

## **ENGR2304 Statics and Strength of Materials** **(3 credit hours: 3)**

Instructor: Zhenhua Huang  
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Office Hours: (T, Th) 2:30 pm-4:00 pm  
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Fall 2025  
Time: (T, Th) 4:00-5:20 pm

Meeting Place: B187

### **Course Description:**

This course introduces the basic concepts of statics and the strength of materials.

### **Course Objectives:**

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

- Understand and calculate the force vectors and moments,
- Understand and calculate the equilibrium,
- Understand and calculate internal forces for trusses and frames,
- Understand and calculate the geometrical properties, including centroid, moment of inertia, etc.
- Understand and calculate stress and strains,
- Understand the mechanical properties of materials,
- Understand and analyze members under axial load, torsion, and bending.

### **Course Requirements:**

Attendance – Attendance is mandatory. More than six absences will result in an “F” grade. Lectures, projects, and class discussions will contain vital information needed to do well on the exams.

#### **Required text** STATICS AND MECHANICS OF MATERIALS (6<sup>th</sup>)

R. C. HIBBELER  
Pearson ISBN-13: 978-0-13-796471-0

Exams: There will be THREE exams (this includes 2 quizzes and a final exam), each quiz is worth 20 points. Exams will be based on text readings, handouts, class exercises, videos, 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 will not contain the same questions.

Assignments: In addition to the readings from the text, there will be writing assignments. No late assignments will be accepted. No emailed assignments will be accepted.

### **Grading Policy:**

Grades will be based on:

Attendance, Participation, and Professionalism @ 10	=	10 pts
HW Assignments @ 10	=	20 pts
2 quizzes @ 25	=	40 pts
Final @ 30	=	30 pts

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100 pts

Extra credit: There is none.

### **Grade Distribution:**

90 - 100 = 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.

**Course Schedule:**

Time	TOPIC	BOOK CHAPTER
Class Week 1	General Principles, Force	1,2
Class Week 2	Force, Moment	2,3
Class Week 3	Equilibrium	4
Class Week 4	Structural Analysis	5
Class Week 5	Geometrical Properties	6
Class Week 6	Quiz 1	
Class Week 7	Stress and Strain	7
Class Week 8	Mechanical Properties	8
Class Week 9	Axial Load	9
Class Week 10	Axial Load	9
Class Week 11	Quiz 2	
Class Week 12	Torsion	10
Class Week 13	Bending	11
Class Week 14	Bending	11
Class Week 15	QA	
Class Week 16	Final Exam	