

Dual Degree (B.Tech & M.Tech) Curriculum
Geotechnical 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.	CE5112	Advanced Soil Mechanics	PMT	3-0-0-3
4.	DPE2	Department Elective-2	PMT	3-0-0-3
5.	DPE3	Department Elective-3	PMT	3-0-0-3
6.	CE5114	Advanced Soil Mechanics Laboratory	PML	0-0-3-2
7.	MAE3	Mathematics Elective-3	SMA	2-0-0-2
8.	IL4101	Industrial Lecture	PIL	1-0-0-1
Total				20

Semester - VIII

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE5206	Ground Improvement and Geosynthetics	PMT	3-0-0-3
2.	CE5211	Soil Dynamics and Geotechnical Earthquake Engineering	PMT	3-0-0-3
3.	DPE4	Department Elective-4	PMT	3-0-0-3
4.	DPE5	Department Elective-5	PMT	3-0-0-3
5.	CE5208	Ground Improvement and Geosynthetics Laboratory	PML	0-0-3-2
6.	HS4202	Professional Ethics	HPE	2-0-0-2
7.	HSE3	Humanities Elective-3	HSS	3-0-0-3
Total				19

Semester - IX

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE6111	Seminar	PMT	- - -1
2.	CE6151	Project Phase-I	PMP	- - -10
3.	FRE3	Free Elective-3	FRE	3-0-0-3
4.	FRE4	Free Elective-4	FRE	3-0-0-3
Total				17

Semester - X

S.No	Course No	Course Name	Category	L-T-P-C
1.	CE6251	Project Phase-II	PMP	- - -15
2.	FRE5	Free Elective-5	FRE	3-0-0-3
Total				18

Total - 205

Department Electives

1. CE5027 Geotechnical Investigations and Foundation Design
2. CE5031 Rock Mechanics
3. CE5032 Unsaturated Soil Mechanics and Applications
4. CE5033 Geoenvironmental Engineering
5. CE5117 Pavement Analysis and Design
6. CE5102 Structural Dynamics
7. CE5029 Nondestructive Testing and Health Monitoring of Civil Structures
8. CE5030 Random Vibration and Structural Reliability
9. CE5034 Advanced Concrete Technology
10. ME5102 Finite Element Method in Engineering Mechanics
11. CE5103 Advanced Solid Mechanics
12. CE5204 Solid and Hazardous Waste Management

Mathematics Electives

1. MA5021 Linear Algebra for Engineers
2. MA5023 Differential Equations for Engineers