

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

**M.Tech.- Structural 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	16CSE11	Computational Structural Mechanics	4	-	3	20	80	100	4
2	16CSE12	Advanced Design of RC Structures	4	-	3	20	80	100	4
3	16CSE13	Mechanics of Deformable Bodies	4	-	3	20	80	100	4
4	16CSE14	Structural Dynamics	4	-	3	20	80	100	4
5	16 CSE15X	Elective-I	3	-	3	20	80	100	3
6	16CSEL16	Structural Engineering Lab-1		3	3	20	80	100	2
7	16CSE17	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 -I</b>	
16CSE151	Advanced Design of Pre-Stressed Concrete Structures
16CSE152	Special Concrete
16CSE153	Design of Precast & Composite Structures
16CSE154	Reliability Analysis of Structures

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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	16CSE21	Advanced Design of Steel Structures	4	-	3	20	80	100	4
2	16CSE22	Earthquake Resistance Structures	4	-	3	20	80	100	4
3	16CSE23	Finite Elements Method of Analysis	4	-	3	20	80	100	4
4	16CSE24	Design Concepts of Substructures	4	-	3	20	80	100	4
5	16CSE25X	Elective-II	3	-	3	20	80	100	3
6	16CSEL26	Structural Engineering Lab-2		3	3	20	80	100	2
7	16CSE27	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 -II</b>	
16CSE251	Design of Tall structures
16CSE252	Repair and Rehabilitation of Structures
16CSE253	Stability of Structures
16CSE254	Theory of Plates and Shells

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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	16CSE31	Seminar / Presentation on Internship (After 8 weeks from the date of commencement)	-	-	-	25	-	25	20
2	16CSE32	Report on Internship	-	-	-	25	-	25	
3	16CSE33	Evaluation and Viva-Voce of Internship	-	-	-	-	50	50	
4	16CSE34	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	16CSE41	Design of Concrete Bridges	4	-	3	20	80	100	4
2	16CSE42X	Elective-3	3	-	3	20	80	100	3
3	16CSE43	Project phase -2	-	-	-	50	-	50	3
4	16CSE44	Evaluation of Project and Viva-Voce	-	-	3	-	100+100	200	10
<b>TOTAL</b>			-	-	<b>6</b>	<b>90</b>	<b>360</b>	<b>450</b>	<b>20</b>

<b>Elective-III</b>	
16CSE421	Optimization Techniques
16CSE422	Design of Industrial Structures
16CSE423	Theory of Plasticity and Fracture Mechanics
16CSE424	Design of Masonry Structures

**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.