

CEE 3055A – Structural Analysis, Fall 2013

TTh 8:05 – 9:25 am, Mason 1133

Course Description: Determination of internal forces and deflection in statically determinate trusses, beams, and frames. Introduction to analysis of statically indeterminate structures.

Prerequisites: COE 3001 - Deformable Bodies.

Text: *Fundamentals of Structural Analysis*, 4th Edition. Kenneth M. Leet, Chia-Ming Uang, Anne Gilbert. ISBN: 0073401099.

Instructor: Yang Wang, Ph.D.
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Office Hour: by email appointment, in Mason 4160

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Office Hours: MW 11-12, TBD (Mason 1201 – Student Commons?)

Grader: Chunhee Cho Email: ccho37@gatech.edu

Grading: Homework (15%, due weekly except for weeks with exams)
Two in-class exams (25%, 25%)
Final Exam (35%)

In-class Exam Schedule (Tentative)

1. October 1 (Tue)
2. November 12 (Tue)

Final Exam Schedule: December 10 (Tue) 8 – 11 am (Period 4 per Registrar's Office)

Course Policy:

1. The Institute mandates you to **check emails on each school day**: “*All students will have an e-mail account through the Georgia Institute of Technology that will be their official point of contact, and they are expected to check this account each school day.*” (<http://www.catalog.gatech.edu/rules/3a.php>) Please do so since email is the only way for the instructor to contact you.
2. Piazza will be used to post electronic materials for this course, and for sharing questions and answers (<http://piazza.com/gatech/fall2013/cee3055a/home>).
3. If you **miss a class**, it is your responsibility to keep abreast of latest material and any announcements by asking fellow students.
4. **Laptop or cell phone usage is not allowed** in the class.

5. In this class, you are allowed to work in groups on all homework and out of class assignments, but **any work you turn in must be completed by yourself**. Generally what this means is: 1) try the problem on your own, 2) if necessary ask for help/suggestions, 3) go back on your own and implement the suggestions.
6. You should strive to turn your assignments in on time. The **late homework policy** uses a time-credit system. You are allowed up to SIX "late days" over the course of the semester. You may use them whenever you like, although no more than two late days per homework. Once you have used your allotted days, additional late assignments will not be accepted.

Note that you cannot use less than a day (meaning a calendar day, **NOT a "School Day" or a "Business Day"**); for example, if an assignment is one hour late it will be considered a full day.

7. If you miss an exam/quiz without a documented excuse¹, you get zero points on that exam/quiz. In exceptional circumstances, **makeup exams or quizzes** may be given after the normal exam time. The makeups may be more difficult than the normal exams, due to the extra time you have compared with other students.
8. It is your responsibility to check possible **conflict in your final exams**, and contact the instructors to resolve the conflicts no later than 2 weeks before the Monday of the exam week: <http://www.registrar.gatech.edu/home/examguide.php>.
9. All in-class exams and the final exam are going to be **closed-book** while allowing cumulative cheat sheets. You can use a one-page two-sided cheat sheet in Exam 1, two pages in Exam 2, and three pages in the final exam. These exams are meant to be your own work.
10. Compliance with GATech's **Academic Honor Code** is expected (<http://www.honor.gatech.edu>). Plagiarizing is defined by *Webster's* as "to steal and pass off (the ideas or words of another) as one's own: use (another's production) without crediting the source." If caught plagiarizing, you will be dealt with according to the GT Academic Honor Code.

¹ A documented excuse includes an original document indicating the excuse (such as hospitalization, family emergencies, Institute activities, etc.), as well as a possible note from the Dean of Students that verifies the document.

CEE 3055 – Structural Analysis

Outline

Week 1. Introduction [Chapter 3.1 – 3.10; browse through Chapters 1 and 2]

Week 2 – 3. Determinate Trusses [Chapter 4.1 – 4.7]

Week 4 – 5. Determinate Plane Frames [Chapter 5.1 – 5.7]

Week 6 – 7. Deflections of Beams and Frames [Chapter 9.1 – 9.3]

Week 8 – 9. Work-Energy Method [Chapter 10.1 – 10.9]

Week 10 – 12. Flexibility Method for Statically Indeterminate Structures [Chapter 11.1 – 11.8]

Week 13 – 14. Slope-Deflection Method [Chapter 12.1 – 12.6]

Week 16. Influence Lines for Determinate Structures [Chapter 8.1 – 8.5]