



MENG 3306 Mechanics of Materials
Course Syllabus

Semester / Year	Spring / 2023
Catalog Description	Stress and strain; uniaxially loaded members; centroids and area moments of inertia; normal and shear stresses; beam deflections; buckling of columns; pressure vessels; combined stresses; failure criteria. Three hours of lecture per week.
Prerequisites	Grade C or better in ENGR/MENG 2301 Mechanics - Statics
Section Number	001
Instructor Name	Professor Matthew Lucci
Contact Information	mlucci@uttyler.edu
Class Type / Instruction Mode / Location	Face-to-Face, RBN 3038
Class Time	11:00 AM - 12:20 PM Tuesdays and Thursdays
Office Hours	12:30 PM - 2 PM on Tuesdays and Thursdays, or by appointment. RBN 3004 in person or virtual.
No. of Credits	3
Required Textbook	Mechanics of Materials, 10th edition, by Russell C. Hibbeler
Optional References	
Additional Rules and Requirements	Attendance is highly encouraged.
Evaluation Method	Project: 40% Homework: 10% Quizzes: 10% Exam 1: 20% Exam 2: 20%
Grading Policy / Scale	Letter grades, scale: A: 90 – 100; B: 80 – 89; C: 70 – 79; D: 60 – 69; F: < 60
Important Events / Dates	Check the University academic calendar before entering the dates. Census date: January 23, 2023 Exam date: TBD Last date to withdraw from one or more 15-week courses: March 23, 2023 Final date: TBD
Attendance / Makeup policy / other rules	There will be no make-up exams or quizzes. Students may receive up to three (3) excused absences by notifying the professor ahead of time for medical/personal reasons.
Course Learning Objectives / ABET & PEOs Relation	By the end of this course, students will be able to: 1. Use various external loads to determine internal forces and related stress and deformation for a variety of structures. 2. Determine the state of stress at a point and calculate principal stresses and directions.



	<ol style="list-style-type: none">3. Relate stress to strain using material properties and calculate deformations.4. Design and analyze beams and shafts based on strength and deformation requirements.5. Use Failure Theories to predict ductile or brittle material failure.6. Use elastic instability and column buckling analysis to design columns.
Tentative Topics / Course Plans	<ol style="list-style-type: none">1. Normal and shear stress2. Normal and shear strain3. Mechanical properties of materials4. Axial load5. Torsion6. Bending7. Stress and strain transformation8. Beam and shaft design9. Deflections of beams and shafts
University Policies	https://www.uttyler.edu/academic-affairs/files/syllabus_information_2021.pdf