

COURSE SYLLABUS

CNET3430 Structural Analysis

COURSE INFORMATION

Credit Hours: 3
Term: Fall 2018
Time: (Tu-Th) 8:30 am -9:50 am
Classroom: D201

INSTRUCTOR INFORMATION

Name: Dr. Saman Rashidyan
Office: Discovery Park F115V
Office Hours: (Tu-Th) 10:00am-11:30am & (Tu-Th) 4:00pm-5:00pm or by appointment
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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 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 (TAC OF ABET)

Performing standard analysis & design in at least one sub-discipline related to construction engineering (#8).

MATERIALS

Required Textbook

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

* Course outline is based on this textbook.

TENTATIVE COURSE OUTLINE

The course outline may be subjected to modifications with notice.

Week	Topic	Book Chapter
1	Introduction, Review Statics, Types of Structures and Loads	1
2	Statically Determinate Structures	2
3	Statically Determinate Trusses, Internal Loading in Structures	3,4
4	Influence Lines	6
5	Deflections and Energy Methods	8
6	Deflections and Energy Methods	8, 9
	Exam #1 (Oct 4)	
7	Deflections and Energy Methods, Force Method	9, 10
8	Force Method	10
9	Force Method	10
10	Displacement Method of Analysis	11
11	Displacement Method of Analysis	11, 12
	Exam #2 (Nov 8)	
12	Displacement Method of Analysis	11, 12
13	Stiffness Method of Analysis (Truss)	14
14	Stiffness Method of Analysis (Beam, Frame).	15,16
15	Review	
16	Final Exam (Dec 11, 8:30am-10am)	

COURSE REQUIREMENTS

Exams

Exams will be based on text books, 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. Please fold your homework, put your name on it and place it on instructor's desk before class begins.

Late Homework: You are allowed to turn in only ONE late homework. The late homework will not be accepted if it is submitted more than one week.

GRADING

In-class assignments	15
Homework	20
Exam #1	20
Exam #2	20
Final Exam	25
Total	100

GRADE DISTRIBUTION

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

DISABILITIES ACCOMMODATION

Any accommodations for differing abilities will be made for this course as per the policies and determination of the Office of Disability Accommodation: <http://disability.unt.edu/>

ADDITIONAL POLICIES

- Please turn off your cell phones prior to class.
- Using cell phones and personal computers are not allowed during exams.