

**INTERNATIONAL CENTRE OF EXCELLENCE FOR DAMS
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

2025-26 onwards

Program Code : **XXX M.Tech. (Dam Safety and Rehabilitation)**
 Department : **International Centre of Excellence for Dams**
 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.	DSC-501	Hydrologic Safety Evaluation of Dams	PCC	3	2	1	0	0	0
2.	DSC-503	Reservoir Sedimentation and Silt Management	PCC	3	2	0	2	0	0
3.	DSC-509	Seismic Hazard Assessment for Dams	PCC	3	2	0	2	0	0
4.	DSC-511	Rock Mechanics and Dam Foundation Engineering	PCC	3	2	0	2	0	0
5.	DSC-513	Hydraulic Design of Spillways and Energy Dissipators	PCC	3	2	0	2	3	0
6.		Program Elective-I	PEC	3	-	-	-	-	-
7.		Social Science Course	SSC	2	-	-	-	-	-
		Total		20					
Semester-II (Spring)									
1.		Program Elective-II	PEC	3	-	-	-	-	-
2.		Program Elective-III	PEC	3	-	-	-	-	-
3.		Program Elective-IV	PEC	3	-	-	-	-	-
4.		Program Elective-V	PEC	3	-	-	-	-	-
5.		Science, Technology, and Advanced Research-tools	STAR	3	-	-	-	-	-
6.	DSC-700	Seminar	SEM	2	-	-	-	-	-
		Total		17					

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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.	DSC-691	Internship Social Activity	ISA	5	-	-	-	-	-
2.	DSC-701A	Thesis Stage-I	THESIS	10	-	-	-	-	-
		Total		15					
Semester-II (Spring)									
1.	DSC-701B	Thesis Stage-II	THESIS	14	-	-	-	-	-
		Total		14					

Summary				
Semester	1	2	3	4
Semester-wise Total Credits	20	17	15	14
Total Credits	66			

M.Tech. (Dam Safety and Rehabilitation)**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.	DSL-501	Assessing and Managing Risks Associated with Dams	PEC	3	2	1	0	3	0
2.	DSL-502	Disaster Management and EAPs for Dams	PEC	3	2	0	2	3	0
3.	DSL-503	Dam Safety Surveillance, Instrumentation and Monitoring	PEC	3	2	1	0	3	0
4.	DSL-504	Environmental Monitoring and Impact Assessment of Dams	PEC	3	2	0	2	3	0
5.	DSL-505	Earthquake Geotechnical Engineering	PEC	3	2	0	2	3	0
6.	DSL-506	Geospatial Techniques for Monitoring of Dams	PEC	3	2	0	2	3	0
7.	DSL-508	Contract and Financial Management	PEC	3	2	1	0	3	0
8.	DSL-509	Seismic Safety Evaluation of Dams	PEC	3	2	0	2	3	0
9.	DSL-510	Planning and Design of Hydro-Mechanical Components in Dams	PEC	3	2	1	0	3	0
10.	DSL-511	Ground Improvement and Geo-synthetics	PEC	3	2	0	2	3	0
11.	DSL-512	Sustainable Tourism around Dams	PEC	3	2	1	0	3	0
12.	DSL-513	Seepage through Dams	PEC	3	2	0	2	3	0

M.Tech. (Dam Safety and Rehabilitation)

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.	DST-501	Analysis of Dam Instrumentation Data	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.	DSS-502	Stakeholder Management of Dams and Large Infrastructure Projects	SSC	2	1	1	0	0	0