

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
BELAGAVI**



**Scheme of Teaching and Examinations**  
**M.Tech. in Civil Engineering**  
**(Specialization in Structural Engineering-(CSE))**  
Choice Based Credit System (CBCS) and Outcome Based Education (OBE)

Specialization in –(CSE)											
II SEMESTER											
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week			Examination				Credits
				Theory	Practical/ Seminar	Tutorial/ Skill Development Activities	Duration in hours	CIE Marks	SEE Marks	Total Marks	
				L	P	T/SDA					
1	PCC	MCSE201	Computational Structural Mechanics – Classical & FE Approach	03	00	00	03	50	50	100	3
2	PCC	MCSE202	Structural Dynamics and Earthquake Resistant Design of Structures	03	00	02	03	50	50	100	4
3	PCC	MCSE203	Advanced Design of Structural Elements	03	00	00	03	50	50	100	3
4	PCC	MCSE204	MODB & Fracture Mechanics	03	00	00	03	50	50	100	3
5	PEC	MCSE215X	Professional Elective - 3	03	00	00	03	50	50	100	3
6	PEC	MCSE216X	Professional Elective – 4	03	00	00	03	50	50	100	3
7	PCCL	MCSEL207	Computational Lab - 2	01	02	00	03	50	50	100	2
8	AEC/SEC	MCSE258	Skill and Ability enhancement courses	00	02	---	02	50	50	100	1
				01	00	----	01				
<b>TOTAL</b>								<b>400</b>	<b>400</b>	<b>800</b>	<b>22</b>
<p>Note: <b>PCC</b>: Professional core. <b>IPCC</b>-Integrated Professional Core Courses, <b>PCC(PB)</b>: Professional Core Courses (Project Based), <b>PCCL</b>-Professional Core Course lab, <b>PEC</b>- Professional Elective Courses, <b>MDC</b>- Multi-Disciplinary Courses</p> <p>, <b>L-Lecture, P-Practical, T/SDA-Tutorial / Skill Development Activities</b> (Hours are for Interaction between faculty and students)</p> <p><b>L-Lecture, P-Practical, T/SDA-Tutorial / Skill Development Activities</b> (Hours are for Interaction between faculty and students) <b>PBLC</b>: Project Based Learning Course,</p> <p>Note: <b>xxx</b> means specialization code for example <b>MDE- Design</b> Engineering, <b>LDN</b>- Digital Communication and Networking, <b>SCE</b>- Computer Engineering, <b>CCT</b>- Construction Technology, <b>AUD</b>- Urban Design, <b>MBA</b>- Master of Business Administration, <b>MCA</b>-Master of Computer Application, etc</p>											

**Ability Enhancement Courses (AEC):** These courses are designed to help students enhance their skills in communication, language, and personality development. They also promote a deeper understanding of subjects like social sciences and ethics, culture and human behaviour, human rights, and the law. **Skill Enhancement Course (SEC):** Skill Enhancement Course means a course designed to provide value-based or skill-based knowledge and should contain both theory and lab/hands-on/training/fieldwork. The main purpose of these courses is to provide students with life skills in the hands-on mode to increase their employability. **If AEC/SEC courses are ONLINE (MOOCs) courses** suggested by the concerned board of studies. These courses will be made available on **www.online.vtu.ac.in**, however online courses are not considered for vertical progression, but qualifying in online courses is mandatory for the award of the degree.

### Specializations: Professional Elective

Specialization		Specialization	
Course Code	Course Title	Course Code	Course Title
MCSE215A	Advanced Concrete Technology	MCSE216A	Design of Plates and Shells
MCSE215B	Construction Materials and their properties	MCSE216B	Advanced Structural Analysis
MCSE215C	Modern Construction Materials	MCSE216C	Bridge Engineering
MCSE215D	Advanced Pre-stressed Concrete	MCSE216D	Reliability Analysis and Reliability Based Design of Structures

**PCC/PCCL/IPCC/PEC/MDC/PCC(PB):** These are the courses which will suit the individual specializations