



**PERIYAR
MANIAMMAI**
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University)
Established Under Sec. 3 of UGC Act, 1956 • NAAC Accredited
think • innovate • transform

Criterion 1 – Curricular Aspects

Key Indicator	1.2	Academic Flexibility
Metric	1.2.2	Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Data for the latest completed academic year)

DEPARTMENT OF MATHEMATICS STRUCTURE OF THE PROGRAM CLEARLY INDICATING COURSES, CREDITS/ELECTIVES

Programmes

1. B.SC MATHEMATICS
2. M.SC MATHEMATICS
3. M.PHIL MATHEMATICS

1. CURRICULUM STRUCTURE OF B.SC MATHEMATICS

SEMESTER I

Type	Course Code	Course Name	L	T	P	SS	H	C
AECC 1	XGL101	Communication Skills in English	2	0	0	2	4	2
LAN	XGL102A/ XGL102B	Ariviyal Tamil /Comprehensive English	3	0	0	0	3	3
CC 1	XPG103	Fundamental Physics	3	1	0	0	4	4
CC 2 (DSC 2A)	XMT104	Foundation Course in Mathematics	4	1	0	0	5	5
CC 3 (DSC 3A)	XMT105	Differential Calculus& Integral Calculus	4	1	0	0	5	5
UMAN 1	XUM106	Human Ethics, Values, Rights and Gender Equality	3	0	0	0	3	0
CC 1 lab	XPG107	Fundamental Physics Lab	0	0	2	0	4	2
Total			19	3	2	2	28	21

SEMESTER II

Type	Course Code	Course Name	L	T	P	SS	H	C
AECC 2	XGL201	English for Effective Communication	2	0	0	0	2	2
AECC 3	XES202	Environmental Studies	2	0	0	1	3	2
CC 4	XPG 203	Modern Physics	3	1	0	0	4	4
CC 5 (DSC 2B)	XMT204	Differential Equations & Laplace Transforms	4	1	0	0	5	5
CC 6 (DSC 3B)	XMT205	Sequences and Series	4	1	0	0	5	5
CC 4 Lab	XPG206	Modern Physics Lab	0	1	2	0	3	2
Total			15	4	2	1	22	20

SEMESTER III

Type	Course Code	Course Name	L	T	P	SS	H	C
SEC 1	XMT301	Logic and Sets	2	0	0	2*	2	2
CC 7	XMT302	Programming in C	3	1	0	0	4	4
CC 8 (DSC 2C)	XMT303	Real Analysis	4	1	0	0	5	5
CC 9 (DSC 3C)	XMT304	Analytical Geometry 3D	4	1	0	0	5	5
GE 1		*Open Elective - To be chosen by student	3	0	0	0	3	3
CC 7 lab	XMT305	Programming in C – Practical	0	1	2	0	3	2
UMAN 2	XUM306	Disaster Management	0	0	0	3*	0	0

Minor Course * Extra Credit		Office Automation (15 hours)	0	0	0	0	0	1*
Total			16	4	2	5*	22	21+1*

SEMESTER IV								
Type	Course Code	Course Name	L	T	P	SS	H	C
SEC 2	XMT401	Theory of Equations	2	0	0	2*	2	2
CC 10	XMT402	Introduction to Matlab	3	1	0	0	4	4
CC 11 (DSC 2D)	XMT403	Vector Calculus and Fourier Series	4	1	0	0	5	5
CC 12 (DSC 3D)	XMT404	Algebra	4	1	0	0	5	5
GE 2		*Open Elective - To be chosen by student	3	0	0	0	3	3
CC 10 Lab	XMT405	Introduction to Matlab - Practical	0	1	2	0	3	2
Minor Course * Extra Credit		Animation Software I (15 hours)	0	0	0	0	0	1*
Total			16	4	2	2*	22	21+1*

SEMESTER V								
Type	Course Code	Course Name	L	T	P	SS	H	C
SEC 3	XMT501	Probability and Statistics	2	0	0	2*	2	2
DSE 1A	XMT502A	Matrices	4	2	0	0	6	6
	XMT502B	Discrete Mathematics						
DSE 2A	XMT503A	Numerical Methods	4	2	0	0	6	6
	XMT503B	Mechanics						
DSE 3A	XMT504A	Linear Algebra	4	2	0	0	6	6
	XMT504B	Astronomy						
GE 3		*Open Elective - To be chosen by student	3	0	0	0	3	3
Minor Course * Extra Credit		Animation Software II (15 hours)	0	0	0	0	0	1*
Total			17	6	0	2*	23	23+1*

SEMESTER VI								
Type	Course Code	Course Name	L	T	P	SS	H	C
SEC 4	XMT601	Graph Theory	2	0	0	2*	2	2
DSE 1B	XMT602A	Complex Analysis	4	2	0	0	6	6
	XMT602B	Number Theory						
DSE 2B	XMT603A	Linear Programming	4	2	0	0	6	6
	XMT603B	Stochastic Processes						
DSE 3B	XPH604	Project	0	0	0	0	8	6
	–	NSS/NCC/NSO....	0	0	0	0	0	1*
Total			10	4	0	2*	22	20+1*

2. CURRICULUMSTRUCTURE OF M.SC MATHEMATICS

Semester	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
I	YMA101	Groups and Rings	4	1	0	5
	YMA102	Analysis - I	4	1	0	5
	YMA103	Differential Equations	3	1	0	4
	YMA104	Discrete Mathematics	3	1	0	4
	YMA1E*	One among the list of Electives (1E)	3	0	0	3
						21

* List of Electives (1E)

Elective Code	Course Name	L	T	P	C
01	Graph Theory	3	0	0	3
02	Coding Theory	3	0	0	3
03	Mathematical Logic	3	0	0	3

Semester	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
II	YMA201	Linear Algebra	4	1	0	5
	YMA202	Analysis - II	4	1	0	5
	YMA203	Integral Equations, Calculus Of Variations And Transforms	3	1	0	4
	YMA204	Operations Research	3	1	0	4
	YMA2E*	One among the list of Electives (2 E)	3	0	0	3
						21

* List of Electives(2E)

Elective Code	Course Name	L	T	P	C
01	Algebraic Number Theory	3	0	0	3
02	Data structures and Algorithms	3	0	0	3
03	Fuzzy sets and Fuzzy logic	3	0	0	3

Semester	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
III	YMA301	Field Theory	3	1	0	4
	YMA302	Topology	4	1	0	5
	YMA303	Automata Theory	3	1	0	4
	YMA304	Mathematical Statistics	3	1	0	4
	YMA3E*	One among the list of Electives (3 E)	3	0	0	3
						20

* List of Electives(3E)

Elective Code	Course Name	L	T	P	C
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01	Data Analysis Using Spss	4	0	0	4
02	Numerical Methods	4	0	0	4
03	Commutative Algebra	4	0	0	4

Semester	Course Code	Course Name	Lecture	Tutorial	Practical	Credit
IV	YMA401	Complex Analysis	4	1	0	5
	YMA402	Functional Analysis	4	1	0	5
	YMA403	Mathematical Modeling	3	1	0	4
		Project work				8
						22

Total Numberof Credits :84

3. CURRICULUM STRUCTURE OF M.Phil MATHEMATICS

Semester	Course Code	Course Title	Lecture	Seminar	Practical	Credit	Hours
I	ZMA101	Research Methodology	4	2	0	6	6
	ZMA102	Algebra & Analysis	4	2	0	6	6
	ZMA103	Differential Equations	4	2	0	6	6
Total Credits: 18							18

Semester	Course Code	Course Title	Lecture	Seminar	Practical	Credit	Hours
II	ZMA201*	Guide Paper	1	3	0	4	4
	ZSW202	Teaching and Learning Skills	1	2	0	2	3
	ZMA202	Research Project - Dissertation	0	0	12	16*	12
Total Credits: 22							19

*Guide Paper

S.NO	Course Code	Course Title
1.	ZMA201A	Advanced Graph Theory
2.	ZMA201B	An Introduction to Category theory and Algebraic Graph theory
3.	ZMA201C	Fuzzy sets, Fuzzy logic & Category of Fuzzy sets
4.	ZMA201D	Fuzzy sets and Fuzzy logic
5.	ZMA201E	Linear Algebra and its Applications
6.	ZMA201F	Markov Chains and Time Series

* 12 credits – Thesis; 4 credits– Viva-voce

Total Credits: 40