

Dual Degree (B.Tech & M.Tech) Curriculum
Environmental and Water Resources Engineering
For B.Tech 2018 Batch

Semester - I

S.No	Course No	Course Name	Category	L-T-P-C
1.	ES1101/ EA1101	Computational Engineering/ Engineering Drawing	BET/ BES	2-0-3-4 1-0-3-3
2.	CY1101/ CY1202	Physical and Theoretical Chemistry/ Organic and Inorganic Chemistry	SCY	2-1-0-3
3.	ID1101	Concepts in Engineering and Design	BET	1-0-2-2
4.	MA1101	Calculus	SMA	3-1-0-4
5.	PH1101	Introduction to Classical Mechanics	SPH	2-1-0-3
6.	PH1103/CY1204	Physics Laboratory/Chemistry Laboratory	SPH/SCY	0-0-3-2
7.	EA1103	Workshop-I	BES	0-0-3-2
8.	HS1101/ HS1103/ HS1105/ HS1107	Language Course (Pass/Fail)	HPF	2-0-0-2
Total				22/21

Semester - II

S.No	Course No	Course Name	Category	L-T-P-C
1.	ES1101/ EA1101	Computational Engineering/ Engineering Drawing	BET/ BES	2-0-3-4 1-0-3-3
2.	CY1101/ CY1202	Physical and Theoretical Chemistry/ Organic and Inorganic Chemistry	SCY	2-1-0-3
3.	ES2101	Engineering Mechanics	BET	3-1-0-4
4.	MA1202	Differential Equations and Matrices	SMA	3-1-0-4
5.	PH1202	Introduction to Electrodynamics and Quantum Mechanics	SPH	2-1-0-3
6.	PH1103/CY1204	Physics Laboratory/Chemistry Laboratory	SPH/SCY	0-0-3-2
7.	EA1202	Workshop-II	BES	0-0-3-2
Total				21/22

Semester - III

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE2101	Strength of Materials	PMT	3-1-0-4
2.	CE2103	Surveying	PMT	3-0-0-3
3.	CE2105	Civil Engineering Materials and Construction	PMT	3-0-0-3
4.	CE2191	Surveying Practical	PML	0-0-3-2
5.	ES1201	Basic Electrical Engineering	BET	3-0-0-3
6.	ES2103	Ecology and Environment	BET	2-0-0-2
7.	HSE1	Humanities Elective-1	HSS	3-0-0-3
8.	MAE1	Mathematics Elective-1	SMA	3-0-0-3
Total				23

Semester - IV

S.No	Course No	Course Name	Category	L-T-P-C
1.	BS2101	Life Sciences	SLS	2-0-0-2
2.	CE2202	Structural Analysis	PMT	3-1-0-4
3.	CE2204	Geology and Soil Mechanics	PMT	3-1-0-4
4.	CE2206	Fluid Mechanics and Hydraulics	PMT	3-1-0-4
5.	CE2292	Structural Engineering Laboratory	PML	0-0-3-2
6.	CE2294	Building Drawing	PML	0-0-3-2
7.	MAE2	Mathematics Elective-2	SMA	3-0-0-3
Total				21

Semester - V

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE3101	Basic Structural Steel Design	PMT	3-1-0-4
2.	CE3103	Water Resources Engineering	PMT	3-1-0-4
3.	CE3105	Environmental Engineering	PMT	3-1-0-4
4.	CE3191	Hydraulics and Environmental Engineering Laboratory	PML	0-0-3-2
5.	CE3193	Building Materials Laboratory	PML	0-0-3-2
6.	FRE1	Free Elective-1	FRE	3-0-0-3
7.	FRE2	Free Elective-2	FRE	3-0-0-3
Total				22

Semester - VI

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE3202	Basic Reinforced Concrete Design	PMT	3-1-0-4
2.	CE3204	Geotechnical Engineering	PMT	3-1-0-4
3.	CE3206	Transportation Engineering	PMT	3-1-0-4
4.	CE3292	Transportation Engineering Laboratory	PML	0-0-3-2
5.	DPE1	Department Elective-1	PMT	3-0-0-3
6.	HSE2	Humanities Elective-2	HSS	3-0-0-3
7.	IT3202	Industrial/Research Internship	PIT	- - - 2
Total				22

Semester - VII

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE4101	Estimation and Construction Management	PMT	3-1-0-4
2.	CE4103	Functional Design of Buildings	PMT	2-0-0-2
3.	CE5105	Air Pollution Control Engineering	PMT	3-0-0-3
4.	CE5107	Surface Water Hydrology	PMT	3-0-0-3
5.	DPE2	Department Elective-2	PMT	3-0-0-3
6.	MAE3	Mathematics Elective-3	SMA	2-0-0-2
7.	IL4101	Industrial Lecture	PIL	1-0-0-1
Total				18

Semester - VIII

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE5202	Biological Processes in Wastewater Engineering	PMT	3-0-0-3
2.	CE5025	Water Resources Planning and Management	PMT	3-0-0-3
3.	DPE3	Department Elective-3	PMT	3-0-0-3
4.	CE5291	Environmental Monitoring Laboratory	PML	0-0-3-2
5.	CE5191	Hydroinformatics Laboratory	PML	0-0-3-2
6.	FRE3	Free Elective-3	FRE	3-0-0-3
7.	HSE3	Humanities Elective-3	HSS	3-0-0-3
8.	HS4202	Professional Ethics	HPE	2-0-0-2
Total				21

Semester – IX

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE6110	Seminar	PMT	- - -1
2.	DPE4	Department Elective-4	PMT	3-0-0-3
3.	FRE4	Free Elective-4	FRE	3-0-0-3
4.	CE6150	Project Phase-I	PMP	- - -10
Total				17

Semester – X

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE6250	Project Phase-II	PMP	- - -15
2.	FRE5	Free Elective-5	FRE	3-0-0-3
Total				18

Total 205

Department Electives

- 1) CE5021 Groundwater Hydrology
- 2) CE5023 Integrated Impact Assessment
- 3) CE5024 Solid and Hazardous Waste Management
- 4) CE5026 GIS and Remote Sensing
- 5) CE5104 Physicochemical Processes in Water and Wastewater Engineering
- 6) CE5111 Environmental Chemistry
- 7) CE5031 Environmental Risk Assessment
- 8) HS7105 Advanced Environmental and Resource Economics
- 9) ME5204 Finite Element Methods in Engineering Mechanics
- 10) ME5101 Computational Fluid Dynamics

Mathematics Electives

- 1) MA5021 Linear Algebra for Engineers
- 2) MA5022 Probability Theory for Engineers
- 3) MA5023 Differential Equations for Engineers