

**CENTRE OF EXCELLENCE IN DISASTER MITIGATION & MANAGEMENT
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code : **XXX M.Tech. (Disaster Mitigation and Management)**
 Department : **Centre of Excellence in Disaster Mitigation & Management**
 Year : **I**
 Model : **2**

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
Semester-I (Autumn)									
1.	DMC-501	Introduction to Disaster Mitigation and Management	PCC	3	3	0	0	3	0
2.	DMC-503	Geodata Processing Techniques and Models	PCC	4	3	0	2	3	0
3.	DMC-505	Natural Hazards: Processes, Monitoring & Prediction	PCC	4	3	0	2	3	0
4.	DMC-507	Climate Change: Impact, Adaptation and Mitigation	PCC	4	2	1	2	3	0
5.		Social Science Course	SSC	2	-	-	-	-	-
		Total		17					
Semester-II (Spring)									
1.		Program Elective-I	PEC	4	-	-	-	-	-
2.		Program Elective-II	PEC	4	-	-	-	-	-
3.		Program Elective-III	PEC	4	-	-	-	-	-
4.		Program Elective-IV	PEC	4	-	-	-	-	-
5.		Science, Technology, and Advanced Research-tools	STAR	3	-	-	-	-	-
6.	DMC-700	Seminar	SEM	2	-	-	-	-	-
		Total		21					

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Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
Semester-I (Autumn)									
1.	DMC-691	Internship Social Activity	ISA	3	-	-	-	-	-
2.	DMC-701A	Thesis Stage-I	THESIS	10	-	-	-	-	-
		Total		13					
Semester-II (Spring)									
1.	DMC-701B	Thesis Stage-II	THESIS	14	-	-	-	-	-
		Total		14					

Summary				
Semester	1	2	3	4
Semester-wise Total Credits	17	21	13	14
Total Credits	65			

M.Tech. (Disaster Mitigation and Management)

Program Elective Courses

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
1.	DML-501	Analysis of Hydrological Extremes	PEC	4	3	1	0	3	0
2.	DML-502	Landslide Hazard Assessment and Mitigation	PEC	4	2	1	2	3	0
3.	DML-503	Cyclone and Wind Engineering	PEC	4	3	1	0	3	0
4.	DML-504	Disaster Preparedness and Mitigation	PEC	4	3	1	0	3	0
5.	DML-505	Weather and Climate Modelling	PEC	4	2	1	2	3	0
6.	DML-506	Advanced Landslide Analysis	PEC	4	2	1	2	3	0
7.	DML-507	Disaster Induced Risks	PEC	4	3	1	0	3	0
8.	DML-508	Instrumentation and Measurements	PEC	4	2	1	2	3	0
9.	DML-509	Application of Geospatial Data for Disaster Mitigation	PEC	4	3	1	0	3	0
10.	DML-510	Vulnerability and Risk Analysis	PEC	4	3	1	0	3	0
11.	DML-511	Manmade and Biological Disasters Detection and Mitigation	PEC	4	3	0	2	3	0
12.	DML-512	Socio-Economic Aspects of Disaster Management	PEC	4	3	1	0	3	0
13.	DML-513	Managerial and Financial Aspects of Disaster Management	PEC	4	3	1	0	3	0
14.	DML-514	Industrial/Manmade Disasters and Safety	PEC	4	3	1	0	3	0
15.	DML-515	Nuclear Physics for Disaster Mitigation	PEC	4	3	1	0	3	0
16.	DML-516	Cryosphere Hazards	PEC	4	3	1	0	3	0
17.	DML-517	Seismic Hazards	PEC	4	3	1	0	3	0
18.	DML-518	Data Analytics for Disaster Management	PEC	4	2	1	2	3	0
19.	DML-519	Fire Science & Engineering	PEC	4	3	0	2	3	0

M.Tech. (Disaster Mitigation and Management)

Science, Technology, and Advanced Research-tools Basket

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
1.	DMT-501	AI/ML in Disaster Management	STAR	3	2	1	0	3	0

Social Sciences Course Basket

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
1.	DMS-501	Climate Change and Sustainable Development	SSC	2	2	0	0	0	0