Course Outcomes

Academic Year – 2023-2024 **Semester: III (A)**

Student will be able to

CO. No.	Description
Course Outcomes: C22- Strength of Material (U21CE301)	
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
CO. No.	**Description**
Course Outcomes: C212 – Engineering Geology (U21CE302)	
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.
CO. No.	**Description**
Course Outcomes: C213 – Surveying and Geomatics (U21CE303)	
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.
CO. No.	**Description**
Course Outcomes: C214 – Elements of Electrical Engineering (U21CE305)	
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

CO. No.	Description
Course Outcomes: C215 – Mathematics-III (U21MA301)	
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.

CO. No.	Description
Course Outcomes: C216 – Strength of Materials Lab (U21CE3L1)	
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.

CO. No.	Description
Course Outcomes: C217- Engineering Geology Lab (U21CE3L2)	
C217.1	Identify the physical and engineering properties of minerals and rocks.
C217.2	Analyze and measure structural aspects of rocks using model.
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.

CO. No.	Description
Course Outcomes: C218 – Surveying and Geomatics Lab (U21CE3L3)	
C218.1	Identify the physical and engineering properties of minerals and rocks
C218.2	Analyze and measure structural aspects of rocks using models
C218.3	Perform field experiment and studies such as VES.
C218.4	Perform studies such as Stereoscopic study of photographs, seismic refraction survey and Slake durability test.
C218.5	Describe the topographical and GSI maps.

CO. No.	Description

Course Outcomes: C219 – Programming Language Lab(U21CS3L1)	
C219.1	Write, test, and debug simple Python programs.
C219.2	Implement Python programs with conditionals and loops.
C219.3	Develop Python programs step-wise by defining functions and calling them.
C219.4	Use Python lists, tuples, dictionaries for representing compound data.
C219.5	Read and write data from/to files in Python.

Course Outcomes

Academic Year – 2022-2023 **Semester: V (A)**

Student will be able to

CO. No.	Description
Course Outcomes:C311 – Concrete Technology (U21CE501)	
C311.1	Identify the properties of different ingredients of concrete.
C311.2	Identify the properties of Hardened Concrete.
C311.3	Distinguish different chemical and mineral admixtures as per their applications
C311.4	Identifying the strengths of Hardened Concrete.
C311.5	Design the concrete mix as per the IS, ACI and British Standard codes.
CO. No.	**Description**
Course Outcomes:C312 – Environmental Engineering (U21CE502)	
C312.1	Aptitude to plan for protected water supply system needs and requirements.
C312.2	Ability to design sequential unit operations in water treatment plants.
C312.3	Design for the safe disposal of waste water and its reuse.
C312.4	Analyze sustainable development of the society.
C312.5	Execute and maintain standards for sustainable development of the society.
CO. No.	**Description**
Course Outcomes: C313 – Structural Analysis-I (U21CE503)	
C313.1	Solve statically indeterminate beams and portal frames using classical methods.
C313.2	Sketch the shear force and bending moment diagrams for different loading condition for in determinate structures.
C313.3	Calculate the deflections in beams and pin jointed trusses.
C313.4	Analyze the three hinged and two hinged arches.
C313.5	To analyze multi storied frames using approximate methods.
CO. No.	**Description**
Course Outcomes: C314 – Hydrology and Water Management (U21CE504)	
C314.1	Understand the interaction among various processes in the hydrologic cycle.
C314.2	Estimation of Design flood for Water Resources structures.
C314.3	Computation of draw down and yield in aquifer.

C314.4	Development of Rainfall–Run off relationship.
C314.5	Development of soil water plant relationship.
CO. No.	**Description**
Course Outcomes:C315 Air and Noise Pollution (U21CE508)	
C315.1	Identify sampling and analysis techniques for air quality assessment.
C315..2	Describe the plume behavior for atmospheric stability conditions.
C315.3	Apply plume dispersion modeling and assess the concentrations.
C315.4	Design air pollution controlling devices.
C315.5	Identifying the causes of indoor air pollution and changes in indoor air quality-control.
CO. No.	**Description**
Course Outcomes:C316 – Basics of Mechanical Engineering (U21ME509)	
C316.1	Identify different sources of energy and their conversion process.
C316.2	Explain the working principle of steam boiler, hydraulic turbines, pumps, IC engines.
C316.3	Recognize the use of internal combustion engine.
C316.4	Recognize various metal joining processes and power transmission elements
C316.5	Understand the properties of common engineering materials and their applications in engineering industry.
C316.6	Describe the power transmission system like belt drives and gear drives.
CO. No.	**Description**
Course Outcomes:C317 – Survey Camp	
C317.1	Develop knowledge of field exposure.
C317.1	Apply surveying knowledge and tools effectively for projects.
C317.1	Develop knowledge of practical application of different survey works.
C317.1	Develop knowledge of practical application of different surveying equipment’s.
C317.1	Develop field constraints and also documentation of technical report.
CO. No.	**Description**
Course Outcomes:C318– Concrete Technology Laboratory (U21CE5L2)	
C318.1	Assess the suitability of differenting redients of concrete by conducting various test prescribed by relevant IS codes.

C318.2	Assess the work ability of concrete and recommend its suitability for structural works.
C318.3	Determine the strengths of hardened concrete in compression, flexure and split tensile tests.
C318.4	Determine the fineness of fine aggregate.
C318.5	Assess the suitability of Bulk and compact densities of fine and coarse aggregates
CO. No.	**Description**
Course Outcomes:C319-Environmental Engineering Lab(U21CE5L3)	
C319.1	Understand the compile and use of experimental information.
C319.2	Ability to perform experiments on water sample for physical and chemical tests.
C319.3	Understand the turbidity in water sample.
C319.4	Assess the suitability Total hardness and Alkalinity.
C319.5	Ability to critically analyze and interpret data and present results on water samples.

LORDS INSTITUTE OF ENGINEERING & TECHNOLOGY
Department of Civil Engineering

Course Outcomes

Academic Year – 2023-2024 **Semester: VII (OU)**

Student will be able to

CO. No.	Description
Course Outcomes:C411 –Estimation and Specification (PC417CE)	
C411.1	Estimate the quantities of materials used in various construction works
C411.2	Compute and prepare bar bending schedules.
C411.3	Prepare rate analysis for various quantities
C411.4	Assess the value of land and buildings
C411.5	Estimate the replacement cost of building and depreciation.
CO. No.	**Description**
Course Outcomes:C412– Disaster Preparedness and Planning (ES310 CE)	
C412.1	Define and explain the terms and concepts related to disaster management.
C412.2	Describe the various categories of disasters and their specific characteristics.
C412.3	Explain the pre-disaster, during disaster and post-disaster measures and framework.
C412.4	Describe the disaster management acts and frameworks specific to India.
C412.5	List and explain the various technological applications to aid disaster management.
CO. No.	**Description**
Course Outcomes: C413 Prestressed Concrete (PE513CE)	
C413.1	Apply the concept of prestressing and determine the losses of prestress.
C413.2	Analyze the prestressed concrete beam and suggest the cable profile for beam.
C413.3	Analyze the prestressed continuous beam and determine the concordant cable profile.
C413.4	Design the prestressed concrete beam for flexure and shear.
C413.5	Estimate the deflection of a prestressed concrete beam and design the end block.
CO. No.	**Description**
Course Outcomes: C414 –Principles of Green Buildings (PE 520 CE)	
C414.1	Define a green building, along with its features, benefits and rating systems.
C414.2	Describe the criteria used for site selection and water efficiency methods.
C414.3	Explain the energy efficiency terms and methods used in green building practices.
C414.4	Select materials for sustainable built environment & adopt waste management methods.
C414.5	Describe the methods used to maintain indoor environmental quality.

CO. No.	Description
Course Outcomes: C415 – Urban Transportation Planning(PE 522 CE)	
C415.1	Describe and evaluate various urban transportation issues and planning methodologies
C415.2	Identify the appropriate data collection methods and its procedures

C415.3	Demonstrate effective way of understanding trip distribution and mode split models
C415.4	Explain various issues related to trip assignment and land use transportation models

CO. No.	Description
Course Outcomes: C416 – Entrepreneurship (OE 621 ME)	
C416.1	Understand Indian Industrial Environment, Entrepreneurship and Economic growth, Small and Large Scale Industries, Types and forms of enterprises.
C416.2	Identify the characteristics of entrepreneurs, Emergence of first generation entrepreneurs, Conception and evaluation of ideas and their sources.
C416.3	Practice the principles of project formulation, Analysis of market demand, Financial and profitability analysis and Technical analysis.
C416.4	Apply the concepts of Project Management during construction phase, project organization, project planning and control using CPM, PERT techniques.
C416.5	UnderstandtheBehaviouralaspectsofentrepreneurs,TimeManagement,Various approaches of time management, their strengths and weakness. The urgency addiction and time management matrix.

CO. No.	Description
Course Outcomes: C417 – Essence of Indian Traditional Knowledge (MC 803 PY)	
C417.1	Understand philosophy of Indian culture.
C417.2	Distinguish the Indian languages and literature among difference traditions.
C417.3	Learn the philosophy of ancient, medieval and modern India.
C417.4	Acquire the information about the fine arts in India.
C417.5	Know the contribution of scientists of different eras.
C417.6	The essence of Yogic Science for Inclusiveness of society.

CO. No.	Description
Course Outcomes: C418 – Estimation and Specification Laboratory (PC 460 CE)	
C418.1	Estimate the quantities of materials used in various construction works.
C418.2	Compute and prepare bar bending schedules.
C418.3	Prepare rate analysis for various quantities.
C418.4	Assess the value of land and buildings.

CO. No.	Description
Course Outcomes: C419 – Project Work (PW 703 CE)	
C419.1	Analyze a current topic of professional interest and present it before an audience.
C419.2	Identify an engineering problem, analyze it and propose a work plan to solve it.
C419.3	Develop awareness of design methodologies & its implementation.
C419.4	Acquire skills in technical report writing.

Coordinator **HoD**