Instructor: Dr. Amer Alkloub (a.kloub@ju.edu.jo)

Office Hours: Sunday, Tuesday, and Thursday 2:00 – 3:00 pm

PREREQUISITE(S):
• Structures I (0901341)

TEXT BOOK:
• Structural Analysis, R.C. Hibbeler, Prentice Hall, 9th edition

REFERENCES:

GRADING SYSTEM:
Mid Exam (40%) (Date of Exam: TBA)
Project (10%)
Final Exam (50%)

CONTENT:

<table>
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<th>Week</th>
<th>Topics</th>
<th>Chapter based on text book</th>
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<td>1-2</td>
<td>Review of Basic Concepts in Structural Analysis and determination of elastic deflection</td>
<td>Chapters 2-6</td>
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### Learning Outcomes

When this course has been completed the student should be able to:

1. Use the approximate method of analysis in estimation of frame reactions due to lateral or gravity loads.
2. Understand and apply the force method of analysis to analyze beams, no sidesway frames, and sidesway frames.
3. Understand and apply the slope-deflection method of analysis to analyze beams, no sidesway frames, and sidesway frames.
4. Understand and apply the moment distribution method of analysis to analyze beams, no sidesway frames, and sidesway frames.
5. Understand and apply the stiffness method of analysis to analyze trusses.
ABET OUTCOMES:

- An ability to apply knowledge of mathematics, science and engineering.
- An ability to function on multi-disciplinary teams.
- An ability to identify, formulate and solve engineering problems.
- An ability to communicate effectively.
- The broad education necessary to understand the impact of engineering solutions in a global and societal context.
- Recognition of the need for, and an ability to engage in life-long learning.
- A knowledge of contemporary issues
- An ability to use the techniques, skills and modern engineering tools necessary for engineering practice.