ADDIS ABABA UNIVERSITY
ADDIS ABABA INSTITUTE OF TECHNOLOGY
SCHOOL OF CIVIL AND ENVIRONMENTAL ENGINEERING

CENG 3122 – REINFORCED CONCRETE STRUCTURES II [3] (5 CP)
ACADEMIC YEAR: 2019/2020

COURSE OUTLINE

1. **Plastic Moment Redistribution**
   1.1. Introduction
   1.2. Plastic hinge and collapse mechanism
   1.3. Rotation requirement
   -------- Assignment I --------
2. **Continuous Beams, One-Way Solid And Ribbed Slabs**
   2.1. Introduction
   2.2. Analysis and design of continuous beams.
   2.3. Analysis and design of one way slabs
   2.4. Analysis and design of one way ribbed slabs
   -------- Test 1 --------
   -------- Assignment II --------
3. **Two Way Slabs**
   3.1. Introduction
   3.2. Analysis and design of two way beam supported slabs
   3.3. Analysis and design of flat slabs
   -------- Assignment III --------
4. **Column**
   4.1. Introduction
   4.2. Analysis and design of short columns
   4.3. Analysis and design of slender columns
   -------- Assignment IV --------
   -------- Test 2--------
5. **Torsion**
   5.1. Introduction
   5.2. Equivalent truss analogy
   5.3. Design for torsion
   -------- Assignment V --------
   -------- Final Exam --------

Mark Distribution:*

Assignments	……. 10%
Test 1& Test 2	……. 30%
Final Examination	……. 40%
Semester Project	……. 20%
Total	……. 100%

References:
1. Reinforced Concrete: Mechanics and Design, by James G MacGregor and James K Wight.
2. Design of Concrete Structures, by Arthur H. Nilson, David Darwin and Charles W. Dolan.
3. Reinforced Concrete: A fundamental Approach, by Edward Nawy
4. Eurocode 2: Design of Concrete Structures- Part-1; General Rules and Rules for Buildings

Instructors:

Blog Link:
https://aaitrc2.wordpress.com