

**M.Sc. Mathematics (2 Years)**

SNo	Sem	Course title	Credits	Credit Distribution					Type of Course					Prerequisite	Mandatory	Audit	CIE (100)	SEE (100)	Remark
				lecture	Tutorial	Practical	Self Study	Core	Elective	Multi Disciplinary	SEC	VAC	AEC	Project	Minor	Internship			
1	I	Advanced Abstract Algebra	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
2	I	Advanced Analysis	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
3	I	Theory of Differential Equations	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
4	I	Optimization Techniques	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
5	I	Programming in Python	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
6	II	Advanced Numerical Analysis	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
7	II	Functional Analysis	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
8	II	General Topology	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
9	II	Mathematical Statistics	2	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
10	II	Research, Innovation & IPR	2	2	0	0	0	0	0	2	0	0	0	0	0	0	-	100	100
11	III	Professional Communication	2	1	0	1	0	0	0	0	0	2	0	0	0	0	-	100	100
12	III	Integral Equations and Calculus of Variation	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
13	III	Fluid Mechanics	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
14	III	Research Methodology	2	2	0	0	0	0	0	2	0	0	0	0	0	0	-	100	100
15	IV	Measure Theory	4	3	1	0	0	4	0	0	0	0	0	0	0	0	-	100	100
16	III	Number theory and Cryptography	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
17	III	Commutative Algebra	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
18	III	Differential Geometry and Tensors	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
19	III	Discrete Mathematics	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
20	III	Financial Mathematics	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
21	III	General theory of Relativity	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
22	III	Graph Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
23	III	Modelling and Simulation	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
24	III	Operator Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
25	III	Theory of Elasticity	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
26	IV	Advanced Fourier Analysis & wavelets	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
27	IV	Algebraic Coding Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
28	IV	Representation Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
29	IV	Computational Fluid Dynamics	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
30	IV	Computational Seismology	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
31	IV	Dynamics of rigid Bodies	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
32	IV	Non Linear Analysis	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
33	IV	Algebraic Number Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
34	IV	Biomathematics	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
35	IV	Special theory of Relativity & Cosmology	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
36	IV	Fractional Calculus	4	3	1	0	0	0	4	0	0	0	0	0	0	0	-	100	100
37	III/IV	Dissertation	10	0	0	0	0	0	0	0	0	0	0	10	0	0		100	100
		Total		80					48	16	4	2	10						

**Elective courses for M Sc Mathematics**

SNo	Sem	Course title	Credits	Credit Distribution					Type of Course							Prerequisite	Mandatory	Audit	CIE (100)	SFF (100)	Remark
				lecture	Tutorial	Practical	Self Study	Core	Elective	Multi	Disciplinary	SEC	VAC	AEC	Project	Minor	Internship				
1	III	Number theory and Cryptography	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
2	III	Commutative Algebra	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
3	III	Differential Geometry and Tensors	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
4	III	Discrete Mathematics	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
5	III	Financial Mathematics	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
6	III	General theory of Relativity	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
7	III	Graph Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
8	III	Modelling and Simulation	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
9	III	Operator Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
10	III	Theory of Elasticity	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
11	IV	Advanced Fourier Analysis & wavelets	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
12	IV	Algebraic Coding Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
13	IV	Representation Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
14	IV	Computational Fluid Dynamics	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
15	IV	Computational Seismology	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
16	IV	Dynamics of rigid Bodies	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
17	IV	Non Linear Analysis	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
18	IV	Algebraic Number Theory	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
19	IV	Biomathematics	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
20	IV	Special theory of Relativity & Cosmology	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	
21	IV	Fractional Calculus	4	3	1	0	0	0	4	0	0	0	0	0	0	0	0	-	100	100	