Course Title: Design of Reinforced Concrete Structural Elements

Course Code: CEE 340

Course Type: Compulsory

Level: Undergraduate

Year / Semester: 3rd year / Fall

Teacher’s Name: Balafas I.

ECTS: 5

Lectures / week: 2x1.5

Laboratories / week: 1x1hr

Course Purpose and Objectives:
- Familiarization with the properties of the materials constituting the reinforced concrete
- Recognition and understanding of the mechanical behavior of linear elements of reinforced concrete
- Learning methods of dimensioning of concrete elements in bending, shearing and torsion
- Understanding the methods of anchoring longitudinal and transverse reinforcements
- Detecting reinforcements in linear elements of reinforced concrete and understanding the role of their existence in the element
- Problem-free concrete construction supervision of concreting

Learning Outcomes:
The aim is to develop the student’s knowledge on the:
- Material properties of reinforced concrete
- Structural behavior of structural members made from reinforced concrete
- Detailing for adequate bond between steel and concrete
- Design of linear reinforced concrete members i.e. beams and columns for bending with and without axial loads
- Design for shear

Prerequisites:
CEE121, CEE230

Course Content:

Teaching Methodology:
Lectures (3 hours/week) - Recitation (1 hour/week)

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