M. Sc. Curriculum (MATHEMATICS)

Course Category	Course No.	Course Title	Contact Hours			Credit	Prerequisites
			L	T	P		
Core Courses (48 credits)	MA 401	Real Analysis	3	1	0	4	None
	MA 403	Linear Algebra	3	1	0	4	None
	MA 405	Ordinary Differential Equations	3	1	0	4	None
	MA 407	Probability Theory	3	1	0	4	None
	MA 409	Numerical Analysis	3	0	0	3	None
	MA 481	Numerical Analysis Lab	0	0	3	2	None
	MA 402	Complex Analysis	3	1	0	4	None
	MA 404	Abstract Algebra	3	1	0	4	None
	MA 406	Partial Differential Equations	3	1	0	4	None
	MA 408	Measure Theory & Integration	3	1	0	4	None
	MA 410	Fluid Mechanics	3	0	0	3	None
	MA 501	Integral Transforms and Integral Equations	3	1	0	4	None
	MA 503	Functional Analysis	3	1	0	4	None
Electives (15 Credits)	Basket I (Semester III)						
	MA 531	Graph Theory	3	0	0	3	None
	MA 533	Operations Research	3	0	0	3	None
	MA 535	Advanced Number Theory	3	0	0	3	None
	MA 537	Computational Fluid Dynamics	3	0	0	3	Fluid Mechanics
	MA 539	Statistical Inference	3	0	0	3	Probability Theory
	MA 541	Applied Dynamical Systems	3	0	0	3	Ordinary Differential Equations
	Basket II (Semester IV)						
	MA 532	Topology	3	0	0	3	None
	MA 534	Numerical Solutions to PDEs	3	0	0	3	Partial Differential Equations
	MA 536	Numerical Linear Algebra	3	0	2	4	Linear Algebra
	MA 538	Fourier Analysis	3	0	0	3	Real Analysis
	MA 540	Stochastic Process	3	0	0	3	Probability Theory
	MA 542	Operator Theory	3	0	0	3	Functional Analysis
	MA 544	Optimal Control Theory	3	0	0	3	Ordinary Differential Equations
	MA 546	Rings and Modules	3	0	0	3	Abstract Algebra

	MA 548	Partial Differential Equations II	3	0	0	3	Partial Differential Equations
	MA 550	Mathematical Biology	3	0	0	3	None
Electives shall include any other course of appropriate level offered in the Institute and recommended by the DAC							
Scientific Writing / Seminar (1 credit)	MA 591	Scientific Writing & Seminar	0	0	2	1	None
Project Works (12 credits)	MA 571	Project (Part I)	0	0	8	4	None
	MA 572	Project (Part II)	0	0	16	8	None