

**M Sc – Mathematics**  
(effective 2018 admissions onwards)  
(Incorporating changes Introduced up to June 2019)

**CURRICULUM**

SEMESTER 1					SEMESTER 2				
18MAT502	Advanced Algebra	4 0 0	4	A	18MAT511	Advanced Complex Analysis	4 0 0	4	A
18MAT503	Advanced Real Analysis	4 0 0	4	B	18MAT512	Advanced Topology	4 0 0	4	A
18MAT504	Ordinary Differential Equations	4 0 0	4	C	18MAT513	Partial Differential Equations	4 0 0	4	B
18MAT505	Stochastic Process	4 0 0	4	C	18MAT514	Measure Theory	4 0 0	4	C
18MAT581	Mathematics Lab	0 0 2	1	L1	18MAT515	Numerical Analysis	3 0 0	3	E
	Elective I	3 0 0	3	E	18MAT582	Numerical Computations Lab	0 0 2	1	L1
15CUL501	Cultural Education	2 0 0	P/ F	F	15AVP501	Amrita Values Programme	1 0 0	1	F
<b>TOTAL</b>			<b>20</b>		<b>TOTAL</b>			<b>21</b>	
SEMESTER 3					SEMESTER 4				
18MAT601	Advanced Graph Theory	4 0 0	4	A	18MAT611	Operator Theory	4 0 0	4	A
18MAT602	Functional Analysis	4 0 0	4	B		Elective IV	3 0 0	3	E
18MAT603	Basic Fluid Dynamics	4 0 0	4	C	18MAT696	Dissertation		10	P
	Elective II	3 0 0	3	D	<b>TOTAL</b>			<b>17</b>	
	Elective III	3 0 0	3	E	<b>TOTAL FOR THE WHOLE PROGRAMME</b>			<b>79</b>	
18MAT691	Seminar	0 0 2	1	F					
15MAT690	Live-in-Lab / Open Elective	2 0 0	2	J					
<b>TOTAL</b>			<b>21</b>						
ELECTIVES (any one Stream)									
ALGEBRA STREAM					ANALYSIS STREAM				
18MAT631	Algebraic Geometry	3 0 0	3	D/E	18MAT641	Fixed Point Theory	3 0 0	3	D/E
18MAT632	Algebraic Topology	3 0 0	3	D/E	18MAT642	Fractals	3 0 0	3	D/E
18MAT634	Coding Theory	3 0 0	3	D/E	18MAT643	Harmonic Analysis	3 0 0	3	D/E
18MAT635	Commutative Algebra	3 0 0	3	D/E	18MAT644	Nonlinear Partial Differential Equations	3 0 0	3	D/E
18MAT636	Lie Algebra	3 0 0	3	D/E	18MAT645	Wavelet Analysis	3 0 0	3	D/E
18MAT637	Theory of Manifolds	3 0 0	3	D/E			3 0 0	3	D/E
18MAT638	Linear Algebra and its Applications	3 0 0	3	D/E	18MAT646	Mathematical Physics			
STATISTICS STREAM					FLUID MECHANICS STREAM				
18MAT651	Queuing Theory and Inventory Control Theory	3 0 0	3	D/E	18MAT661	Advance Boundary Layer Theory	3 0 0	3	D/E
18MAT653	Statistical Pattern Classifications				18MAT662	Computational Fluid Dynamics	3 0 0	3	D/E
18MAT654	Statistical Quality Control and Six Sigma Quality Analysis	3 0 0	3	D/E	18MAT663	Finite Element Methods	3 0 0	3	D/E

18MAT655	Theory of Sampling and Design of Experiments	3 0 0	3	D/E	18MAT664	Magneto-Hydro Dynamics	3 0 0	3	D/E
18MAT656	Time Series Analysis	3 0 0	3	D/E	18MAT665	Mathematical Foundations of Incompressible Fluid Flow	3 0 0	3	D/E
18MAT657	Statistical Techniques For Data Analytics	3 0 0	3	D/E	18MAT666	Introduction to Fluid Dynamics	3 0 0	3	D/E
<b>COMPUTER STREAM</b>									
18MAT671	Data Structures & Algorithms	3 0 0	3	D/E					
18MAT672	Algorithms For Advanced Computing	3 0 0	3	D/E					
18MAT673	Computer Aided Design of VLSI Circuits	3 0 0	3	D/E					
18MAT674	Cryptography	3 0 0	3	D/E					
18MAT675	Fuzzy Sets and its Applications	3 0 0	3	D/E					
18MAT676	Introduction to Soft Computing	3 0 0	3	D/E					
18MAT677	Object-Oriented Programming and Python	3 0 0	3	D/E					