M.E. Civil Engineering (Computer Aided Structural Engineering)

Course type	Subjects	Scheme of Instruction (Hrs/week)			Scheme of Examination					Credits
M. E. Civil Engineering (Computer Aided Structural Engineering) Semester – I										
		L	T	P	Theory (Hrs)	Theory	IA	Orals	Total Marks	
Core I	MCSE111 - Computational Structural Mechanics	4	0	0	2.5	75	25	0	100	04
Core II	MCSE112 – Python Programming	4	0	0	2.5	75	25	0	100	04
Program Elective I	MCSE121 – Theory of deformable bodies	4	0	0	2.5	75	25	0	100	04
	MCSE122 - Numerical Techniques in structural Engineering									
	MCSE123 - Structural Health Monitoring									
Program Elective II	MCSE131 - Structural Optimisation	4	0	0	2.5	75	25	0	100	04
	MCSE132 – Stability of Structures									
	MCSE133 – Structural Reliability									
Lab I	MCSE141 - Computer Aided Structural Engineering Lab I (CASE Lab I)	0	0	4	0	0	0	50	50	02
Lab II	MCSE142 - Computer Aided Structural Engineering Lab II (CASE Lab II)	0	0	4	0	0	0	50	50	02
General Topic/ Elective	MFE151 - Research Methodology and IPR	2	0	0	2	50	0	0	50	02
Skill/ Ability Enhancement	MCSE161 – Building Information Modelling*	2	0	0	-	-	50	0	50	02
	Total	**20**	**0**	**8**	**-**	**350**	**150**	**100**	**600**	**24**

* Students should clear the IA to get credits

Course type	Subjects	Scheme of Instruction (Hrs/week)			Scheme of Examination					Credits
M. E. Civil Engineering (Computer Aided Structural Engineering) Semester – II										
		L	T	P	Theory (Hrs)	Theory	IA	Orals	Total Marks	
Core III	MCSE211 - Computational Structural Dynamics	4	0	0	2.5	75	25	0	100	04
Core IV	MCSE212 - Advanced Design of Reinforced Concrete and Prestressed Structures	4	0	0	2.5	75	25	0	100	04
Program Elective III	MCSE221- Offshore Structures	4	0	0	2.5	75	25	0	100	04
	MSE222 – RC Design of substructures									

Course type	Subjects	L	T	P	Theory (Hrs)	Theory	IA	Orals	Total Marks	Credits
	MCSE223 – Composite and smart materials									
Program Elective IV	MCSE231 – Analysis of Plates and Shells	4	0	0	2.5	75	25	0	100	04
	MCSE232 – Experimental Techniques in structural Engineering									
	MCSE233 – Limit State design of structural Steel Elements									
Lab III	MCSE241 - Computer Aided Structural Engineering Lab III (CASE Lab III)	0	0	4	0	0	0	50	50	02
Lab IV	MCSE242 -Computer Aided Structural Engineering Lab IV (CASE Lab IV)	0	0	4	0	0	0	50	50	02
Mini Project	MCSE251 - Mini Project/Seminar*	0	0	4	0	0	-	50	50	02
Skill/ Ability Enhancement	MCSE261 – Applications of IOT in Civil Engineering**	2	0	0	0	0	50	0	50	02
	Total	18	0	12		300	150	150	600	24

*Students shall finalize the dissertation topic and the guide by the end of second semester.

** Students should clear the IA to get credits

M. E. Civil Engineering (Computer Aided Structural Engineering) Semester – III										
Course type	Subjects	Scheme of Instruction (Hrs/week)			Scheme of Examination					Credits
		L	T	P	Theory (Hrs)	Theory	IA	Orals	Total Marks	
Internship	MFE311- Internship (14 weeks)	0	0	16	0	0	100	100	200	08
Major Project	MFE321 – Dissertation Phase – I	0	0	16	0	0	100	100	200	08
Open Elective	MFE331 – NPTEL/MOOCS/SWAYAM Course –I	2	0	0	0	50*	0	0	50*	02
	Total	2	0	32	0	50*	200	200	450	18

Note: *in the case of Open Elective through NPTEL/MOOCS/SWAYAM, marks awarded by respective examining authority will be considered and scaled to 50 marks.

M. E. Civil Engineering (Computer Aided Structural Engineering Semester – IV										
Course type/ Code	Subjects	Scheme of Instruction (Hrs/week)			Scheme of Examination					Credits
		L	T	P	Theory (Hrs)	Theory	IA	Orals	Total Marks	
Program Elective V	MCSE411 - Design of Earthquake Resistant Structures	4	0	0	2.5	75	25	0	100	04
	MCSE412 -Design of High-Rise Structures									
	MCSE413 –-AI and expert systems in structural Engineering									
Open Elective	MCSE421 - NPTEL/MOOCS/SWAYAM Course –II	2	0	0	0	50*	0	0	50*	02
Major	MCSE431- Dissertation Phase –	0	0	16	0	0	100	100	200	08

Project	II									
	Total	**6**	**0**	**16**			**125**	**125**	**100**	**350**	**14**

Note: *In the case of Open Elective through NPTEL/MOOCS/SWAYAM, marks awarded by respective examining authority will be considered and scaled to 50 marks.