

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
BELAGAVI**



**Scheme of Teaching and Examinations**  
**M.Tech., in Civil Engineering**  
**Specialization in Infrastructure Engineering and Management (MCEM)**  
Choice Based Credit System (CBCS) and Outcome Based Education (OBE)-2024  
**II SEMESTER**

Specialization in -(CEM)											
II SEMESTER											
Sl. No	Course	Course Code	Course Title	Teaching Hours /Week			Examination				C R
				Theory	Practical/ Seminar	Tutorial/ Skill Development Activities	Duration in hours	CIE Marks	SEE Marks	Total Marks	
				L	P	T/SDA					
1	PCC	MCEM201	Maintenance and rehabilitation of Infrastructures	02	00	02	03	50	50	100	3
2	PCC	MCEM202/MCHT202	Highway Construction Technology	02	00	02	03	50	50	100	3
2	IPCC	MCEM203	Construction Project Management	02	02	00	03	50	50	100	4
3	PCC	MCEM204	Advanced Concrete Technology	02	00	02	03	50	50	100	3
4	PEC	MCEM215X	Professional Elective -1	02	00	02	03	50	50	100	3
5	PEC	MCEM216X	Professional Elective-2	02	00	02	03	50	50	100	3
6	PCCL	MCEML207	Construction Material Testing & Evaluation Laboratory	01	02	00	03	50	50	100	2
7	AEC/SEC	24CEM258x	Ability/Skill Enhancement Course (Offline/Online)	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><b>Note:</b> PCC: Professional core. IPCC-Integrated Professional Core Courses, PCC(PB): Professional Core Courses (Project Based), PCCL-Professional Core Course lab, PEC- Professional Elective Courses, MDC- Multi-Disciplinary Courses,  L-Lecture, P-Practical, T/SDA-Tutorial / Skill Development Activities (Hours are for Interaction between faculty and students)  L-Lecture, P-Practical, T/SDA-Tutorial / Skill Development Activities (Hours are for Interaction between faculty and students) PBLC: Project Based Learning Course,  <b>Note:</b> xxx means specialization code for example MDE- Design Engineering, LDN- Digital Communication and Networking, SCE- Computer Engineering, CCT- Construction Technology, AUD- Urban Design, MBA- Master of Business Administration, MCA-Master of Computer Application, etc</p>											
<b>Professional Elective 1</b>						<b>Professional Elective 2</b>					
MCEM215A		Prefabricated Structures			MCEM216A/MCHT216A		Bridge and grade separated structures				
MCEM215B/ MCHT215B		Soil Mechanics			MCEM216B		IoT and Smart Cities				
MCEM215C/MCHT215C		Construction & Demolition Waste management			MCEM216C		Smart Materials and Structures				
MCEM215D/ MCHT215D		Special Concrete			MCEM216D		Energy Conservation techniques in Buildings				

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

Ability / Skill Enhancement Courses					
Course Code	Course title	L	T/SDA	P	
MCEM258A/ MCHT258A	Occupational Safety and Health Management in Construction Projects				
MCEM258B/ MCHT258B	Smart City Infrastructure				
MCEM258C/ MCHT258C	Road Safety Engineering & Management				
MCEM258D	Urban Public Transport				
<p><b>Ability Enhancement Courses (AEC):</b> 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.</p> <p><b>Skill Enhancement Course (SEC):</b> 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.</p> <p><b>If AEC/SEC courses are ONLINE (MOOCs) courses</b> suggested by the concerned board of studies. These courses will be made available on <b>www.online.vtu.ac.in</b>, however online courses are not considered for vertical progression, but qualifying in online courses is mandatory for the award of the degree.</p>					