

**DEPARTMENT OF WATER RESOURCES DEVELOPMENT AND MANAGEMENT
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **XXX M.Tech. (Drinking Water and Sanitation)**
 Department: **WR Department of Water Resources Development and Management**
 Year: **II**

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.	WRN-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.	WRN-701B	Thesis Stage-II (continued from III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										

Summary				
Semester	1	2	3	4
Semester-wise Total Credits	20	20	12	18
Total Credits	70			

Program Elective Courses for M.Tech. (Drinking Water and Sanitation)

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.	WRN-501	System Design Techniques	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	WRN-580	Renewable Energy System Technology	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	WRN-581	Water Quality Monitoring and Modeling	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	WRN-586	Groundwater Development and Management	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.	WRN-587	Watershed Development and Management	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
6.	WRN-588	Remote Sensing and GIS Applications in Water Systems	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
7.	WRN-589	Drinking-Water for Low-Income Societies	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
8.	WRN-590	Wastewater and Fecal Sludge Management	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
9.	WRN-591	Resilience, Shocks and Emergencies	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
10.	WRN-592	Management and Operation of Water Utilities	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
11.	WRN-593	Water Works Engineering	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
12.	WRN-594	Flow Hydraulics and Urban Drainage	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
13.	WRN-595	Circular Water Economy	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
14.	WRN-596	Sustainable Water Resources	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-