1. Course Name
Structural Analysis II
2. Course Code
CE322
3. Semester/Year
Second Semester / Third Year 2025-2026
4. Date of Preparation
2026/22/1
5. Available Attendance Methods
In-person
6. Total Study Hours / Total Units
60 theoretical hours / 4 units
7. Course Instructor's Name (If multiple, list all)
Name: noorulhuda kadhim hussein **Email: nooralhuda@uowa.edu.iq**

8. **Course Objectives**
o Provide students with general knowledge on the analysis of statically determinate and indeterminate structures. o Teach students the energy method to find displacements in trusses, beams, and structural frameworks (such as trusses, beams, bridges, etc.). o Teach students to analyze statically indeterminate structures using the force and displacement methods.
9. **Teaching and Learning Strategy** The strategy involves explaining the material, asking students continuous questions to encourage participation, using electronic tools to clarify different topics, conducting surprise and monthly written exams, and assigning homework for each explained topic

10. **Course Structure**

Week	Hours	Required Learning Outcomes	Unit or Topic Name	Learning Method	Assessment Method
1	4	Understand the basic concepts of energy and external work	External Work and Strain Energy	In-person	Discussion
2	4	Understand the principle of virtual work	Principle of Virtual Work	In-person	Written Exam
3	4	Apply the virtual work method to analyze trusses	Virtual Work Method: Trusses	In-person	Written Exam
4	4	Apply the virtual work method to analyze beams and frames	Virtual Work Method: Beams and Frames	In-person	Written Exam
5	4	Understand statically indeterminate structures	Statically Indeterminate Structures	In-person	Discussion
6	4	Learn the force method to analyze structures	Force Method of Analysis: General Procedure	In-person	Written Exam
7	4	Analyze beams using the force method	Force Method of Analysis: Beams	In-person	Written Exam
8	4	Analyze frames using the force method	Force Method of Analysis: Frames	In-person	Written Exam
9	4	Analyze trusses using the force method	Force Method of Analysis: Trusses	In-person	Written Exam
10	4	Understand the general procedures of the displacement method	Displacement Method of Analysis: General Procedures	In-person	Discussion
11	4	Understand slope-deflection equations	Slope-Deflection Equations	In-person	Written Exam
12	4	Analyze beams using the slope-deflection method	Beam Analysis	In-person	Written Exam
13	4	Analyze frames without sidesway using slope-deflection	Frame Analysis (No Sidesway)	In-person	Written Exam
14	4	Analyze frames with sidesway using slope-deflection	Frame Analysis (With Sidesway)	In-person	Written Exam

11. Course Evaluation

- **Surprise Exams: 5%**
- **Homework: 5%**
- **Classroom Activity: 5%**
- **First Exam: 12.5%**
- **Second Exam: 12.5%**
- **Final Exam: 60%**

12. Learning and Teaching Resources

Required Textbook

- ***Structural Analysis*** **by R. C. Hibbeler, Tenth Edition**

Main References (Sources)

- ***Elementary Theory of Structures*** **by Yuan-Yu Hsieh, Second Edition.**
- ***Structural Analysis*** **by Jack C. McCormac.**

Recommended Online Resources

- **YouTube Link**

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