VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

SCHOOL OF CIVIL ENGINEERING

M.Tech. Structural Engineering

Curriculum

Breakup of Courses

Sl. No.	Category	Credits
1	University Core	**27**
2	University Elective	**6**
3	Programme Core	**19**
4	Programme Elective	**18**
	Minimum credits required to qualify	**70**
	Credits Offered	70

University Core (27 Credits)

Course Code	Course Title	L	T	P	J	C
MAT5005	Advanced Mathematical Methods	3	0	0	0	3
ENG5001 &	Technical English I &	0	0	2	0	
ENG5002	Technical English II	0	0	2	0	2
	(or)					
EFL5097	Foreign Language	2	0	0	0	
STS5001 and 5002	Soft skills	-	-	-	-	2
SET5001 and 5002	SET Projects	-	-	-	-	4
CLE6099	Master's Thesis	-	-	-	-	16
	Total					**27**

University Elective: 6 Credits

Programme Core (19 Credits)

Course Code	Course Title	L	T	P	J	C	Pre - requisite
CLE5001	Theory of Elasticity and Plasticity	3	0	0	0	3	-
CLE5002	Design of Concrete Structural Systems	3	0	0	4	4	-
CLE5003	Structural Dynamics	4	0	0	0	4	-
CLE6014	Finite Element Analysis	2	2	2	0	4	CLE5001
CLE6015	Advanced Design of Steel Structures	2	2	0	4	4	CLE5002
	Total					19	

Programme Elective (18 Credits)

Course Code	Course Title	L	T	P	J	C	Pre - requisite
CLE5010	Matrix Methods of Structural Analysis	2	2	0	0	3	-
CLE5012	Design of Bridges	2	0	0	4	3	-
CLE5013	Experimental Stress Analysis	3	0	0	0	3	-
CLE5014	Machine Foundations	2	2	0	0	3	-
CLE5015	Prefabricated Structures	2	0	0	4	3	-
CLE5016	Stability of Structures	2	2	0	0	3	-
CLE6001	Advanced Concrete Materials and Technology	2	0	0	4	3	-
CLE6002	Advanced Foundation Design	3	0	0	0	3	-
CLE6004	Repair and Rehabilitation of Structures	3	0	0	0	3	-
CLE6016	Pre-stressed Concrete Structures	2	2	0	0	3	CLE5002
CLE6017	Earthquake Resistant Design	2	0	0	4	3	CLE5003
CLE6018	Application of Numerical Methods in Structural Engineering	2	2	0	0	3	MAT5005
CLE6019	Theory and Design of Plates and Shells	2	2	0	0	3	CLE5001
CLE6020	Analysis and Design of Tall Structures	2	0	0	4	3	CLE6015
CLE6021	Structural Optimization	3	0	0	0	3	CLE6015
CLE6022	Urban Planning and Sustainability	3	0	0	0	3	-
CLE6023	Offshore Structures	2	2	0	0	3	-
CLE6024	Energy Efficient Buildings	3	0	0	0	3	