

# Dr. Ambedkar Institute of Technology

(An Autonomous Institute, Affiliated to VTU, Accredited by NAAC with 'A' grade)

## Department of CIVIL ENGINEERING

SCHEME OF TEACHING AND EXAMINATION I SEMESTER (Autonomous) 2018-19

### M. Tech in STRUCTURAL ENGINEERING

#### I Semester M TECH

Sl. No.	Sub Code	Subject Title	Teaching Department	Teaching hours per week			Maximum Marks allotted			Examination Credits
				Lecture	Tutorial/ Seminar/ Assignment	Practical / Project	CIE	SEE	Total	
1.	18CSE11	Computational Structural Mechanics	....	4	-	-	50	50	100	3
2.	18CSE12	Advanced Design of RC Structures	....	4	-	-	50	50	100	3
3.	18CSE13	Mechanics of Deformable Bodies	....	4	-	-	50	50	100	3
4.	18CSE14	Structural Dynamics	....	4	-	-	50	50	100	3
5.	18CSE15X	ELECTIVE – I	....	4	-	-	50	50	100	3
6.	18CSEL16	Structural Engineering Laboratory - I	....	-	-	3	50	50	100	2
7.	18CSES17	Technical Seminar	....	-	2	-	50	-	50	2
8.	18CSEM18	Mini project/ Industry visit/ Field work	....	-	-	6	50	-	50	2
<b>Total</b>							<b>400</b>	<b>300</b>	<b>700</b>	<b>21</b>

Technical Seminar: Seminar on Advanced topics from refereed journals by each student.

#### ELECTIVE I

Sl.No	Name of the Subject	Subject Code
1	Advanced Design of Pre-stressed Concrete Structures	18CSE151
2	Special Concrete	18 CSE 152
3	Design of Pre-cast and Composite Structures	18 CSE 153
4	Reliability Analysis of Structures	18 CSE 154

**Chairman-BOS**

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### M. Tech in STRUCTURAL ENGINEERING

#### II Semester M TECH

Sl. No.	Sub Code	Subject Title	Teaching Department	Teaching hours per week			Maximum Marks allotted			Examination Credits
				Lecture	Tutorial/ Seminar/ Assignment	Practical / Project	CIE	SEE	Total	
1.	18CSE21	Advanced Design of Steel Structures	.....	4	-	-	50	50	100	3
2.	18CSE22	Earthquake Resistant Structures	.....	4	-	-	50	50	100	3
3.	18CSE23	Finite Element Method of Analysis	.....	4	-	-	50	50	100	3
4.	18CSE24	Design Concepts of Sub Structures	.....	4	-	-	50	50	100	3
5.	18CSE25X	ELECTIVE – II	.....	4	-	-	50	50	100	3
6.	18CSEL26	Structural Engineering Laboratory - II	.....	-	-	3	50	50	100	2
7.	18RM27	Research Methodology	.....	-	2	-	50	50	100	2
8.	18CSEM28	Mini project/ Industry visit/ Field work	.....	-	-	6	50	-	50	2
<b>Total</b>							<b>400</b>	<b>350</b>	<b>750</b>	<b>21</b>

#### ELECTIVE-II

Sl. No	Name of the Subject	Subject Code
1	Design of Tall Structures	18 CSE 251
2	Repair and Rehabilitation of Structures	18 CSE 252
3	Stability of Structures	18 CSE 253
4	Design of Plates and Shells	18 CSE 254

**Internship:** All the students have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and /or II and III semesters. A University examination shall be conducted during III semester and the prescribed credit shall be counted for the same semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not takeup/complete the internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.

**Chairman-BOS**

# Dr. Ambedkar Institute of Technology

SCHEME OF TEACHING AND EXAMINATION III SEMESTER (Autonomous) 2018-19

## M. Tech in STRUCTURAL ENGINEERING

### III Semester M TECH

Sl. No.	Sub Code	Subject Title	Teaching Department	Teaching hours per week			Maximum Marks allotted			Examination Credits
				Lecture	Tutorial/ Seminar/ Assignment	Practical / Field Work	CIE	SEE	Total	
1.	18CSE31	Design of Concrete Bridge Structures	....	04	-	-	50	50	100	<b>4</b>
2.	18CSE32X	Professional Elective 3	.....	04	-	-	50	50	100	<b>3</b>
3.	18CSE33X	Professional Elective 4	.....	04	-	-	50	50	100	<b>3</b>
4	18CSEI34	Internship	.....				50	50	100	<b>8</b>
5	18CSES35	Technical Seminar	.....				50	-	50	<b>2</b>
6.	18CSEP36	Project phase - I	.....	-	-	-	50	-	50	<b>2</b>
<b>Total</b>							<b>300</b>	<b>200</b>	<b>500</b>	<b>22</b>

Professional Elective 3			Professional Elective 4		
Sl .No	Name of the Subject	Subject Code	Sl .No	Name of the Subject	Subject Code
1	Design of Industrial Structures	18CSE321	1	Optimization Techniques	18CSE331
2	Theory of Plasticity and Fracture Mechanics	18CSE322	2	Composites and Smart materials	18CSE332
3	Masonry structures	18CSE323	3	Advanced Structural Mechanics	18CSE333
		18CSE324	4	Earth and Earth Retaining Structures	18CSE334

**Note:**

1. **Technical Seminar:** CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. Participation in the seminar by all postgraduate students of the same and other semesters of the programme shall be mandatory. The CIE marks awarded for Technical Seminar, shall be based on the evaluation of Seminar Report, Presentation skill and Question and Answer session
2. **Project Phase-1:** Students in consultation with the guide/co-guide if any, shall pursue literature survey and complete the preliminary requirements of selected Project work. Each student shall prepare relevant introductory project document, and present a seminar. CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide if any, and a senior faculty of the department. The CIE marks awarded for project work phase -1, shall be based on the evaluation of Project Report, Project Presentation skill and Question and Answer session

3. SEE as per the norms
4. **2. Internship:** Those, who have not pursued /completed the internship shall be declared as failed and have to complete during subsequent SEE examinations after satisfying the internship requirements. Internship SEE shall be as per the norms.

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**IV Semester M TECH**

Sl. No.	Sub Code	Subject Title	Teaching Department	Teaching hours per week			Maximum Marks allotted			Examination Credits
				Lecture	Tutorial/ Seminar/ Assignment	Practical / Field Work	CIE	SEE	Total	
1	18CSEP41	Project Work Phase II – Midterm Internal Evaluation	.....	-	-	-	50		50	2
2	18CSEP42	Project work evaluation and viva voce					100	100	200	22
<b>Total</b>							<b>150</b>	<b>100</b>	<b>250</b>	<b>24</b>
<b>Grand Total (I to IV Semester) : 88 Credits</b>										

**1. Project Phase-2:**

CIE marks shall be awarded by a committee comprising of HOD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. The CIE marks awarded for project work phase -2, shall be based on the evaluation of Project Report subjected to plagiarism check, Project Presentation skill and Question and Answer session in the ratio 50:25:25.

SEE shall be at the end of IV semester. Project work evaluation and Viva-Voce examination (SEE), after satisfying the plagiarism check, shall be as per the norms.