

DEPARTMENT OF CIVIL ENGINEERING
B Tech. 5th SEM
COURSE OUTCOMES

***COURSE OUTCOMES OF STRUCTURAL
ENGINEERING DESIGN – I***

CO1. Learner is able to understand the importance of reinforced cement concrete.

CO2. Learner has clarity about the various design philosophies used in structure engineering design

CO3. Learner is able analyze and design singly and doubly reinforced section using working stress method.

CO4. Learner is able to analyze and design rectangular beams using limit state method.

CO5. Learner is able to design elements such as slabs, columns, footings and staircases.

***COURSE OUTCOMES OF HYDROLOGY AND
WATER RESOURCES ENGINEERING***

CO1. The students will be able to Explain the hydrologic cycle and precipitation.

CO2. The students will be able to Compute runoff by different method

CO3. The students will be able to Estimate the water requirement of different crops

CO4. The students will be able to Design Canal.

CO5. The students will be able to Compute the reservoir capacity

***COURSE OUTCOMES OF GEOTECHNICAL
ENGINEERING***

CO1. Students should be able to define different properties of soil.

CO2. Students should be able to analyze permeability, compaction and effective stress.

CO3. Students should be able to analyze consolidation of soil and shear strength.

CO4. Students should be able to evaluate the stability of slope of different types of soil.

CO5. Students should be able to explore soil infield.

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COURSE OUTCOMES TRANSPORTATION ENGINEERING

CO1. Will conversant with various terminologies of Highway Engineering and design geometric elements of highways and expressways.

CO2. Will carry out traffic studies and implement traffic regulation and control measures.

CO3. Will evaluate highway construction material and design rigid and flexible pavements as per IRC.

CO4. Will conversant with various terminologies of Railway Engineering.

CO5. Will design turnouts in Railway.

COURSE OUTCOMES STRUCTURAL ANALYSIS – II

CO1. Learner is able to differentiate and analyze the different kinds of structures- determinate and indeterminate.

CO2. Learner is able to apply suitable method for given structure - rigid jointed or pin-jointed plane frames.

CO3. Learner is able to analyze indeterminate beams and frame (sway and non-sway) using Moment distribution method.

CO4. Learner is able to analyze indeterminate beams and frame (sway and non-sway) using slope deflection method.

CO5. Learner is able to draw influence line diagram for determinate and indeterminate beams using Muller Breslau principle and is able to apply it for finding out maximum values of stress function.

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***COURSE OUTCOMES OF STRUCTURAL
ANALYSIS LAB***

- CO1.** To determine the flexural rigidity (EI) for a given beam using various prototype models.
- CO2.** To determine the deflections of beam and frame.
- CO3.** To determine the horizontal deflection and deformed shape of portal frames with different end conditions.
- CO4.** To determine the strain in an externally loaded beam using digital strain indicator.
- CO5:** Students will be able to learn about SAP2000, ANSYS and MS Excel.

***COURSE OUTCOMES OF
TRANSPORTATION ENGINEERING LAB***

- CO1.** Learner will able to determine the crushing strength value of aggregate.
- CO2.** Will determine abrasion value of aggregate.
- CO3.** Will list physical properties of bitumen for road construction.
- CO4.** Will list index properties of aggregate.
- CO5.** Will determine flash and fire point of bitumen.

***COURSE OUTCOMES OF GEOTECHNICAL
ENGINEERING LAB***

- CO1** Determine index properties of soils
- CO2** Determine Engineering properties of soil
- CO3** Evaluate Compressive behavior of soils
- CO4** Evaluate Strength behavior of soils
- CO5** Evaluate compaction of soils

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COURSE OUTCOMES OF GEOTECHNICAL ENGINEERING LAB

- CO1 Determine index properties of soils
- CO2 Determine Engineering properties of soil
- CO3 Evaluate Compressive behavior of soils
- CO4 Evaluate Strength behavior of soils
- CO5 Evaluate compaction of soils

COURSE OUTCOMES OF PROJECT-I BASED ON SUMMER INTERNSHIP/INDUSTRIAL TRAINING

- CO1. For his/ her organization of internship learner is able to assess its strengths, weakness, and opportunities and threats (SWOT)
- CO2. Learner is able to determine the challenges and future potential for his /her internship organization in particular and the sector in general.
- CO3.Learner is able to test the theoretical learning in practical situations by accomplishing the task assigned during the internship project.
- CO4.Learner is able to apply various soft skills such as time management, positive attitude and communication skills during performance of the task assigned in internship organization.
- CO5.Learner is able to analyze the functioning of internship organization and recommend changes for improvement in processes.

COURSE OUTCOMES OF ENVIRONMENTAL STUDIES

- CO1. Interpret and demonstrate the concept of ecology and ecosystem for environmental sustainability.

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CO2. Define and establish the diversified knowledge of biodiversity and its conservation.

CO3. Explain the uses of natural resources efficiently and its impact on environment.

CO4. Illustrate and solve the simple and complex social issues relating to human communities.

CO5. Exemplify and make useful solution to combat the environmental degradation with the aid of national and international legislations and protocols there under.

CO6. Demonstrate and elucidate the complicated issues and anthropological problems for societal development