COURSE OUTCOMES OF STRUCTURAL ENGINEERING DESIGN-II

- CO1. Leaner is able to understand the difference between plastic and elastic analysis
- CO2. Learner has clarity about the various design philosophies used in structure engineering design
- CO3. Learner is able analyze and design simple bolted and welded connections subjected to axial load.
- **CO4**. Leaner is able to analyze and design axially loaded Tension member and compression member using limit state method.
- CO5. Leaner is able to analyze and design Laterally Supported and Laterally Unsupported Beams using limit state method

COURSE OUTCOMES ENVIRONMENTAL ENGINEERING

- **CO1**. The students must be able to apply the knowledge to plan, design, construct and monitor a water/wastewater treatment plant as per a city's water demand.
- **CO2**. Students must be able to summarize complexities in the characteristics(s) of water/wastewater that is available and the correct treatment methods to be adopted.
- **CO3**. Students must be able to justify the patterns of water storage and recommend the correct distribution methods suitable for the city under consideration.
- **CO4**. The student must be able to analyze the wastes coming in for treatment and decide upon the techniques of treatment to be given.
- **CO5**. Students must be able to apply the knowledge reused to develop a positive attitude to earth, environment and its protection against pollution and adopt safer methods of waste disposal.

COURSE OUTCOMES OF ENGINEERING ECONOMICS, ESTIMATING AND COSTING

CO1. Learner is able to identify various items of building and able to determine approximate estimation

of buildings.

- **CO2**. Learner is able to determine detailed quantity estimate and Bar bending schedule of civil engineering works from given details.
- **CO3**. Leaner is able to determine of quantities of materials and rate analysis of any items in residential building works.
- **CO4**. Leaner is able to understand Contracts and Tender Documents.
- **CO5**. Leaner is able to understand basic Engineering Economics in construction industry.

COURSE OUTCOMES OF CONCRETE TECHNOLOGY

- CO1. Identify properties of concrete making materials.
- **CO2**. Acquire fundamental knowledge of fresh concrete.
- **CO3**. Acquire fundamental knowledge of hardened concrete.
- **CO4**. Understand the basic behavior of mix design of concrete, its application in a varied environment.
- **CO5**. Handle the quality control of special concrete on site and become good professional engineers.

COURSE OUTCOMES OF CONSTRUCTION ENGINEERING AND MANAGEMENT

- **CO1**. Students are able to understand basic project planning and scheduling method for construction project
- **CO2**. Students will get an introduction to the different construction method and equipment.
- **CO3**. Students are able to understand about the key regulatory requirement to safeguards the construction projects
- **CO4**. Students are able to understand planning and organizing construction site & resource.
- **CO5**. Students are expected to know contract and its types.

COURSE OUTCOMES OF STRUCTURAL ENGINEERING LAB

- **CO1**. Learner will able to understand the latest version of staadpro software for analysis of complex structures.
- CO2 .Learner will able to analyse& design geometric modeling of RCC frame.
- CO3. Learner will able to analyse& design geometric modeling of RCC footings.
- **CO4**. Learner will able to analyse& design geometric steel frame.
- **CO5**.Learner will able to interpretate results of desired steel frames.

COURSE OUTCOMES OF ENVIRONMENTAL ENGINEERING LAB

- **CO1** Able to determine different parameters of water and waste water.
- CO2 Able to examine biochemical oxygen demand and chemical oxygen demand of given samples.
- CO3 Able to understand the technologies required for domestic and industrial wastewater treatment

COURSE OUTCOMES OFCOMPUTER AIDED CIVIL ENGINEERING DRAWING LAB

- **CO1**. To develop graphical skills for communicating concepts, ideas and designs of engineering products graphically/ visually.
- **CO2**. To get exposure to desired standards relating to technical drawings using Computer Aided Design and Drafting practice
- CO3. Develop Parametric design and the conventions of formal engineering drawing
- CO4. Produce and interpret 2D & 3D drawings
- CO5. Examine a design critically and with understanding of CAD software.

CO6. To do a detailed study of an engineering artefact

COURSE OUTCOMES OF CONCRETE TECHNOLOGY LAB

- **CO** 1 Outline the importance of testing of cement and its properties.
- CO 2 Assess the different properties of aggregate.
- CO 3 Summarize the concept of workability with admixture and testing of concrete.
- **CO 4** Describe the preparation of green andhardened concrete and their properties.
- **CO 5** Describe the properties of Mix Design.