5CE01 Reinforced Cement Concrete -II

Course Outcomes:

After completion of this course, students will be able

1. To explain properties of cement, aggregate, concrete, admixtures.
2. To explain the basic design philosophy behind the Working Stress method.
3. To explain the basic design philosophy behind the Limit state method.
4. To explain the preliminary requisites of designing an earthquake resistant structure.
5. To design basic structural elements like slabs, beams, columns, staircases & isolated footings.
6. To design liquid retaining structures resting over firm strata.

5CE02 Fluid Mechanics -II

Course Outcomes:

After completion of this course, students will be able

1. To explain flow through open channels and hydraulic jump.
2. To solve problems of rectangular and trapezoidal channel section.
3. To solve problems of coefficient of contraction, discharge, velocity
4. Explain various elements of hydraulic plants and turbines.
5. To determine different types of flow profiles.
6. To differentiate between gradually varied flow and rapidly varied flow

5CE03 Building Planning & CAD

Course Outcomes:

Upon completion of this course, students will be able to

1. Draw free hand sketches of various building elements.
2. Explain principles of planning, building bye laws.
3. The student should be able to apply these principles of planning.
4. Students should be able to provide aesthetically pleasing, functional as well as economical solution to the problem at hand.
5. Manually prepare a submission drawing satisfying the building by-laws.
6. Layout the building on field.
7. Explain Computer Aided Drawing concepts.

8. Draw, Dimension and Plot building drawing.
9. Use CAD software to prepare a submission drawing satisfying the building by-laws.

5CE04 Surveying -II

Course Outcomes:

After completion of this course, students will be able

(i) To explain classification of surveying, different types of bearings, concept of leveling, theodolite traversing, contouring, tacheometric surveying, curves, triangulation, hydrographic surveying and photogrammetric surveying.
(ii) To solve problems related with above topics
(iii) To carry out various surveys in the field.
(iv) To prepare drawings and reports based on the field surveys

5CE06 Communication Skills

Course Outcomes:

Upon completion of this course, students will be able to

1. Demonstrate different forms of communication.
2. Write technical reports.
3. Participate in interviews and group discussion.

6CE01 Numerical Methods and Computer Programming

Course Outcomes:

Upon completion of this course, students will be able to

1. Define computer programming related terms
2. Explain computer programming related concepts
3. Write demonstration programs to show working of I/O statements, control structures, arrays, library functions and subprograms
4. Analyze programs related to numerical methods, civil and structural engineering problems
5. Write programs to demonstrate the application of programming to numerical methods, civil and structural engineering problems
6. Develop own program for automating/ solving Civil Engineering problems

6CE02 Design of RCC and Prestressed concrete structures

Course Outcomes:

Upon completion of this course, students will be able to

1. Explain analysis and design procedure for various steel structural elements.
2. Analyze roof trusses.
3. Apply codal provisions for steel structures.
4. Design tension member, compression member, roof trusses, riveted and welded connections, beams, plate girders, connections, simple and compound column, solid slab & gusseted base for various load conditions.
5. Explain design procedure for RCC structural elements like flat slab, cantilever & counterfort retaining wall, combined footing, grid slab.
6. Apply codal provisions for RCC structures.

6CE03 Water Resources Engineering-I

Course Outcomes:

Upon completion of this course, students will be able to

1. Explain basics of hydrology for estimation of flood
2. Apply knowledge of crop water requirements for finding consumptive use of water & its estimation.
3. Use ground water hydraulic to find yield of open wells & tube wells.
4. Apply the knowledge of water harvesting to obtain its cost.
5. Fix Control levels from given data

(6CE04) Transportation Engineering-II

Course Outcomes:

At the end of Transportation Engineering-I course the student will be able:

1. To explain standard terminologies of railway track
2. To explain the component parts of permanent way and to evaluate geometric features of track
3. To describe railway turnout and their detailed component part, also facilities regarding maintenance of railway route.
4. To introduce development of air transportation, agencies controlling national and international aviation, component parts and zoning laws etc.
5. To demonstrate airport layout and traffic control stratagies.
6. To explain Tunnel Engineering and to evaluate methods in soft soil as well as hard soil.

6CE06 Estimating & Costing

Course Outcomes:

Upon completion of this course, students will be able to

1 Explain concepts related to reading drawing, measurements, preparing cost and quantity estimate for all types of building, earthwork calculations of road & canals, rate analysis, valuation, rent fixation, organization & role of government departments as construction agency, contracts and tender documents.

2 Calculate/ estimate the quantities of items, perform rate analysis of items of work, prepare all contract documents.

3 Prepare estimates, contract and tender documents of a project.

4 Perform valuation of existing buildings.

6CE10 Minor Project

A seven day group survey project based on any one topic
1) Irrigation Project
2) Rehabilitation of Village / Town
3) Water Supply Project
4) Sewerage System
5) Bridge on River

Post field work - Data Analysis, Design, Report & Drawing sheets.

Course Outcomes:

Upon completion of this course, students will be able to

1. Plan and execute a minor project.
2. Write project report.