

COURSE SYLLABUS

CNET 3430/CMGT3435 Structural Analysis

COURSE INFORMATION

Credit Hours: 3

Term: Fall 2026

Time: Lecture MW 3:25 pm -4:45 pm

Classroom: K150

INSTRUCTOR INFORMATION

Name: Saman Rashidyan, Ph.D., P.E., P.M.P.

Office: Discovery Park F101J

Office Hours: MW 2 pm-3 pm or by appointment

Phone: (940) 369-5263

Email: Saman.Rashidyan@unt.edu

COMMUNICATION EXPECTATIONS

- You can communicate with your instructor via email any time. Emails will be answered within 48 hours.
- Grades, PowerPoint files and announcements will be posted on Canvas.

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 STRUCTURE

Course format/content delivery: face-to-face.

Length of the semester: Aug 17 – Dec 11

COURSE PREREQUISITE

ENGR 2332 (Mechanics of Materials) / ENGR 2304 (Statics and Strength of Materials).

COURSE OBJECTIVES

By the end of the course, you will 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

ABET # 4 an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.

MATERIALS

Required Textbook

Structural Analysis* (10th), Russell C. Hibbeler, Pearson, 2017.

* Course outline is based on this textbook.

MINIMUM TECHNOLOGY REQUIREMENTS

- Computer
- Reliable internet access
- [Canvas Technical Requirements](https://clear.unt.edu/supported-technologies/canvas/requirements) (<https://clear.unt.edu/supported-technologies/canvas/requirements>)

COMPUTER SKILLS & DIGITAL LITERACY

- Using Canvas
- Using email with attachments

TECHNICAL ASSISTANCE

Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues. UIT Help Desk: [UIT Student Help Desk site](http://www.unt.edu/helpdesk/index.htm) (<http://www.unt.edu/helpdesk/index.htm>)
Email: helpdesk@unt.edu , Phone: 940-565-2324

COURSE EVALUATION

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course. Please don't forget to submit the course evaluation when the link is sent to you in November.

TENTATIVE COURSE OUTLINE

The course outline may be subjected to modifications with notice.

Week	Date	Topic	Book Chapter
1	8/17	Types of Structures and Loads	1
	8/19	Types of Structures and Loads	1
2	8/24	Analysis of Statically Determinate Structures	2
	8/26	Analysis of Statically Determinate Structures	2
3	8/31	Analysis of Statically Determinate Structures	
	9/2	Analysis of Statically Determinate Trusses	2
4	9/7	Labor Day (no classes, university closed)	3
	9/9	Analysis of Statically Determinate Trusses	3
5	9/14	Internal Loadings Developed in Structural Members	4
	9/16	Internal Loadings Developed in Structural Members	4
6	9/21	Internal Loadings Developed in Structural Members	4
	9/23	Exam 1	
7	09/28	Influence Lines for Statically Determinate Structures	6
	09/30	Influence Lines for Statically Determinate Structures	6
8	10/5	Influence Lines for Statically Determinate Structures	6
	10/7	Deflections	7
9	10/12	Deflections	7
	10/14	Deflections	7
10	10/19	Deflections Using Energy Methods	8
	10/21	Deflections Using Energy Methods	8
11	10/26	Analysis of Statically Indeterminate Structures by the Force Method	9
	10/28	Exam 2	
12	11/2	Analysis of Statically Indeterminate Structures by the Force Method	9
	11/4	Displacement Method of Analysis: Slope-Deflection Equations	10
13	11/09	Displacement Method of Analysis: Slope-Deflection Equations	10
	11/11	Displacement Method of Analysis: Moment Distribution	11
14	11/16	Displacement Method of Analysis: Moment Distribution	11
	11/18	Stiffness Method of Analysis (Trusses)	14
15	11/23	Thanksgiving Break (no classes)	
	11/25		
16	11/30	Stiffness Method of Analysis (Beams)	15
	12/2	Stiffness Method of Analysis (Frames)	16
		Final Exam 1 - 3 p.m. Wednesday, December 9	

COURSE REQUIREMENTS

Exams

Exams will be based on the textbook, handouts, class exercises, homework, class lectures and class 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 missed exams only if you have a documented university excused absence. Make-up exams may not be the same as the original.

Homework

Homework is due one week, unless otherwise noted. You are NOT allowed to turn in late homework.

GRADING

Attendance and class participation	5
Homework and Assignments	20
Exam #1	22.5
Exam #2	22.5
Final Exam	30
Total	100

GRADE DISTRIBUTION

90 – 100 and higher	A
80-89	B
70-79	C
60-69	D
Below 60	F