

M.Sc. Mathematics

Programme: M.Sc. Mathematics

A. Distribution of Courses, Credits and Contact Hours

Type of Course	Total No. of Courses	Credits per Course	Total Credits	Percentage in Total Credits	Total Contact Hours	Percentage in Total Contact Hours
Core (Compulsory)						
Theory	13	4	52	57.78	65	54.17
Laboratory	2	2	4	4.44	8	6.67
Research Review	1	2	2	2.22	5	4.17
Article Publication	1	2	2	2.22	7	5.83
Internship: Review and Report	1	2	2	2.22	Extra	-
Project	1	4	4	4.44	9	7.50
Elective (Optional)						
Theory	5	4	20	22.22	18	15.00
Ability Enhancement						
Soft and Quantitative Skills	2	1	2	2.22	4	3.33
Value Added Technical Skills	1	2	2	2.22	4	3.33
Total	27	1-4	90	100	120	100

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B. List of Core and Elective Courses

Core Courses (Compulsory)

Theory :

- 16PMC101 : Algebra
- 16PMC102 : Real Analysis
- 16PMC103 : Ordinary Differential Equations
- 16PMC104 : Complex Analysis
- 16PMC105 : Topology
- 16PMC106 : Partial Difference Equation
- 16PMC107 : Functional Analysis
- 16PMC108 : Classical Mechanics
- 16PMC109 : Graph Theory
- 16PMC110 : Fluid Dynamics
- 16PMC111 : Operator Theory
- 16PMC112 : Mathematical Statistics
- 16PMC113 : Mathematical Methods

Laboratory :

- 16PMC301 : Practical Mathematics
- 16PMC302 : Applicable Mathematics

Elective Courses (Optional)

Regular Study :

Group 1(Any One Course)

- 16PMC201 : Numerical Analysis
- 16PMC202 : Magneto Hydrodynamics
- 16PMC203 : Stochastic Process

Group 2(Any One Course)

- 16PMC204 : Fuzzy Logic and Fuzzy Sets
- 16PMC205 : Control Theory
- 16PMC206 : Latex and Mathematica

Group 3(Any One Course)

- 16PMC207 : Number Theory
- 16PMC208 : Cryptography
- 16PMC209 : Space Dynamics

Group 4(Any One Course)

- 16PMC210 : Differential Geometry
- 16PMC211 : Design and Analysis of Algorithms
- 16PMC212 : Stochastic Differential Equations

Self Study :

(Any One Course)

- 16PMC213 : Operations Research
- 16PMC214 : Nonlinear Differential Equations
- 16PMC215 : Distribution Theory

Explanation for Course Code:

**First 02 Digits : Year 2016; Third Digit : Level of the Programme (U : UG / P : PG);
Fourth and Fifth Digits : Cluster / Discipline Code; Last 03 Digits : Nature of the
Course (Core/Elective/Supportive etc.,)**

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**C. Semester-wise Distribution of Courses, Credits, Marks and
Contact Hours**

Part	Type of Course	Course Code	Title of the Course	Credits	Marks	Contact Hours / Week
Semester I						
III	Core: Theory – 1	16PMC101	Algebra	4	100	5
	Core: Theory – 2	16PMC102	Real Analysis	4	100	5
	Core: Theory – 3	16PMC103	Ordinary Differential Equations	4	100	5
	Core: Theory – 4	16PMC104	Complex Analysis	4	100	5
	Elective: Theory – 1	16PMC201/ 16PMC202/ 16PMC203	Numerical Analysis/ Magnetohydrodynamics/ Stochastic Process	4	100	4
	Core : Laboratory – 1	16PMC301	Practical Mathematics	2	100	4
	Core: Article Publication	16PMC601	Publication of Article in Research Journal	-	CIA	2
Sub-Total				22	600	30
Semester II						
III	Core: Theory – 5	16PMC105	Topology	4	100	5
	Core: Theory – 6	16PMC106	Partial Difference Equation	4	100	5
	Elective: Theory – 2	16PMC204/ 16PMC205/ 16PMC206	Fuzzy Logic and Fuzzy Sets / Control Theory/ Latex and Mathematica	4	100	4
	Core: Laboratory – 2	16PMC302	Applicable Mathematics	2	100	4
	Core: Article Publication	16PMC601	Publication of Article in Research Journal	-	CIA	3
	Research Review	16PMC701	Research Review on Current Trends in the Discipline	-	CIA	3
	Ability Enhancement	16PAB401	Soft and Quantitative Skills – I	1	100	2
	Ability Enhancement	16PMC401	Value Added Technical Skills	2	100	4
Sub-Total				17	600	30
	Core: Internship	16PMC801	Summer Internship			
Semester III						
III	Core: Theory – 7	16PMC107	Functional Analysis	4	100	5
	Core: Theory – 8	16PMC108	Classical Mechanics	4	100	5
	Core: Theory – 9	16PMC109	Graph Theory	4	100	5
	Core: Theory – 10	16PMC110	Fluid Dynamics	4	100	5
	Elective: Theory – 3	16PMC207/ 16PMC208/ 16PMC209	Number Theory/ Cryptography/ Space Dynamics	4	100	4
	Core: Article Publication	16PMC601	Publication of Article in Research Journal	2	100	2
	Core: Research Review	16PMC701	Research Review on Current Trends in the Discipline: Report	2	100	2
	Ability Enhancement	16PAB402	Soft and Quantitative Skills – II	1	100	2
	Core: Internship	16PMC801	Summer Internship : Review and Report	2	100	Extra
	Sub-Total				27	900
Semester IV						

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III	Core: Theory – 11	16PMC111	Operator Theory	4	100	5
	Core: Theory – 12	16PMC112	Mathematical Statistics	4	100	5
	Core: Theory – 13	16PMC113	Mathematical Methods	4	100	5
	Elective: Theory – 4	16PMC210/ 16PMC211/ 16PMC212	Differential Geometry/ Design and Analysis of Algorithms/ Stochastic Differential Equations	4	100	4
	Elective: Theory – 5: (Self Study)	16PMC213/ 16PMC214/ 16PMC215	Operations Research/ Nonlinear Differential Equations/ Distribution Theory	4	100	2
	Core: Project	16PMC501	Project and Viva Voce	4	100	9
Sub-Total				24	600	30

Total Credits: $22+17+27+24 = 90$

Total Marks: $600+600+900+600 = 2700$