



**DNR COLLEGE OF ENGINEERING & TECHNOLOGY: BHIMAVARAM
DEPARTMENT OF CIVIL ENGINEERING**

Course Outcomes

AY. 2019-20

M.TECH I YEAR I SEM

Course Name: THEORY OF ELASTICITY

After completion of this course students will be able to:

CM8701	CO Statement	BT LEVEL
CM87011	Know the definition of stress and deformation and how to determine the components of the stress and strain tensors	REMEMBER
CM87012	Apply the conditions of compatibility and equations of equilibrium.	UNDERSTAND
CM87013	Understand how to express the mechanical characteristics of materials, constitutive equations and generalized Hook law.	ANALYZE
CM87014	Use the equilibrium equations stated by the displacements and compatibility conditions stated by stresses	EVALUATE
CM87015	Understand index notation of equations, tensor and matrix notation and define state of plane stress, state of plane strain	ANALYZE
CM87016	Be able to analyze real problem and to formulate the conditions of theory of elasticity Applications	ANALYZE



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M.TECH I YEAR I SEM

Course Name: STRUCTURAL DYNAMICS

After completion of this course students will be able to:

CM8702	CO Statement	BT LEVEL
CM87021	Understand the response of structural systems to dynamic loads	UNDERSTAND
CM87022	Realize the behavior and response of linear and nonlinear SDOF and MDOF structures with various dynamic loading	ANALYZE
CM87023	Understand the behavior and response of MDOF structures with various dynamic loading.	UNDERSTAND
CM87024	Possess the ability to find out suitable solution for continuous system	EVALUATE
CM87025	Understand the behavior of structures subjected to dynamic loads under free vibration	UNDERSTAND
CM87026	Understand the behavior of structures subjected to dynamic loads Harmonic excitation and earthquake load	UNDERSTAND



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Course Name: MATRIX ANALYSIS OF STRUCTURES

After completion of this course students will be able to:

CM8703	CO Statement	BT LEVEL
CM87031	Perform the structural analysis of determinate and indeterminate structures using classical compatibility methods	APPLY
CM87032	method of consistent displacements, force and equilibrium Methods	ANALYZE
CM87033	Perform structural analysis using the stiffness method.	APPLY
CM87034	Solve multiple degree of freedom two and three dimensional problems	EVALUATE
CM87035	involving trusses, beams, frames and plane stress	UNDERSTAND
CM87036	Understand basic finite element analysis	UNDERSTAND



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M.TECH I YEAR I SEM

Course Name: REPAIR AND REHABILITATION OF STRUCTURES

After completion of this course students will be able to:

CM8707	CO Statement	BT LEVEL
CM87071	Recognize the mechanisms of degradation of concrete structures and to design durable concrete structures.	APPLY
CM87072	Conduct field monitoring and non-destructive evaluation of concrete structures.	ANALYZE
CM87073	Design and suggest repair strategies for deteriorated concrete structures including repairing with composites.	APPLY
CM87074	Understand the methods of strengthening methods for concrete structures	EVALUATE
CM87075	Assessment of the serviceability and residual life span of concrete structures by Visual inspection and in situ tests	UNDERSTAND
CM87076	Evaluation of causes and mechanism of damage	UNDERSTAND



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M.TECH I YEAR I SEM

Course Name: ADVANCED CONCRETE TECHNOLOGY

After completion of this course students will be able to:

CM8709	CO Statement	BT LEVEL
CM87091	Choose the basic physical and chemical properties of construction materials for determining quality of concrete.	UNDERSTAND
CM87092	Evaluate the most economical and eco-friendly concrete mix based on standard methods for producing quality of concrete	ANALYZE
CM87093	Explain the workability and manufacturing process of concrete for obtaining economical and durable concrete.	APPLY
CM87094	Analyze the impact of water/cement ratio on strength and durability of concrete by measuring its hardened strength by compressive, tensile and flexural strengths	EVALUATE
CM87095	Apply the knowledge of mechanical properties of concrete like Elasticity, Creep & Shrinkage in the designing of the concrete structures.	UNDERSTAND
CM87096	Examine special concretes and new generation concrete for satisfying the future needs of industry in real time	UNDERSTAND

