

# M.TECH, STRUCTURAL ENGINEERING

Course Code	<b>COMPUTATIONAL STRUCTURAL MECHANICS - 16CSE11</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of Structural Analysis
CO3	Design and develop analytical skills
CO4	Summarize the Solution techniques
CO5	Understand the concepts of structural behaviour
	<b>ADVANCED DESIGN OF RC STRUCTURES - 16CSE12</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of Structural Design
CO3	Design and develop analytical skills.
CO4	Summarize the principles of Structural Design and detailing
CO5	Understands the structural performance.
	<b>MECHANICS OF DEFORMABLE BODIES - 16CSE13</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of stress-strain behaviour of continuum
CO3	Design and develop analytical skills.
CO4	Describe the continuum in 2 and 3- dimensions
CO5	Understand the concepts of elasticity and plasticity.
	<b>STRUCTURAL DYNAMICS - 16CSE14</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of Structural Dynamics
CO3	Design and develop analytical skills.
CO4	Summarize the Solution techniques for dynamics of Multi-degree freedom systems
CO5	Understand the concepts of damping in structures.
	<b>SPECIAL CONCRETE - 16CSE152</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of Concrete mix design
CO3	Design and develop analytical skills.
CO4	Summarize the Light Weight concrete, Fibre reinforced concrete and High Performance concrete
CO5	Understand the concepts of high Performance concrete
	<b>STRUCTURAL ENGINEERING LAB-1 - 16CSEL16</b>
CO1	Achieve Knowledge of design and development of experimenting skills.
CO2	Understand the principles of design of experiments
CO3	Design and develop analytical skills.
CO4	Summarize the testing methods and equipments.
	<b>ADVANCED DESIGN OF STEEL STRUCTURES - 16CSE21</b>
	<b>EARTHQUAKE RESISTANT STRUCTURES - 16CSE22</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of engineering seismology
CO3	Design and develop analytical skills.
CO4	Summarize the Seismic evaluation and retrofitting of structures.
CO5	Understand the concepts of earthquake resistance of reinforced concrete buildings.
	<b>FINITE ELEMENT METHOD OF ANALYSIS - 16CSE23</b>
CO1	Achieve Knowledge of design and development of problem solving skills.

CO2	Understand the principles of stress-strain behaviour of continuum
CO3	Design and develop analytical skills.
CO4	Describe the state of stress in a continuum
CO5	Understand the concepts of elasticity and plasticity.
	<b>DESIGN CONCEPTS OF SUBSTRUCTURES - 16CSE24</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of subsoil exploration
CO3	Design and develop analytical skills.
CO4	Identify and evaluate the soil shear strength parameters.
CO5	Understand the concepts of Settlement analysis.
	<b>REPAIR AND REHABILITATION OF STRUCTURES - 16CSE 252</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the cause of deterioration of concrete structures.
CO3	Design and develop analytical skills.
CO4	Summarize the principles of repair and rehabilitation of structures
CO5	Understands the concept of Serviceability and Durability
	<b>STRUCTURAL ENGINEERING LAB-II - 16CSEL26</b>
CO1	Achieve Knowledge of design and development of programming skills.
CO2	Understand the principles of structural analysis and design
CO3	Design and develop analytical skills.
CO4	Summarize the performance of structures for static and dynamic forces.
	<b>DESIGN OF CONCRETE BRIDGES - 16CSE 41</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of optimization.
CO3	Design and develop analytical skills.
CO4	Summarize the Linear, Non-linear and Geometric Programming
CO5	Understands the concept of Dynamic programming
	<b>DESIGN OF MASONRY STRUCTURES - 16CSE 424</b>
CO1	Achieve Knowledge of design and development of problem solving skills.
CO2	Understand the principles of design and construction of masonry structures
CO3	Design and develop analytical skills.
CO4	Summarize the masonry Characteristics.
CO5	Evaluate the strength and stability of the masonry structures