

ABET Course Syllabus (Structural Analysis II)

1. Course number and name

0902345: Structural Analysis II

2. Credits and contact hours

3 Credit Hours and 3 Contact Hours/week

3. Text book, title, author, and year

Structural Analysis, Hibbeler, R.C., 9th Edition, , 2014

Other course Materials:

- Notes

4. Specific course information

a. Course Description: Analysis of statically indeterminate structures, force method, slope-deflection equation, moment distribution method, stiffness matrix.

b. Prerequisites: (0902343) Structural Analysis I

c. Course Type: Obligatory Specialization Requirement

5. Specific goals for the course

a. Specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.

No.	Course Learning Outcomes (CLOs)
1	Understand the basis for indeterminate structure analysis
2	Apply the force method for the analysis of statically indeterminate beams, frames, trusses.
3	Apply the slope deflection equations for the analysis of statically indeterminate beams and frames.
4	Analyze continuous beams and frames using the moment distribution method
5	Analyze indeterminate trusses using Stiffness Method

b. explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.

Course addresses ABET Student Outcome(s): 1 as follows:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

6. Brief list of topics to be covered

- Introduction to indeterminate structures
- Review of deflection
- Force method
- Slope-deflection method in beams and frames
- Moment Distribution method
- Introduction to the Stiffness Method
- Truss Analysis Using the Stiffness Method