



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

**Course Outcomes
AY. 2021-22
I YEAR II SEM**

Course Name: FINITE ELEMENT METHODS IN STRUCTURAL ENGINEERING

After completion of this course students will be able to:

CN8701	CO Statement	BT LEVEL
CN87011	Develop finite element formulations of 1 degree of freedom problems and solve them	EVALUATE
CN87012	Understand any Finite Element software to perform stress	UNDERSTAND
CN87013	Thermal and modal analysis	ANALYZE
CN87014	Compute the stiffness matrices of different elements and system	ANALYZE
CN87015	Interpret displacements	EVALUATE
CN87016	Strains and stress resultants	APPLY



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**Course Outcomes
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Course Name: THEORY OF PLATES AND SHELLS

After completion of this course students will be able to:

CN8702	CO Statement	BT LEVEL
CN87021	Have a knowledge about various plate theories due to bending.	REMEMBER
CN87022	Gain the knowledge of Navier's solution, Levy's solution and solve for the rectangular and square plates	UNDERSTAND
CN87023	Analyze circular plates with various boundary conditions.	ANALYZE
CN87024	Focus on the finite difference method of solving plate problems.	EVALUATE
CN87025	Ability to realize the potential energy principle and find the solution of rectangular plates for various loadings	ANALYZE
CN87026	Understand the behaviour of folded plates and shells	ANALYZE



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Course Name: STABILITY OF STRUCTURES

After completion of this course students will be able to:

CN8703	CO Statement	BT LEVEL
CN87031	Analyze different types of structural instabilities	REMEMBER
CN87032	Execute and work out the inelastic buckling using various methodologies	UNDERSTAND
CN87033	Examine the behaviour of beam columns and frames with and without side sway	ANALYZE
CN87034	classical and stiffness methods	EVALUATE
CN87035	To be well versed in the lateral buckling, torsional buckling	ANALYZE
CN87036	Flexural torsional buckling of various beams and non-circular sections	ANALYZE



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**Course Outcomes
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Course Name: EARTH RETAINING STRUCTURES

After completion of this course students will be able to:

CN8708	CO Statement	BT LEVEL
CN8708 1	Quantify the lateral earth pressures associated with different earth systems	REMEMBER
CN8708 2	Evaluate the mechanical properties of geosynthetics used for soil reinforcement	UNDERSTAND
CN8708 3	Identify the merits and demerits of different earth retaining systems. Select the most technically appropriate type of retaining wall for the application from a thorough	ANALYZE
CN8708 4	knowledge of available systems	EVALUATE
CN8708 5	Design of retaining structures using appropriate design methods, factors of safety, earth pressure diagrams and field verification methods	ANALYZE
CN8708 6	Aware of current guidelines regarding the design of earth retaining structures.	ANALYZE