

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELAGAVI**



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

Specialization in –(CAS)											
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	MCAS201	Computational Structural Mechanics – Classical & FE Approach	03	00	00	03	50	50	100	3
2	PCC	MCAS202	Structural Dynamics and Earthquake Resistant Design of Structures	03	00	02	03	50	50	100	4
3	PCC	MCAS203	Design of Plates and Shells	03	00	00	03	50	50	100	3
4	PCC	MCAS204	Continuum Mechanics	03	00	00	03	50	50	100	3
5	PEC	MCAS215X	Professional Elective - 3	03	00	00	03	50	50	100	3
6	PEC	MCAS216X	Professional Elective – 4	03	00	00	03	50	50	100	3
7	PCCL	MCASL207	Computational Lab - 2	01	02	00	03	50	50	100	2
8	AEC/SEC	MCAS258	Skill and Ability enhancement courses	00	02	---	02	50	50	100	1
				01	00	----	01				
TOTAL				20	04	02	--	400	400	800	22

Note: **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,
Note: **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

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	Professional Elective - 3	Specialization	Professional Elective - 4
Course Code	Course Title	Course Code	Course Title
MCAS215A	Design of Structural Systems for Bridges and flyovers	MCAS216A	Advanced Mechanics of Materials
MCAS215B	Python And Its Application In Civil Engineering	MCAS216B	Geotechnical Aspects of Foundation and Earth Retaining Structures
MCAS215C	Structural Stability Analysis	MCAS216C	Applications of IOT in Civil Engineering
MCAS215D	Geotechnical Earthquake engineering	MCAS216D	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