CNET3430 Structural Analysis

Instructor: Dr. Cheng Yu
Office: Discovery Park F115F
Office Hours: (T, Th) 1:00pm-2:00pm
Phone: 940-891-6891
Email: cheng.yu@unt.edu

Fall 2014
Time: (T, Th) 10:00 -11:20 am
Classroom: NTDP D202

Course Description:
This course presents the analysis of continuous structures using slope-deflection, conjugate-beam, and virtual work methods. Force and stiffness methods of analysis are applied to truss and frame structures. The course includes appropriate computer applications.

Course Objectives:
By the end of the course, you be able to:

- Understand the determinacy and stability of structures.
- Understand the formulation of equilibrium problems in linear elastic structures.
- Understand the force method of structural analysis.
- Understand the displacement method of structural analysis.
- Understand the energy method.
- Understand methods to calculate the deflection of linear elastic structures.

Program Outcomes (TAC of ABET):
Determining forces and stresses in elementary structural systems

Course Requirements:
Attendance – Attendance is mandatory. Lectures, projects, and class discussions will contain vital information needed to do well on the exams.

Required text Structural Analysis (8th)
Russell C. Hibbeler

Exams: There will be THREE exams. Exams will be based on text readings, handouts, class exercises, homework, and class lectures and discussions. Students are responsible for all text material, regardless of whether we review the text material in class or not.

Missed Exams: You will be allowed to make up a missed exam only if you have a documented university excused absence. If you know in advance that you will miss an exam, you MUST contact me before the scheduled exam. Make-up exams may not contain the same.
**Assignments:** In addition to the readings from the text, there will be writing assignments. No late assignments will be accepted.

Grades will be based on:

- Homework @ 25 = 25 pts
- Exam #1 @ 15 = 15 pts
- Exam #2 @ 15 = 15 pts
- Final Exam @ 25 = 25 pts
- Project @ 20 = 20 pts
- Project Bonus @ 5 = 5 pts
- CFS Competition @ 5 = 5 pts

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110 pts

**Grade Distribution**

- 90 - 110 = A
- 80 - 89 = B
- 70 - 79 = C
- 60 - 69 = D
- Below 60 = F

**Disabilities Accommodation:**
The University of North Texas complies with Section 504 of the 1973 Rehabilitation Act and with the Americans with Disabilities Act of 1990. The University of North Texas provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 during the first week of class.

**Additional Policies and Procedures:**

Tardiness: If you arrive late, please enter quietly and sit down. Do not walk in front of speakers or disrupt the class in any other way.

Cell Phones: Please remember to turn off phones prior to class.

Extra Help: PLEASE DO NOT WAIT UNTIL THE LAST MINUTE. If you are having trouble with this class, please come by my office during office hours. I am also available through email cheng.yu@unt.edu
**Course Outline:**
This course outline is tentative, and may be subjected to changes.

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<th>BOOK CHAPTER</th>
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<td>Week 3</td>
<td>Statically Determinate Trusses, Internal Loading in Structures</td>
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<td>CFS Competition Due, email entry to <a href="mailto:cfs_competition@unt.edu">cfs_competition@unt.edu</a></td>
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<td>Week 6</td>
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<td>Week 7</td>
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