ARCE 504: FINITE ELEMENT METHOD FOR BUILDING STRUCTURES

Office: Building 21, Room 219C, Phone: 756-1343

Office Hours: M 8-9, TU 10-11, W 12-1, TH 2-3, F 2-3

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Textbook: Handouts by instructors

Recommended reading:

Lectures: MW 10-11.30, Building 21, Room 229

Grading:

Grading will be based on the following schemes:

<table>
<thead>
<tr>
<th>Scheme 1:</th>
<th>Scheme 2:</th>
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<tr>
<td>30% Homework</td>
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<td>25% Quizzes</td>
<td>45% Quizzes</td>
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<td>45% Final</td>
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Catalog Description

- Basic concepts of equilibrium and compatibility.
- Stiffness and flexibility properties of various types of finite elements.
- Development and application of displacement and force methods.
- Elastic stability and dynamic response of buildings to earthquake, wind and moving loads.
- Use of finite-element computer programs.

Learning Outcomes

- Acquire a fundamental working knowledge of finite element analysis
- Identify when finite element analysis is applicable and the limitations of such analysis
- Understand how to incorporate finite element analysis to better understand elemental and overall structural behavior.
- Understand basic modeling techniques using finite elements- meshing and element types
- Interpret finite element data output for beam and membrane elements

Plagiarism/Cheating

Plagiarism in any form is inappropriate and unprofessional and will not be tolerated. Students will not copy other students’ work and will keep their eyes only on their own paper during quizzes and examinations. Students failing to abide by these rules will be subject to the disciplinary procedures of the university. Cheating/plagiarism will result in an automatic failure in the course and a permanent notation that you cheated on your university records.

Furlough

This year presents some unique budgetary challenges for the University and the College. Due to inadequate funding, the faculty are on furlough for the year where they are required to take two days per month off and receive a 9.23% pay cut. As a result, the faculty is encouraged to find a commensurate reduction in workload. In response to this situation, the number of lessons in this course will be reduced by 10% resulting in two furlough drops where we will not attend scheduled class. These are tentatively scheduled for Monday, February 8 and Wednesday, March 10.