Course Purpose:

CE 363 focuses on computing the response of statically indeterminate structural systems. This course will extend many of the concepts treated in CE 329, and it will introduce matrix methods of analysis that form the basis of all modern structural analysis software.

Course Objectives:

By the end of the course, you should be able to do the following:

- Compute structural deflections accounting for applied loads, temperature effects, initial fabrication errors, support settlements, and flexible supports.
- Determine internal member forces and resulting stress distributions.
- Analyze statically indeterminate structures using both stiffness and flexibility approaches.
- Use and/or develop structural analysis software to analyze complicated structural systems.
- Interpret the output from computer-based analyses for the purpose of structural design.

Text (optional):


Additional References:


Office Hours:

M/F 9:00 - 10:00
W 10:00 - 12:00

Office: ECJ 4.722
Phone: 475-6175
email: ewilliamson@mail.utexas.edu

Class Hours:

MWF 8:00 - 9:00 ECJ 5.410
Prerequisite:

CE 329

Conduct of Course:

Attendance: The course consists primarily of lectures and in-class problems. Attendance is essential and will follow the policies set forth in the Undergraduate and Graduate Catalogs.

Homework: Homework problems will be assigned regularly. Late work (any that come in after the beginning of the period on the due date) will receive a maximum grade of 50%. Late work will not be accepted after the solution has been made available, nor will late work be accepted from any student more than two times over the course of the semester.

Homework Format: The homework problems are probably the most important vehicle for learning the material presented in this course. There are two goals in doing the homework problems: (a) to learn the concept or method used in solving the given problem, and (b) to communicate your approach and results to someone else (the instructor or grader in this case). To encourage the achievement of these goals, I will insist that all homework assignments for the semester be done on engineering paper and/or printed out neatly from the computer. The evaluation of each homework will depend on both presentation aesthetics and technical correctness.

Tests: There will be two tests during the semester. Students will be given two hours to complete the midterm exams. Exact times and dates will be announced by the instructor. A final examination covering the entire course will be given during the regularly scheduled exam period (Saturday, December 16, 9:00 - 12:00 noon).

Missed Tests: If you miss a test without either a certified medical excuse or prior instructor approval, you may take a makeup test at a designated time near the end of the semester. Only one makeup test will be given. It will be fair but challenging! Tests missed with certified medical excuses or prior instructor approval will be dealt with individually. If you miss the final exam without a valid excuse, a zero will be averaged into your grade.

Grading: Grades will be determined according to the following format: Midterm exam with higher grade (30%), midterm exam with lower grade (25%), homework (15%), and final examination (30%). A grade of 90 or above will receive an A, 80 or above at least B, 70 or above at least C, and 60 or above at least D. Exception: In order to receive a passing grade, your exam average must be 60 or above.

Notice: I do not curve grades in this course. It is theoretically possible for everyone in the class to get an A (or an F). Your performance depends only on how you do, not on how everyone else in the class does. Therefore, it is in your best interest to help your classmates in every legal way possible.

Gray areas between guaranteed letter grades: There will be a “gray area” of several points below the specified numerical cutoff for letter grades. Thus, two people getting the same numerical grade (say an 89) might receive different grades for the course. If you are in one of these gray areas, whether or not you receive the higher or the lower grade depends upon your improvement over the semester and your participation in class and group work. If your test performance has shown improvement and you actively participate in class discussions, your grade will go up.

Academic Integrity: As engineers you will be responsible for upholding the canons of ethics for the profession. A test of your ability to do so is to uphold the University’s Academic Honesty Policy. While I do not anticipate problems of this nature, any instances of academic dishonesty will be dealt with immediately and severely in accordance with published procedures. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Because such dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. For further information, visit the Student Judicial Services web site http://deanofstudents.utexas.edu/sjs/.

Consulting with the instructor: You are strongly encouraged to discuss academic or personal questions with the instructor during office hours or by email.
Important Dates:

- September 5: Last day to drop course without approval of Chairman and Dean
- September 15: Last day to drop course for a possible refund
- September 27: Last day to drop course without possible academic penalty
- October 25: Last day to drop course with Dean’s approval
- November 23-25: Thanksgiving Holidays

Course Evaluation:

The students will evaluate the course and the instructor on forms provided by the Measurement and Evaluation Center.

Additional Information:

Web-based, password-protected class sites will be associated with all academic courses taught at the University. Syllabi, handouts, assignments, and other resources are types of information that may be available within these sites. Site activities could include exchanging email, engaging in class discussions and chats, and exchanging files. In addition, electronic class rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on restricting directory information, see the Undergraduate Catalog or go to: http://www.utexas.edu/student/registrar/catalogs/gi00-01/app/appc09.html.

The University of Texas at Austin provides upon request appropriate academic adjustments for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4241 TDD, or the College of Engineering, Director of Students with Disabilities at 471-4382.