



LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY

Himayath Sagar - 500 091, Hyderabad.

DEPARTMENT OF CIVIL ENGINEERING

COURSE OUTCOMES (COS)

Course Name: C211 Strength of Material

Year: II-I Sem

A.Y: 2022-23

C211.1	Evaluate the slope and deflection for various types of determinate beams.
C211.2	Analyze and draw the S.F.D and B.M.D for indeterminate beams.
C211.3	Evaluate crippling load for long columns using Euler's and Rankine's theory.
C211.4	Determine the deflections for various beams and frames using strain energy, and unit load method.
C211.5	Determine the principal moment of inertia for rectangular, L, I, T sections.
C211.6	Analyze the various beam sections for shear center.

Course Name: C212 Engineering Geology

Year: II-I Sem

A.Y: 2022-23

C212.1	Identify various minerals, rocks and analyse geological structures.
C212.2	Explain rock weathering, classify various soils and understand hydrogeology.
C212.3	Classify landforms based on their geomorphology and evaluate the engineering properties of rocks.
C212.4	Examine rocks for their suitability in various construction applications.
C212.5	Investigate and identify the geological problems in dams, reservoirs and tunnels, and explain the geological causes of earthquakes, tsunamis and landslides.

Course Name: C213 Surveying and Geomatics

Year: II-I Sem

A.Y: 2022-23

C213.1	Explain the terminologies and concepts involved in basic and modern surveying equipment & technologies and also defines the concepts of horizontal and vertical curves.
C213.2	Demonstrate the working principles and applications of basic and modern surveying instruments like chain, prismatic compass, plane table, dumpy level, theodolite and total station.
C213.3	Apply the knowledge of surveying & levelling in calculating lengths, bearings, reduced levels, elevation differences and plotting of a ground.
C213.4	Apply the knowledge of theodolite and trigonometry in finding horizontal and vertical angles, heights of inaccessible points.
C213.5	Use of knowledge of curves concept in surveying, in setting out both horizontal and vertical curves for the purpose of roadway and railway alignment.
C213.6	Calculate the elevations and distances of accessible and inaccessible objects by single and double plane methods.

Course Name: C214 Elements of Electrical Engineering

Year: II-I Sem

A.Y: 2022-23

C214.1	Analyze Electrical circuits to compute and measure the parameters of Electrical Energy.
C214.2	Illustrate the working principles of Electrical DC Machines.
C214.3	Identify and test various Electrical switchgear, single phase transformers and assess the ratings needed in given application.
C214.4	Describe the working principles of electrical AC machines.
C214.5	Discuss the various Electrical Installations.
C214.6	Discuss the Elementary calculations for energy consumption, power factor improvement and battery backup.

Course Name: C215 Mathematics-III

Year: II-I Sem

A.Y: 2022-23

C215.1	Solve problems in engineering involving PDEs.
C215.2	Evaluate second-order linear equations & initial and boundary conditions.
C215.3	Solve solutions for heat diffusion and vibration problems.
C215.4	Formulate and solve problems involving random variables.
C215.5	Apply statistical methods and hypothesis testing for analyzing experimental data.
C215.6	Use Concepts of F-distribution and chi-square distribution, goodness of fit and test for dependence.

Course Name: C216 Strength of Materials Lab**Year: II-I Sem****A.Y: 2022-23**

C216.1	Demonstrate the Stress-strain behaviour of ductile material.
C216.2	Compare Young's modulus of different materials by conducting deflection test on different types of beams
C216.3	Calculate rigidity modulus by spring test and torsion test.
C216.4	Evaluate compressive strength of brick.
C216.5	Find Hardness number and Impact strength of given Specimens.

Course Name: C217 Engineering Geology Lab**Year: II-I Sem****A.Y: 2022-23**

C217.1	Identify the physical and engineering properties of minerals and rocks
C217.2	Analyze and measure structural aspects of rocks using models
C217.3	Perform field experiment and studies such as VES.
C217.4	Perform studies such as Stereoscopic study of photographs, seismic refraction survey and Slake durability test.
C217.5	Describe the topographical and GSI maps.

Course Name: C218 Surveying and Geomatics Lab**Year: II-I Sem****A.Y: 2022-23**

C218.1	Compute lengths, areas and bearings of the given field work.
C218.2	Understand the basic working principles of theodolite and total station
C218.3	Compute setting out data for setting out of horizontal curves by various methods
C218.4	Computation of setting out data for horizontal and vertical curves by various methods.
C218.5	Understand the basic concepts related to Photogrammetry, RS and GPS.

Coordinator**HoD**



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COURSE OUTCOMES (COS)

Course Name: C311 Theory of Structures

Year: III-I Sem A.Y: 2022-23

C311.1	Solve statically indeterminate beams and portal frames using Slope Deflection Method
C311.2	Analyse the shear force and bending moment diagrams of statically indeterminate beams and portal frames for different loading condition using Moment distribution method.
C311.3	Analyse the shear force and bending moment diagrams of statically indeterminate beams and portal frames for different loading condition using Kani's method.
C311.4	Analyse Moving Loads and ILD for bending moment and shear force, for determinate girders for different position of loading system and for different sections of girder
C311.5	Analyse Moving Loads and ILD for member forces in determinate Trusses for different position of loading system

Course Name: C312 Soil Mechanics

Year: III-I Sem A.Y: 2022-23

C312.1	Examine different soils and identify the type of soil based on index properties of soils, soil formation & its structure
C312.2	Calculate the coefficient of permeability of the soil .
C312.3	Calculate the stresses in the soil and draw to flow net to compute the seepage quantity in soils
C312.4	Determine Compaction parameters of a soil using laboratory test
C312.5	Determine consolidation parameters of a soil using laboratory test such as using square root of time fitting method, logarithmic square method and height of solids method.
C312.6	Recognize the importance of shear strength in load carrying capacity of soil. Calculate the shear strength of soil using various laboratory tests

Course Name: C313 Concrete Technology

Year: III-I Sem A.Y: 2022-23

C313.1	Identify the properties of different ingredients of concrete.
C313.2	Identify the properties of freshand Hardened Concrete.
C313.3	Distinguish different chemical and mineral admixtures as per their applications
C313.4	Design the concrete mix as per the IS, ACI and British Standard codes.
C313.5	Differentiate special concretes depending on their constituents and specific application.

Course Name: C314 Water Resources Engineering Year: III-I Sem

A.Y: 2022-23

C315.1	Determine the fixation of different levels of reservoirs
C315.2	Analyze and design gravity dams and earthen dams
C315.3	Explain the design aspects of different types of weirs and regulatory systems.
C315.4	Analyze the different types of cross drainage structures
C315.5	Evaluate the factors leading to the assessment of waterpower potential and layout of a hydel plant
C315.6	Understand different terminology related to water resources engineering.

Course Name: C315 Environmental Engineering

Year: III-I Sem A.Y: 2022-23

C321.1	Analyze the basic quality and quantity parameters of water by some prescribed methods.
C321.2	Analyze the different types of treatment methods and water distribution.
C321.3	Describe the characters of sewage, plumbing and sanitary.
C321.4	Explain the different stages of treatment methods.
C321.5	Explain the concepts of air pollution and its effects.
C321.6	Explain the various gaseous pollutants and its control.



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Course Name: C411 Construction Engineering and Management Year: IV-I Sem A.Y: 2022-23

C411.1	Understand and apply current construction practices in the management of infrastructure projects
C411.2	Analyze the planning, scheduling and design related problems in construction projects
C411.3	Evaluate and design the construction costs and budget of the project
C411.4	Apply resource Optimization in Construction projects using available software
C411.5	Gain knowledge on safety, health and Environmental aspects of a construction projects and Implementation of BIM and lean principles in Project Management to reduce cost and time
C411.6	Apply to optimize time-cost trading in construction

Course Name: C412 Prestressed Concrete Year: IV-I Sem A.Y: 2022-23

C412.1	Explain the basic properties of Pre-stressed concrete constituents and concept of prestressing.
C412.2	Calculate pre-stress losses for simple pre-stressed concrete beams
C412.3	Analyze stresses developed in pre-stressed concrete members
C412.4	Design pre-stressed concrete beam to resist flexure and shear
C412.5	Estimate deflections of pre-stressed concrete member
C412.6	Analyze and design of End block by Guyon method and IS method

Course Name: C413 Disaster Mitigation and Management Year: IV-I Sem A.Y: 2022-23

C414.1	Apply the concept of disaster management to evaluate a disaster situation.
C414.2	Classify the various categories of disasters and their specific characteristics.
C414.3	Select appropriate pre-disaster, during disaster and post disaster measures and frame work.
C414.4	Identify the disaster management acts and frameworks specific to India relevant to a situation.
C414.5	Identify a suitable technological application to aid disaster management.
C414.6	Apply the latest technologies for monitoring the warning systems of disasters.

Course Name: C414 Retrofitting and Rehabilitation of Structures Year: IV-I Sem A.Y: 2022-23

C413.1	Select an appropriate building repair and maintenance method for a specified deterioration in structures.
C413.2	Differentiate the types of defects, damage and explain the various deterioration mechanisms in structures.
C413.3	Choose an appropriate non-destructive test and a condition assessment procedure for a given structure.
C413.4	Apply the knowledge of repair materials and techniques for choosing a rehabilitation process for a distressed structure.
C413.5	Choose a suitable retrofitting and rehabilitation procedure for a deteriorated and distressed structure.
C413.6	Learn how to strengthen the existing structure

Course Name: C415 Entrepreneurship

Year: IV-I Sem

A.Y: 2022-23

C415.1	Understand Indian Industrial Environment, Entrepreneurship and Economic growth, Small and Large Scale Industries, Types and forms of enterprises.
C415.2	Identify the characteristics of entrepreneurs, Emergence of first generation entrepreneurs, Conception and evaluation of ideas and their sources.
C415.3	Practice the principles of project formulation, Analysis of market demand, Financial and profitability analysis and Technical analysis.
C415.4	Apply the concepts of Project Management during construction phase, project organization, project planning and control using CPM, PERT techniques
C415.5	Understand the Behavioral aspects of entrepreneurs, Time Management, Various approaches of time management, their strengths and weakness. The urgency addiction and time management matrix.

Course Name: C416 Seminar

Year: IV-I Sem

A.Y: 2022-23

C417.1	Engaged in the integral activities of reading, discussion and composition around a particular topic.
C417.2	Develop presentation skills.
C417.3	Apply confidence to face the interviews.
C417.4	Investigate the advancements in the particular topic.
C417.5	Distinguish opinions from researched claims.

Course Name: C417 Project Phase- I

Year: IV-I Sem

A.Y: 2022-23

C418.1	Apply the basic concepts of civil engineering and learn the implementation.
C418.2	Analysis and design of particular problems in project.
C418.3	Analyse and design the buildings using staad pro and E-Tabs software.
C418.4	Perform research work in material testing and in design of concrete mix.
C418.5	Discuss complete process of a project – designing, programming, module development.

Coordinator

HoD

