

**ALTERNATE HYDRO ENERGY CENTRE
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **13 M.TECH. (ENVIRONMENTAL MANAGEMENT OF RIVERS AND LAKES)**
 Department: **AH ALTERNATE HYDRO ENERGY CENTRE**
 Year: **I**

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.	AHN-523	Integrated Management of water bodies	PCC	4	3	1	2/2	3	-	20	20	20	40	-
2.	AHN-525	Aquatic Ecology	PCC	4	3	1	2/2	3	-	20	20	20	40	-
3.	AHN-544	Project Formulation and Implementation	PCC	4	3	1	-	3	-	25	-	25	50	-
4.		Programme Elective Course-I*	PEC	4	-	-	-	-	-	-	-	-	-	-
5.		Programme Elective Course-II*	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		20	9	3	2							
Semester-II (Spring)														
1.	AHN-527	Laboratory Course	PCC	2	-	-	3	-	3	-	50	-	-	50
2.	AHN-554	Waste Water Collection, Treatment and Disposal	PCC	4	3	1	-	3	-	25	-	25	50	-
3.	AHN-700	Seminar	SEM	2	-	-	-	-	-	-	-	100	-	-
4.		Programme Elective Course-III*	PEC	4	-	-	-	-	-	-	-	-	-	-
5.		Programme Elective Course-IV*	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		16	3	1	3							

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Program Code: **13** **M.TECH. (ENVIRONMENTAL MANAGEMENT OF RIVERS AND LAKES)**
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 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.	AHN-701A	Dissertation Stage-I (to be continued in 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.	AHN-701B	Dissertation Stage-II (contd. From III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										

Summary				
Semester	1	2	3	4
Semester-wise Total Credits	20	16	12	18
Total Credits	66			

Program Elective Courses (EMRL)

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.	AHN-517 B	Modeling, Simulation and Computer Applications	PEC	4	3	1	2/2	3	-	20	20	20	40	-
2.	AHN-518	Environmental Planning and Management	PEC	4	3	1	-	3	-	25	-	25	50	-
3.	AHN-540	Solar Photo-Voltaic Design and Application	PEC	4	3	1	-	3	-	25	-	25	50	-
4.	AHN-542	Energy Conservation and Management	PEC	4	3	1	-	3	-	25	-	25	50	-
5.	AHN-550	Application of RS & GIS in Environment Management	PEC	4	3	1	-	3	-	25	-	25	50	-
6.	AHN-552	Hydrology and Modeling of water bodies	PEC	4	3	1	-	3	-	25	-	25	50	-
7.	AHN-556	Environmental Laws, Public Participation and Institutional Development	PEC	4	3	1	-	3	-	25	-	25	50	-
8.	AHN-558	Coastal Pollution Monitoring and Impact Assessment	PEC	4	3	1	-	3	-	25	-	25	50	-
9.	AHN-576	Planning and Management of Environmental Facility	PEC	4	3	1	-	3	-	25	-	25	50	-
10.	AHN-580	Climate Change and water resources	PEC	4	3	1	-	3	-	25	-	25	50	-
13.	CEN-603	Industrial and Hazardous Waste Management	PEC	4	3	1	-	3	-	25	-	25	50	-
12.	CEN-604	Environment Impact & Risk Assessment	PEC	4	3	1	-	3	-	25	-	25	50	-
11.	CEN-605	Solid Waste Management	PEC	4	3	1	-	3	-	25	-	25	50	-
14.	HYN-527	Ground Water Hydrology	PEC	4	3	1	-	3	-	25	-	25	50	-
15.	HYN-531	Water Shed Behavior & Conservation Practices	PEC	4	3	1	-	3	-	25	-	25	50	-
16.	HYN-542	Urban Hydrology	PEC	4	3	1	-	3	-	25	-	25	50	-