DEPARTMENT OF APPLIED MATHEMATICS AND SCIENTIFIC COMPUTING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code: **XXX M.Tech. (Applied Mathematics and Scientific Computing)**
Department: **AMS Department of Applied Mathematics and Scientific Computing**
Year: **I**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight(%)				
S. No.	**Subject Code**	**Course Title**	**Subject Area**	**Credits**	**L**	**T**	**P**	**Theory**	**Practical**	**CWS**	**PRS**	**MTE**	**ETE**	**PRE**
Semester-I (Autumn)														
1.	AMS-501	Theory and Applications of Stochastic Processes	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	AMS-503	Numerical Linear Algebra	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	AMS-505	Advanced Data Structures and Algorithms	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	AMS-507	Programming Lab	PCC	2	0	0	4	0	2	-	50	-	-	50
5.		Program Elective-I	PEC	4	-	-	-	-	-	-	-	-	-	-
6.		Program Elective-II	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		**22**										
Semester-II (Spring)														
1.	AMS-502	Applied Optimization Techniques	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	AMS-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-
3.		Program Elective-III	PEC	4	-	-	-	-	-	-	-	-	-	-
4.		Program Elective-IV	PEC	4	-	-	-	-	-	-	-	-	-	-
5.		Program Elective-V	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		**18**										

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Program Code: **XXX M.Tech. (Applied Mathematics and Scientific Computing)**
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Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight(%)				
S. No.	**Subject Code**	**Course Title**	**Subject Area**	**Credits**	**L**	**T**	**P**	**Theory**	**Practical**	**CWS**	**PRS**	**MTE**	**ETE**	**PRE**
Semester-I (Autumn)														
1.	AMS-701A	Thesis Stage-I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		**12**										
Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.														
Semester-II (Spring)														
1.	AMS-701B	Thesis Stage-II (continued from III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		**18**										

Summary				
Semester	**1**	**2**	**3**	**4**
Semester-wise Total Credits	22	18	12	18
Total Credits	**70**			

Program Elective Courses M.Tech.(Applied Mathematics and Scientific Computing)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight(%)				
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1.	AMS-601	Introduction to Approximation Theory	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
2.	AMS-602	Advanced Transform Techniques	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
3.	AMS-603	Applied Soft Computing	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
4.	AMS-604	Applied Operations Research	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
5.	AMS-605	Advanced Decision Making	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
6.	AMS-606	Ethics in Artificial Intelligence and Data Science	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
7.	AMS-607	Advanced Integral Equations and Calculus of Variations	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
8.	AMS-608	Advanced Evolutionary Algorithms	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
9.	AMS-609	Computational Differential Equations	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
10.	AMS-610	Logistics and Supply Chain Management	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
11.	AMS-611	Advanced Computational Fluid Dynamics	PEC	4	3	1	0	3	-	20-35	-	20-30	40-50	-