

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**SCHEME OF TEACHING AND EXAMINATION 2016-2017**

M.Tech. - Geotechnical Engineering.

**I SEMESTER**

Sl. No.	Subject Code	Title	Teaching Hours/Week		Examination				Credit
			Theory	Practical/ Field Work/ Assignment	Duration	I.A. Marks	Theory/ Practical Marks	Total Marks	
1	16CGT11	Finite Elements in Geotechnical Engineering	4	-	3	20	80	100	4
2	16CGT12	Theoretical Soil Mechanics	4	-	3	20	80	100	4
3	16CGT13	Subsurface Investigation and Ground Improvement Techniques	4	-	3	20	80	100	4
4	16CGT14	Design of Shallow Foundations	4	-	3	20	80	100	4
5	16CGT15X	Elective-1	3	-	3	20	80	100	3
6	16CGTL16	Advanced Geotechnical Engineering Lab-1		3	3	20	80	100	2
7	16CGT17	Seminar	-	3	-	100	-	100	1
<b>TOTAL</b>			<b>19</b>	<b>6</b>	<b>18</b>	<b>220</b>	<b>480</b>	<b>700</b>	<b>22</b>

<b>Elective -1</b>	
16CGT151	Pavement Analysis and Design
16CGT152	Case Histories in Geotechnical Engineering
16CGT153	Theory of Elasticity and Plasticity
16CGT154	Advanced Soil Mechanics

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**II SEMESTER**

Sl. No.	Subject Code	Title	Teaching Hours/Week		Examination			Credit	
			Theory	Practical/ Field Work/ Assignment	Duration	I.A. Marks	Theory/ Practical Marks		Total Marks
1	16CGT21	Soil Dynamics	4	-	3	20	80	100	4
2	16CGT22	Unsaturated Soil Mechanics	4	-	3	20	80	100	4
3	16CGT23	Design of Deep foundations	4	-	3	20	80	100	4
4	16CGT24	Earth and Earth Retaining Structures	4	-	3	20	80	100	4
5	16CGT25X	Elective-2	3	-	3	20	80	100	3
6	16CGTL26	Advanced Geotechnical Engineering Lab-2		3	3	20	80	100	2
7	16CGT27	Seminar	-	3	-	100	-	100	1
<b>TOTAL</b>			<b>19</b>	<b>6</b>	<b>18</b>	<b>220</b>	<b>480</b>	<b>700</b>	<b>22</b>

Elective -2	
16CGT251	Earthquake Resistant Design of Foundations
16CGT252	Soil Structure Interaction
16CGT253	Offshore Geotechnical Engineering
16CGT254	Foundation Engineering in Difficult Ground

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**III SEMESTER: Internship**

Sl. No.	Subject Code	Title	Teaching Hours / Week		Examination			Credit	
			Theory	Practical/ Field Work/ Assignment	Duration	I.A. Marks	Theory/ Practical Marks		Total Marks
1	16CGT31	Seminar / Presentation on Internship (After 8 weeks from the date of commencement)	-	-	-	25	-	25	20
2	16CGT32	Report on Internship	-	-	-	25	-	25	
3	16CGT33	Evaluation and Viva-Voce of Internship	-	-	-	-	50	50	
4	16CGT34	Evaluation of Project phase -1	-	-	-	50	-	50	1
<b>TOTAL</b>			-	-	-	<b>100</b>	<b>50</b>	<b>150</b>	<b>21</b>

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**IV SEMESTER**

Sl. No.	Subject Code	Title	Teaching Hours /Week		Examination			Credit	
			Theory	Practical/ Field Work/ Assignment	Duration	I.A. Marks	Theory/ Practical Marks		Total Marks
1	16CGT41	Forensic Geotechnical Engineering	4	-	3	20	80	100	4
2	16CGT42X	Elective-3	3	-	3	20	80	100	3
3	16CGT43	Evaluation of Project phase -2	-	-	-	50	-	50	3
4	16CGT44	Evaluation of Project and Viva-Voce	-	-	-	-	100+100	200	10
<b>TOTAL</b>			-	-	<b>6</b>	<b>90</b>	<b>360</b>	<b>450</b>	<b>20</b>

<b>Elective -3</b>	
16CGT421	Optimization Techniques in Geotechnical Engineering
16CGT422	Reinforced Soil Structures
16CGT423	Rock Mechanics
16CGT424	Geotechnical Practice for waste management system and ground modifications

**Note:**

- 1. Project Phase-1:** 6-week duration shall be carried out between 2<sup>nd</sup> and 3<sup>rd</sup> Semester vacation. Candidates in consultation with the guide shall carry out literature survey/ visit industries to finalize the topic of Project.
- 2. Project Phase-2:** 16-week duration during 4<sup>th</sup> semester. Evaluation shall be done by the committee constituted comprising of HOD as Chairman, Guide and senior faculty of the department.
- 3. Project Evaluation:** Evaluation shall be taken up at the end of 4<sup>th</sup> semester. Project work evaluation and Viva-Voce examination shall conducted
- 4. Project evaluation:**
  - a. Internal Examiner shall carry out the evaluation for 100 marks.
  - b. External Examiner shall carry out the evaluation for 100 marks.
  - c. The average of marks allotted by the internal and external examiner shall be the final marks of the project evaluation.
  - d. Viva-Voce examination of Project work shall be conducted jointly by Internal and External examiner for 100 marks.