

**DEPARTMENT OF CIVIL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **18** **M. Tech. (Geotechnical Engineering)**
 Department: **CE** **Civil Engineering**
 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.	CEN-701A	Dissertation Stage-I (to be continued 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.	CEN-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 (Geotechnical Engineering)

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.	CEN-621	Advanced Geotechnical Exploration and Testing	PEC	4	3	1	-	3	-	25	-	25	50	-
2.	CEN-622	Advanced Foundation Engineering	PEC	4	3	1	2/2	3	-	20	20	20	40	-
3.	CEN-623	Stability Analysis of Slopes	PEC	4	3	1	-	3	-	25	-	25	50	-
4.	CEN-624	Design of Under-Ground Excavations	PEC	4	3	1	-	3	-	25	-	25	50	-
5.	CEN-625	Ground Improvement Engineering	PEC	4	3	1	-	3	-	25	-	25	50	-
6.	CEN-626	Foundations on Weak Rocks	PEC	4	3	1	-	3	-	25	-	25	50	-
7.	CEN-627	Landslide Analysis and Control	PEC	4	3	1	-	3	-	25	-	25	50	-
8.	CEN-628	Constitutive Modeling of Geological Materials	PEC	4	3	1	-	3	-	25	-	25	50	-
9.	CEN-545	Finite Element Analysis	PEC	4	3	-	2	3	-	15	25	20	40	-
10.	CEN-650	Design of Bridge Sub-structure	PEC	4	3	-	2	3	-	15	25	20	40	-