

**Academic Curriculum for Master of Technology in
IRRIGATION WATER MANAGEMENT (IWM)**

Teaching Scheme					Contact Hours per Week			Exam. Duration (Hrs.)		Relative Weightage (%)				
S.No	SUBJECT CODE	COURSE TITLE	SUBJECT AREA	CREDITS	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
1st YEAR														
I SEMESTER (AUTUMN)														
1.	WR-501	System Design Techniques	PCC	4	3	1	0	3	-	20-35	-	20-30	40-50	-
2.	WR-571	Design of Irrigation Structures and Drainage Works	PCC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
3.	WR-573	Principles and Practices of Irrigation	PCC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
4.	WR-575	On Farm Development	PCC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
5.		Program Elective Course	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
Sub Total				20										
II SEMESTER (SPRING)														
1.	WR-574	Diagnostic Analysis	PCC	2	-	-	4	-	-	-	50	-	-	50
2.		Program Elective Course	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
3.		Program Elective Course	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
4.		Program Elective Course	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
5.		Program Elective Course	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
6.	WR-700	Seminar	SEM	2	-	-	-	-	-	-	-	100	-	-
Sub Total				20										
Note: P.G. Diploma course in IWM shall be of ONE YEAR duration comprising of semesters I and II only, with a minimum credits of 40														
2nd YEAR														
III SEMESTER (AUTUMN)														
1.	WR-701A	Dissertation Stage I	DIS	12	-	-	-	-	-	-	-	-	100	-
Sub Total				12										
* to be continued and grade to be awarded in the next semester														
IV SEMESTER (SPRING)														
1.	WR-701B	Dissertation Stage II (contd. From 3 rd Semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
Sub Total				18										
Total				70										

12/11/2023
 प्रोफेसर एवं विभागाध्यक्ष
 Professor & Head
 जो संतो वि० एच प्र० वि० / Deptt. of WRDM
 भा० प्रौ० सं० रुड़की / I. I. T. Roorkee
 रुड़की / Roorkee-247 667

PROGRAMME ELECTIVES COURSES (IWM)

1.	WR-503	Water Resources Planning and Management	PEC	4	3	1		3	-	20-35	-	20-30	40-50	-
2.	WR-504	Applied Hydrology	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
3.	WR-513	Earth and Rockfill Dams	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
4.	WR-516	Rural and Urban Water Supply	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
5.	WR-520	Environmental Impact Assessment of Water Resource Projects	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
6.	WR-522	Climate Change and Water Resources	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
7.	WR-572	Soil and Agronomy	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
8.	WR-576	Operation Maintenance and Management of Irrigation Systems	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
9.	WR-577	Water and Land Laws	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
10.	WR-578	Rural Sociology and Irrigation Economics	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
11.	WR-579	Evaluation of Irrigation Project	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
12.	WR-580	Renewable Energy System Technology	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
13.	WR-581	Water Quality Monitoring and Modeling	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
14.	WR-582	Theory of Seepage	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
15.	WR-588	Remote Sensing and GIS Applications in Water System	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
16.	WR-584	Cropping System Modeling	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
17.	WR-585	Environmental Impact of Irrigated Agriculture	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
18.	WR-586	Groundwater Development and Management	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
19.	WR-587	Watershed Development and Management	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
20.	WR-597	Machine Learning Models in Water Resources Planning and Management	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
21.	WR-598	Smart Irrigation Systems	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
22.	WR-595	Circular Water Economy	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-
23.	WR-596	Sustainable Water Resources	PEC	4	3	1	-	3	-	20-35	-	20-30	40-50	-