



DEPARTMENT OF CIVIL ENGINEERING

Year/Class/Semester: S.E./CIVIL/IV

Course Code	CourseName	COs
CSC401	Applied Mathematics-IV	<p><i>Student will be able to</i></p> <p>CO1.Apply the concepts of eigenvalues and eigenvectors in engineering problems.</p> <p>CO2.Use the concepts of Complex Integration for evaluating integrals, computing residues & evaluate various contour integrals.</p> <p>CO 3.Apply the concept of Z- transformation and inverse in engineering problems.</p> <p>CO4.Use the concept of probability distribution and sampling theory to engineering problems.</p> <p>CO5.Apply the concept of Linear Programming Problems to optimization., and AI.</p> <p>CO 6.Solve Non-Linear Programming Problems for optimization of engineering problems.</p>
CSC402	Structural Analysis	<p><i>Student will be able to</i></p> <p>CO1.Analyze for axial force in the Coplanar, perfect trusses and analysis of 3- Hinged arches</p> <p>CO 2.Draw Influence Line Diagrams for axial forces in trusses, Reactions, SF and B M in beams</p> <p>CO 3.Evaluate rotation and displacement at a joint of frames and deflection at any joint of truss.</p> <p>CO4.Apply Flexibility methods and make use of Clapeyron's Theorem to analyze the indeterminate structures</p> <p>CO 5. Analyze the indeterminate structures such as beams & simple rigid jointed frames using direct stiffness method</p> <p>CO6.Analyse the indeterminate structures using Moment Distribution as Stiffness method and make plastic analysis.</p>
CSC403	Surveying	<p><i>Student will be able to</i></p> <p>CO 1. Apply the principles of surveying and field procedures to conduct the various surveys</p> <p>CO 2. Use various methods for taking linear and angular measurements</p> <p>CO 3. Collect, record and analyse the field data for preparing drawings</p> <p>CO 4. Explain the advancements in instruments and methods</p> <p>CO 5.Calculate the area of land and volume of earthwork.</p> <p>CO6.Set out curves</p>



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CSC404	Building Materials And Concrete Technology	<p><i>Student will be able to</i></p> <p>CO1. To develop and implement the conceptual knowledge of building materials in the construction industry</p> <p>CO 2. Assess the properties of building stones and their classifications. Understand the concept of various methods of manufacturing of bricks and different types of concrete blocks.</p> <p>CO 3. To expose students to various quality control aspects of civil engineering materials by performing different lab tests on materials</p> <p>CO 4. Identify the ingredients and properties of fresh and hardened concrete</p> <p>CO5. To interpret and design concrete mix for various grades for various exposure conditions</p> <p>CO 6. To study the new technology for manufacturing, testing and quality of concrete.</p>
CSC405	Fluid Mechanics- II	<p><i>Student will be able to</i></p> <p>CO1. Analyze flow through pipes, various losses through pipes, pipe network and power transmission through nozzle</p> <p>CO 2. Explain the concept of Laminar flow and velocity distribution through parallel plates and pipes.</p> <p>CO 3. Explain the concept of Turbulent flow and velocity distribution in pipes.</p> <p>CO 4. Describe boundary layer concept, boundary layer separation and flow around submerged bodies.</p> <p>CO5. Apply Moment of Momentum Principle</p> <p>CO 6. Explain the importance of dimensionless numbers, dimensional analysis and similarity behavior of model and prototype</p>