Appendix-

ALTERNATE HYDRO ENERGY CENTRE
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code: **12** **M.TECH. (ALTERNATE HYDRO ENERGY SYSTEMS)**
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-511	Small Hydro Power Planning and Management	PCC	4	3	1	-	3	-	25	-	25	50	-
2.	AHN-513	Renewable Energy Resources Development Technology	PCC	4	3	1	2/2	3	-	20	20	20	40	-
3.	AHN-514	Hydro Electric Equipment	PCC	4	3	1	2/2	3	-	20	20	20	40	-
4.	-	Programme Elective Course-I*	PEC	4	-	-	-	-	-	-	-	-	-	-
5.	-	Programme Elective Course-II*	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		20	9	3	2							
Semester-II (Spring)														
1.	AHN-512	Design of SHP Structures	PCC	4	3	1	-	3	-	25	-	25	50	-
2.	AHN-516	Hydro Mechanical Equipment	PCC	4	3	1	2/2	3	-	20	20	20	40	-
3.	AHN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-
4.	-	Programme Elective Course-III*	PEC	4	-	-	-	-	-	-	-	-	-	-
5.	-	Programme Elective Course-IV*	PEC	4	-	-	-	-	-	-	-	-	-	-
		Total		18	6	2	1							

ALTERNATE HYDRO ENERGY CENTRE
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code: **12** **M.TECH. COURSE IN "ALTERNATE HYDRO ENERGY SYSTEMS"**
Department: **AH** **ALTERNATE HYDRO ENERGY CENTRE**
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**	**18**	**12**	**18**
Total Credits	**68**			

Program Elective Courses (AHES)

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 A	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-522	Wind Energy Application Technology	PEC	4	3	1	-	3	-	25	-	25	50	-
4.	AHN-526	Instrumentation for Small Hydro Power Station	PEC	4	3	1	2/2	3	-	20	20	20	40	-
5.	AHN-528	Rural Electrical Energy System Planning and Design	PEC	4	3	1	-	3	-	25	-	25	50	-
6.	AHN-530	Remote Sensing and GIS for SHP Planning	PEC	4	3	-	2	3	-	15	25	20	40	-
7.	AHN-534	Construction Planning and Management	PEC	4	3	1	-	3	-	25	-	25	50	-
8.	AHN-536	Biomass Production and Utilisation	PEC	4	3	1	-	3	-	25	-	25	50	-
9.	AHN-538	Operation and Maintenance of Small Hydro Plants	PEC	4	3	1	-	3	-	25	-	25	50	-
10.	AHN-540	Solar Photo-Voltaic Design and Application	PEC	4	3	1	-	3	-	25	-	25	50	-
11.	AHN-542	Energy Conservation and Management	PEC	4	3	1	-	3	-	25	-	25	50	-
12.	AHN-548	Simulation of Small Hydropower Plants	PEC	4	3	1	2/2	3	-	20	20	20	40	-
13.	AHN-580	Climate Change and water resources	PEC	4	3	1	-	3	-	25	-	25	50	-