

**PROPOSED COURSE STRUCTURE & SYLLABUS FOR M.TECH COURSES
(STRUCTURAL ENGINEERING)**

Semester-I							
S.No.	Course Code	Course Name	Category	Hours per			Credits
				L	T	P	
1.	21D11101	Advanced Structural Analysis	PC	3	0	0	3
2.	21D11102	Advanced Concrete Technology	PC	3	0	0	3
3.	21D11103a 21D11103b 21D11103c	Program Elective Course - I 1. Advanced Mathematical Method 2. Theory and Analysis Of Plates 3. Theory of Elasticity	PE	3	0	0	3
4.	21D11104a 21D11104b 21D11104c	Program Elective Course – II 1. Experimental Stress Analysis 2. Maintenance and Rehabilitation of Structures 3. Design of Bridges	PE	3	0	0	3
5.	21D11105	Advanced Concrete Laboratory – I	PC	0	0	4	2
6.	21D11106	Computer Aided Design Laboratory – I	PC	0	0	4	2
7.	21D11107	Research Methodology and IPR	MC	2	0	0	2
8.	21D11108a 21D11108b 21D11108c	Audit Course – I 1. English for Research Paper Writing 2. Value Education 3. Pedagogy Studies	AC	2	0	0	0
Total							18

PROPOSED COURSE STRUCTURE & SYLLABUS FOR M.TECH COURSES

(STRUCTURAL ENGINEERING)

Semester-II							
S.No.	Course Code	Course Name	Category	Hours per			Credits
				L	T	P	
1.	21D11201	Structural Dynamics	PC	3	0	0	3
2.	21D11202	Finite Element Methods for Structural Engineering	PC	3	0	0	3
3.	21D11203a 21D11203b 21D11203c	Program Elective Course – III 1. Advanced Reinforced Concrete Design 2. Design of Prestressed Concrete 3. Analysis of Shells and Folded Plates	PE	3	0	0	3
4.	21D11204a 21D11204b 21D11204c	Program Elective Course – IV 1. Stability of Structures 2. Advanced Steel Design 3. Fracture Mechanics	PE	3	0	0	3
5.	21D11205	Advanced Concrete Laboratory – II	PC	0	0	4	2
6.	21D11206	Computer Aided Design Laboratory – II	PC	0	0	4	2
7.	21D11207	Technical Seminar	PR	0	0	4	2
8.	21D11208a 21D11208b 21D11208c	Audit Course – II 1. Disaster Management 2. Constitution of India 3. Stress Management by Yoga	AC	2	0	0	0
Total							18



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPURAMU

COLLEGE OF ENGINEERING (Autonomous)

ANANTAPUR – 515 002

PROPOSED COURSE STRUCTURE & SYLLABUS FOR M.TECH COURSES (STRUCTURAL ENGINEERING)

Semester-III							
S.No.	Course Code	Course Name	Category	Hours per			Credits
				L	T	P	
1.	21D11301a 21D11301b 21D11301c	Program Elective Course – V 1. Earthquake Resistant Design of Buildings 2. Cost Effective Housing Techniques 3. Building Construction Management	PE	3	0	0	3
2.	21D10301	Open Elective 1. Green Buildings	OE	3	0	0	3
3.	21D11302	Dissertation Phase – I	PR	0	0	20	10
4.	21D11303	Co-Curricular Activities	PR				02
Total							18

Semester-IV							
S.No.	Course Code	Course Name	Category	Hours per			Credits
				L	T	P	
1.	21D11401	Dissertation Phase – II	PR	0	0	32	16
Total							16

Open Elective:

There shall be one Open Elective in III Semester. The respective boards have to give two subjects under open elective category. The students have to choose an elective offered by any department. However, the student shall not select the subject which is already studied or to be studied during the course.

Audit course I:

1. English for Research Paper Writing
2. Value Education
3. Pedagogy Studies

Audit course II:

1. Disaster Management
2. Constitution of India
3. Personality Development through Life Enlightenment Skills.

Semester-I							
S.No.	Course Code	Course Name	Category	Hours per			Credits
				L	T	P	
1.	21D12101	Matrix Methods of Structural Analysis	PC	3	0	0	3
2.	21D12102	Advanced Concrete Technology	PC	3	0	0	3
3.	21D12103a 21D12103b 21D12103c	Program Elective Course - I 1. Computer Aided Numerical Methods 2. C++ and Data Structures 3. Theory of Elasticity	PE	3	0	0	3
4.	21D12104a 21D12104b 21D12104c	Program Elective Course – II 1. Experimental Stress Analysis 2. Modeling Simulation and Computer Applications 3. Structural Health Monitoring	PE	3	0	0	3
5.	21D12105	Advanced Concrete Laboratory – I	PC	0	0	4	2
6.	21D12106	Computer Aided Design Laboratory – I	PC	0	0	4	2
7.	21D11107	Research Methodology and IPR	MC	2	0	0	2
8.	21D11108a 21D11108b 21D11108c	Audit Course – I 1. English for Research Paper Writing 2. Value Education 3. Pedagogy Studies	AC	2	0	0	0
Total							18

Semester-II							
S.No.	Course Code	Course Name	Category	Hours per week			Credits
				L	T	P	
1.	21D12201	Structural Dynamics	PC	3	0	0	3
2.	21D12202	Finite Element Analysis	PC	3	0	0	3
3.	21D12203a 21D12203b 21D12203c	Program Elective Course – III 1. Design of Prestressed Concrete 2. Management Information Systems 3. Reliability Based Engineering Design	PE	3	0	0	3
4.	21D12204a 21D12204b 21D12204c	Program Elective Course – IV 1. Stability of Structures 2. Advanced Steel Design 3. Artificial Neural Networks	PE	3	0	0	3
5.	21D12205	Advanced Concrete Laboratory – II	PC	0	0	4	2
6.	21D12206	Computer Aided Design Laboratory – II	PC	0	0	4	2
7.	21D12207	Technical Seminar	PR	0	0	4	2
8.	21D11208a 21D11208b 21D11208c	Audit Course – II 1. Disaster Management 2. Constitution of India 3.Stress Management by Yoga	AC	2	0	0	0
Total							18

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**PROPOSED COURSE STRUCTURE & SYLLABUS FOR M.TECH COURSES
(COMPUTER AIDED STRUCTURAL ENGINEERING)**

Semester-III							
S.No.	Course Code	Course Name	Category	Hours per			Credits
				L	T	P	
1.	21D12301a 21D12301b 21D12301c	Program Elective Course – V 1. Optimization in Structural Design 2. CAD and Computer Applications in Structural Engineering 3. Cost Effective Housing Techniques	PE	3	0	0	3
2.	21D10301	Open Elective 1. Green Buildings	OE	3	0	0	3
3.	21D12302	Dissertation Phase – I	PR	0	0	20	10
4	21D12303	Co-Curricular Activities	PR				02
Total							18

Semester-IV							
S.No.	Course Code	Course Name	Category	Hours per			Credits
				L	T	P	
1.	21D12401	Dissertation Phase – II	PR	0	0	32	16
Total							16

Open Elective:

There shall be one Open Elective in III Semester. The respective boards have to give two subjects under open elective category. The students have to choose an elective offered by any department. However, the student shall not select the subject which is already studied or to be studied during the course.

Audit course I:

1. English for Research Paper Writing
2. Value Education
3. Pedagogy Studies

Audit course II:

1. Disaster Management
2. Constitution of India
3. Personality Development through Life Enlightenment Skills.