

Academic Curriculum for Master of Technology in Drinking Water & Sanitation (DWS)

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-503	Water Resources Planning and Management	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
2.	WRN-507	Drinking-Water and Sanitation Sustainability	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
3.	WRN-509	Water Sanitation, Hygiene and Infrastructural Management	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
4.	WRN-516	Rural and Urban Water Supply	PCC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
5.		Program Elective-I	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		20										
Semester – II (Spring)														
1.	WRN-506	Mini Project on Drinking Water and Sanitation	PCC	2	-	-	4	-	3	-	50	-	-	50
2.		Program Elective - II	PEC	4	-	-	-	-	-	-	-	-	-	-
3.		Program Elective - III	PEC	4	-	-	-	-	-	-	-	-	-	-
4.		Program Elective - IV	PEC	4	-	-	-	-	-	-	-	-	-	-
5.		Program Elective - V	PEC	4	-	-	-	-	-	-	-	-	-	-
6.	WRN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-
		Total		20										

Teaching Scheme					Contract 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-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			4	
Total Credits				70										

प्रोफेसर एवं विभागाध्यक्ष
 Professor & Head
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 I. I. T. Roorkee
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 23/10/23

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-	Watershed Development and	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-	Wastewater and Fecal Sludge	PEC	4	3	1	0	3	0	20-35	-	20-30	40-50	-
9.	WRN-	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	-
15.	WRN-597	Machine Learning Models in Water Resources Development and Management	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-