining that information has not been tampered With. To provide Techniques for determining who authored pieces of information. To provide various principles, techniques and algorithms of interest in cryptographic practice. To provide techniques for non- reputation in message transmission.

	Major Elective-III	17P4MAEL3A 17P4MAEL3B	Advanced Numerical Analysis (or) Design and Analysis of Algorithms	<ul style="list-style-type: none"> • After studying this course the student will be able to • Demonstrate a familiarity with major algorithms and data structures. (or) <ul style="list-style-type: none"> • To impart the students the knowledge of design analysis of algorithms which is the core of computer science. • To make students thinks logically and organize sequentially these algorithms.
	CN	17P4MACN	Comprehension	<ul style="list-style-type: none"> • To better for the preparations of Competitive Exams in advance.
	Project	17P4MAPR	Project	<ul style="list-style-type: none"> • Undertake problem identification, formulation and solution. • Demonstrate the knowledge, skills and attitudes.