JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Tech in COMPUTER AIDED STRUCTURAL ENGINEERING
Effective from Academic Year 2022 - 23 admitted batch

R22 COURSE STRUCTURE AND SYLLABUS

I YEAR I – SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1.	Professional Core - I	Theory of Elasticity and Plasticity	3	0	0	3
2.	Professional Core - II	Advanced Structural Mechanics	3	0	0	3
3.	Professional Elective - I	1. Advanced Structural Steel Design 2. Theory of Plates and Shells 3. Structural Stability	3	0	0	3
4.	Professional Elective - II	1. Advanced Reinforced Concrete Design 2. Computer Oriented Numerical Methods 3. Structural Reliability	3	0	0	3
5.	Lab - I	Computer Aided Design Laboratory	0	1	2	2
6.	Lab - II	Numerical Analysis Laboratory	0	1	2	2
7.		Research Methodology & IPR	2	0	0	2
8.	Audit - I	Audit Course - I	2	0	0	0
		Total	**16**	**2**	**4**	**18**

I YEAR II – SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1.	Professional Core - III	Finite Element Analysis	3	0	0	3
2.	Professional Core - IV	Structural Dynamics	3	0	0	3
3.	Professional Elective - III	1. Computer Aided Applications in Structural Engineering 2. Special Concretes 3. Design of Highrise Buildings	3	0	0	3
4.	Professional Elective - IV	1. Programming for Structural Analysis and Design 2. Advanced Prestressed Concrete Design 3. Structural Health Monitoring	3	0	0	3
5.	Lab - III	Structural Engineering Laboratory	0	1	2	2
6.	Lab - IV	FE Analysis and Design Studio	0	1	2	2
7.		Mini Project with Seminar	0	0	4	2
8.	Audit - II	Audit Course - II	2	0	0	0
		Total	**14**	**2**	**8**	**18**

II YEAR I – SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1.	Professional Elective - V	1. Earthquake Resistant Design of Structures 2. Pre-Engineered Buildings 3. Rehabilitation and Retrofitting of Structures	3	0	0	3
2.	Open Elective	Open Elective	3	0	0	3
3.	Dissertation	Dissertation Work Review - II	0	0	12	6
4.		**Total**	**6**	**0**	**12**	**12**

II YEAR II - SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1.	Dissertation	Dissertation Work Review - III	0	0	12	6
2.	Dissertation	Dissertation Viva-Voce	0	0	28	14
		Total	**0**	**0**	**40**	**20**

Open Electives Offered by the Department:
1. Green Buildings
2. Construction Project Management
3. Safety and Construction Practice Regulations