

CENTRAL INSTITUTE OF TECHNOLOGY KOKRAJHAR

(Deemed to be University, MHRD, Govt. of India)

Civil Engineering Department

Course structure for M.Tech programme in Water Resources and Hydraulic Engineering

Course structure

Date: 10/12/2020

Semester I

Sl. No.	Course Code	Subject	Teaching Scheme (Hrs/week)			Examination Scheme			Credits C
			L	T	P	ESE	MSE	S	
Theory									
1	PCE101	Research Methodology	3	0	0	100	50	20	6
2	PCEW102	Open Channel Flow	3	1	0	100	50	20	8
3	PCEW103	Applied Hydrology	3	1	0	100	50	20	8
5	PCEW111*	Elective - I	3	0	0	100	50	20	6
6	PCEW112*	Elective - II	3	0	0	100	50	20	6
7	PCEW171	Water Resources Engineering Laboratory-I	0	0	4	60	20	20	4
8	Audit course	Project engineering and management	2	0	0	0	0	0	0
Total			15	2	4	660	270	120	38
Total Contact Hours : 21									
Total Credit : 38									

Elective - I Subjects

Sl. No.	Subject Code (PCEW111*)	Subject
1	PCEW1111	Water resources systems analysis
2	PCEW1112	Human resource Management for water resources projects
3	PCEW1113	Industrial Water Pollution Control
4	PCEW1114	Economic aspects of water resources development
5	PCEW1115	Financing infrastructure projects
6	PCEW1116	Any other subject offered from time to time with the approval of the competent authority.

Elective - II Subjects

Sl. No.	Subject Code (PCEW112*)	Subject
1	PCEW1121	Hydropower engineering
2	PCEW1122	Surface water quality modelling and control
3	PCEW1123	Eco-hydraulics and hydrology
4	PCEW1124	Environmental dynamics and control
5	PCEW1125	Ground water hydrology
6	PCEW1126	Any other subject offered from time to time with the approval of the competent authority.

Semester II

Sl. No.	Course Code	Subject	Teaching Scheme (Hrs/week)			Examination Scheme			Credits C
			L	T	P	ESE	MSE	S	
Theory									
1	PCEW201	Advanced computational hydraulics	3	1	0	100	50	20	8
2	PCEW202	Hydraulics of sediment transport	3	1	0	100	50	20	8
3	PCEW211*	Elective - III	3	0	0	100	50	20	6
4	PCEW212*	Elective - IV	3	0	0	100	50	20	6
5	PCEW271	Water Resources Engineering Laboratory-II	0	0	4	60	20	20	4
6	PCEW291	Seminar	0	0	4	100	-	-	4
Total			12	2	8	660	270	120	36
Total Contact Hours : 22									
Total Credit : 36									

Elective - III Subjects		
Sl. No.	Subject Code (PCEW211*)	Subject
1	PCEW2111	Optimization techniques in Water Resources Engineering
2	PCEW2112	Integrated watershed management
3	PCEW2113	Soft computing techniques in water resources
4	PCEW2114	Turbulent Fluid Flow
5	PCEW2115	Any other subject offered from time to time with the approval of the competent authority.

Elective - IV Subjects		
Sl. No.	Subject Code (PCEW212*)	Subject
1	PCEW2121	Statistical techniques and computer programming
2	PCEW2122	GIS and remote sensing for land and water resources
3	PCEW2123	River engineering
4	PCEW2124	Hydraulic structures
5	PCEW2125	Any other subject offered from time to time with the approval of the competent authority.

Semester III

Sl. No.	Course Code	Subject	Teaching Scheme (Hrs/week)			Examination Scheme			Credits C
			L	T	P	ESE	MSE	S	
1	PCEW371	Project-I	0	0	20	100	-	50	20
Total			0	0	20	100	-	50	20
Total Contact Hours : 20									
Total Credit : 20									

Semester IV

Sl. No.	Course Code	Subject	Teaching Scheme (Hrs/week)			Examination Scheme			Credits C
			L	T	P	ESE	MSE	S	
1	PCEW471	Project-II	0	0	30	200	-	100	30
Total			0	0	30	200	-	100	30
Total Contact Hours: 30									
Total Credit: 30									

Overall credits: 124

Total contact hours: 93

Acronyms:

L: Lecture

T: Tutorial

P: Practical

ESE: End Semester Examination of 3 hours duration

MSE: Mid Semester Examination of 2 hours duration

S: Sessional

C: Credit
