



**DNR COLLEGE OF ENGINEERING & TECHNOLOGY BHIMAVARAM.**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**COURSE OUTCOMES**

<b>Program Name:</b>	B.TECH- CE	<b>Class / Sem</b>	I/II
<b>Regulation</b>	R20		

<b>CO Statement -Linear Algebra &amp; Numerical methods- M-II</b>
Describe the basic properties on elementary row and column operations
Find the characteristics equation , Eigen values and Eigen vectors.
Solve orthogonalisation of the given matrix.
Evaluate the root of algebraic and transcendental equation
Determine interpolating polynomial for the given data.
Calculate the numerical solution of ordinary differentiation.

<b>CO Statement- ENGINEERING CHEMISTRY</b>
<i>Interpret</i> the knowledge on the different types of composite plastic materials
<i>Outline</i> the theory of construction of electrodes, batteries and fuel cells in redesigning new engineering products
<i>learn</i> various synthetic methods of nonmaterial's for modern advances of engineering technology.
Illustration of commonly used materials in industries.
Differentiate petroleum , petrol, synthetic petrol, and their production.
Predict the suitable methods for purification and treatment of hard water and brackish water

<b>CO Statement-ENGINEERING MECHANICS</b>
Determine the equilibrium of a particle in space using principle of law of mechanics.
Solve the problems of simple systems with sliding friction.
Explain the equilibrium of rigid bodies in two dimensions and three dimensions.
Calculate principle moment of inertia and mass moment of inertia of plane areas and volumetric objects.
Solve the problems using equations of motion in rectilinear motion.
Calculate the equilibrium of systems using work-Energy method.

<b>CO Statement-PROGRAMMING FOR PROBLEM SOLVING USING C</b>
Describe an algorithms and to draw flowcharts for solving problems
Translate flowcharts/algorithms to C Programs, compile and debug programs
Use of Operators ,Two-way/ and Multi-way selection in programs.
Classify use of Arrays and Strings in C program.
Evaluate the concept of Pointers and their different applications.
Illustrate the concept of Functions and File I/O operations and to develop modular reusable code.

<b>CO Statement-BUILDING MATERIALS AND CONCRETE TECHNOLOGY</b>
Understand properties of different building materials.
Demonstrate the ability to know about different materials such as stone, bricks, tiles, wood, paints, and their classification, manufacture and structural requirements.
Understand the composition of Portland cement. Behavior and properties of cement, aggregates and admixtures.
Study the properties and tests of hardened concrete.
Design concrete mixtures to achieve fresh and hardened properties required
Evaluate fresh and hardened properties in laboratory and field using destructive and non-destructive techniques.

<b>CO Statement – ENGINEERING CHEMISTRY LAB</b>
Illustrate volumetric titrations acquires some volumetric skills.
Analyze hard and soft water
Analyze volumetric skills of red-ox titrations with different indicators.
Estimate amount of vitamin c in given sample
Understand the synthesis of nylon & Bakelite
Experiment the instruments like conductometer , potentiometer ,colorimeter & p <sup>H</sup> meter

<b>CO Statement – PROGRAMMING FOR PROBLEM SOLVING USING C LAB</b>
Explain the Basic concepts of variables and data types
Use of Operators and Expressions
Demonstrate the usage of Conditional and Unconditional statements
Classify the functions and relate functions with respect to arrays and strings
Describe the concept of pointers and structures
Demonstrate the usage of files and Command Line Arguments

<b>CO Statement – BUILDING PLANNING AND COMPUTER AIDED BUILDING DRAWING</b>
Demonstrate different types of scales, lines, dimensioning patterns, abbreviations and symbols as per IS codes
Illustrate line plan and preparing working drawings for residential buildings
Illustrate line plan and preparing working drawings for Public buildings
Prepare different elevation drawings for aesthetic and sectional details
Study and draw perspective drawing of various objects
Provide scope and provisions for building components and services

<b>CO Statement – ENVIRONMENTAL SCIENCE</b>
Understand and evaluate the global scale of environmental problems.
Recognize different types of resources like land, water, mineral and energy and also about the effects of environment by the usage of these resources.
Describe the ecosystem diversity, its values and also about the importance of the endemic species and different techniques involved in its conservation
Identify different types of pollutions and their control technologies, Waste water treatment, Bio medical waste management etc.,
Explain various environmental acts and disaster management
Discuss environmental assessment and the stages involved in EIA and the environmental audit