

BRIDGE DESIGN STUDIO (ELECTIVE LAB –II)

Course Code: 19CE2262

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Course Outcomes:

At the end of the course students will be able to

CO1: Understand preliminary design of a bridge and carry out the survey.

CO2: Workout the alignment and vertical profile of the bridge with bridge type.

CO3: Analyze and design the bridge structure for the given loads

CO4: Prepare the drawings and estimate the cost of the bridge project

CO5: Prepare the construction schedule and planning

LIST OF EXPERIMENTS

1. Site measurement of prototype structure and estimation quality and cost.
2. Ground survey for location of piers and span length
3. Bridge alignment, height, and curvature study and length of bridge.
4. Study on the structural systems for the bridge (Ex :prestressed concrete, cable stayed bridge, steel bridge, etc)
5. Analysis of bridge for various loads
6. Design of bridge girder structure
7. Design of bridge pier section
8. Analysis and design of bearings
9. Analysis and design of sub structure
10. Preparation of drawings for the bridge

11. Cost estimation for actual structure with material and construction cost
12. Construction planning and scheduling for the bridge

References:

1. Johnson victor D, -Essentials of Bridge Engineering||, 7th edition, Oxford, IBH Publishing Co., Ltd., 2006.
2. Krishnam Raju N., -Design of Bridges||, 4th edition, Oxford and IBH Publishing Co., Ltd., 2008.