

B.Sc. (Honours / Honours with Research) in Mathematics

YEAR	FIRST SEMESTER							SECOND SEMESTER						
	Type	Course Code	Course Name	L	T	P	C	Type	Course Code	Course Name	L	T	P	C
I	<i>MAJ</i>	MAS1110	Fundamental of Calculus	3	1	0	4	<i>MAJ</i>	MAS1212	Ordinary Differential Equations	3	1	0	4
	<i>MIN-1</i>	PHY1101	Mechanics	2	1	2	4	<i>MIN-2</i>	PHY1201	Waves and Optics	2	1	2	4
	<i>MD-1</i>	CHY1101	Atomic Structure, Bonding and Periodicity	2	1	2	4	<i>MD-2</i>	CHY1201	States of Matter and Molecular Properties	2	1	2	4
	<i>AEC-1</i>	LN1106	Communicative English	2	-	-	2	<i>AEC-2</i>	PHY1240	Report writing	1	1	0	2
	<i>SEC-1</i>	MAS1122	Fundamental of Computers	1	0	2	2	<i>SEC-2</i>	MAS1221	Logical Reasoning and Competitive Aptitude	1	1	0	2
	<i>VAC-1</i>	CHY1003	Environmental Science	2	-	-	2	<i>SEC-3</i>	MAS1222	Introduction to Python Programming	1	-	2	2
	<i>VAC-2</i>	PES1030	Yoga & Wellness	-	1	2	2	<i>VAC-3</i>	MAS1223	Ancient Indian Knowledge System	2	-	-	2
			Total	12	4	8	20			Total	13	4	6	20
		Total Contact Hours (L + T + P)							Total Contact Hours (L + T + P)					

YEAR	THIRD SEMESTER							FOURTH SEMESTER						
	Type	Course Code	Subject Name	L	T	P	C	Type	Course Code	Subject Name	L	T	P	C
II	<i>MAJ</i>	MAS2121	Real Analysis-1	3	1	0	4	<i>MAJ</i>	MAS2221	Modern Algebra	3	1	0	4
	<i>MAJ</i>	MAS2122	Vector Calculus	3	1	0	4	<i>MAJ</i>	MAS2222	Applied Mechanics: Statics	3	1	0	4
								<i>MAJ</i>	MAS2223	Real Analysis-2	3	1	0	4
								<i>Project</i>	MAS2270	Project Based Learning	0	0	0	2
	<i>MIN-3</i>	xxxxx	xxxx	3	1	0	4	<i>MIN-4</i>	xxxxx	xxxx	3	1	0	4
	<i>MD-3</i>	MAS2125	Multivariable Calculus	2	1	0	3							
	<i>AEC-3</i>	CHY2170	Scientific Writing	2	0	0	2	<i>AEC-4</i>	PHY2240	Scientific Translation and Linguistic Competence	2	-	-	2
	<i>SEC-4</i>	PHY2140	Basic Instrumentation Skills	2	1	-	3							
		Total	15	5	0	20			Total	14	4	0	20	
		Total Contact Hours (L + T + P)							Total Contact Hours (L + T + P)					

MIN-3	
MAS2123	Elements of Discrete Mathematics
MAS2124	Probability Distributions and Sampling Theory

MIN-4	
MAS2224	Introduction to Number Theory
MAS2225	Statistical Inference

YEAR	FIFTH SEMESTER							SIXTH SEMESTER						
	Type	Course Code	Subject Name	L	T	P	C	Type	Course Code	Subject Name	L	T	P	C
III	<i>MAJ</i>	MAS3121	Analytical Geometry of Three-Dimensions	3	1	0	4	<i>MAJ</i>	MAS3201	Complex Analysis	3	1	0	4
	<i>MAJ</i>	MAS3122	Elements of Linear Algebra	3	1	0	4	<i>MAJ</i>	MAS3221	Introductory Course on PDEs	3	1	0	4
	<i>MAJ</i>	MAS3123	Theory of Riemann Integration and Series of Function	3	1	0	4	<i>MAJ</i>	MAS3222	Applied Mechanics: Dynamics	3	1	0	4
	<i>MAJ</i>	MAS3124	Introduction to MATLAB	3	0	2	4	<i>MAJ</i>	MAS3223	Linear Programming Problem and Network Scheduling	3	1	0	4
	<i>MIN-5</i>	xxxxxx	xxxx	-	-	-	4	<i>MIN-6</i>	xxxxxx	xxxx	3	1	0	4
			Total	12	3	2	20			Total	15	5	0	20
	Total Contact Hours (L + T + P)							Total Contact Hours (L + T + P)						

MIN-5	MAS3125	Information and Coding Theory
	MAS3126	Applied Statistics
	MAS3127	Cryptography

MIN-6	MAS3224	Calculus of Variations and Integral Equations
	MAS3225	Financial Mathematics and Investment Analysis
	MAS3226	Machine Learning and Artificial Intelligence
	MAS3227	Econometrics

YEAR	SEVENTH SEMESTER							EIGHTH SEMESTER							
	Type	Course Code	Subject Name	L	T	P	C	Type	Course Code	Subject Name	L	T	P	C	
IV	MAJ	MAS4121	A Course on Fluid Dynamics	3	1	0	4	EC/RP	****/ MAS4270	Elective Courses/ Research Project	0	0	0	12	
	MAJ	MAS4122	Computational Numerical Methods	3	0	2	4								
	MAJ	MAS4123	Special Functions and Orthogonal Polynomials	3	1	0	4	MIN-7	MAS4227	Research Methodology and Scientific Writing	-	-	-	4	
	MAJ	MAS4124	Introduction to Topology	3	1	0	4	MIN-8	MAS4228	Numerical Solution of Differential Equations	-	-	-	4	
	MAJ	MAS4125	Integral Transforms: Laplace, Fourier, and Mellin	3	1	0	4								
				Total	15	4	2	20			Total	0	0	0	20
	Total Contact Hours (L + T + P)								Total Contact Hours (L + T + P)						

EC-1/2/3	Code	Course Name	Credits
1	MAS4221	Introduction to Bifurcation Theory	4C, LTP:310
2	MAS4222	Introduction to Celestial Mechanics	4C, LTP:310
3	MAS4223	Computational Methods in Fluid Dynamics	4C, LTP:310
4	MAS4224	Nonlinear Programming	4C, LTP:310
5	MAS4225	Tensor Analysis	4C, LTP:310
6	MAS4226	Theory of Relativity	4C, LTP:310

List of Minor and Multidisciplinary Courses offered by Department of Mathematics

Minor (MIN)				Multidisciplinary (MD)			
Course Code	Course Name	SEM	Credits	Course Code	Course Name	SEM	Credits
MAS2124	Probability Distributions and Sampling Theory	III	4C, LTP:310	MAS2125	Multivariable Calculus	III	3C, LTP:210
MAS2225	Statistical Inference	IV	4C, LTP:310				
MAS3126	Applied Statistics	V	4C, LTP:310				
MAS3227	Econometrics	VI	4C, LTP:310				
MAS3228	Theory of Logical Mathematics	VI	4C, LTP:310				
MAS4126	Statistical Methods in Biological Sciences	VII	4C, LTP:310				
MAS4227	Research Methodology and Scientific Writing	VIII	4C, LTP:310				
MAS4229	Applications of MATLAB	VIII	4C, LTP:310				