



MENG 3306 – Mechanics of Materials Course Syllabus

Semester / Year	Fall 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/EENG 2301 Mechanics - Statics								
Section Number	001								
Instructor Name	Dr. Hamed Hosseinzadeh								
Contact Information	Email: TBD								
Class Type / Instruction Mode / Location	F2F Ratliff Building North 3041								
Class Time	Tu/Th 3:30PM - 4:50PM								
Office Hours	Tuesday/Thursday 09:00 AM to 12:00 PM; By appointment								
No. of Credits	3								
Required Textbook	Mechanics of Materials, 10th edition, by Russell C. Hibbeler								
Optional References	N/A								
Additional requirements	N/A								
Evaluation Method	<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Homework</td> <td style="text-align: right;">15 %</td> </tr> <tr> <td>Mid Exam</td> <td style="text-align: right;">30 %</td> </tr> <tr> <td>Project</td> <td style="text-align: right;">15 %</td> </tr> <tr> <td>Final Exam</td> <td style="text-align: right;">40 %</td> </tr> </table>	Homework	15 %	Mid Exam	30 %	Project	15 %	Final Exam	40 %
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Grading Policy / Scale	Letter grades: 90-100: A, 80-89: B, 70-79: C, 60-69:D, 0-59: F Note: 89.4 == B								
Important events / dates	Census date: September 1 st , 2023. Last date to withdraw from one or more 15-week courses: October 30, 2023 (https://www.uttyler.edu/schedule/files/2023-2024/academic-calendar-2023-2024-main-20230328.pdf) <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Mid Exam</td> <td style="width: 30%; text-align: center;">Tuesday</td> <td style="width: 20%; text-align: center;">September</td> <td style="width: 20%; text-align: right;">26th</td> </tr> <tr> <td>Final Exam</td> <td style="text-align: center;">Thursday</td> <td style="text-align: center;">November</td> <td style="text-align: right;">30th</td> </tr> </table>	Mid Exam	Tuesday	September	26th	Final Exam	Thursday	November	30th
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Attendance / Makeup policy / other rules	Attendance is required , Missing 3 classes ==> F No makeup exams will be authorized without providing an official document showing that your absence is in line with university rules.								



Course Learning Objectives / ABET & PEOs Relation	By the end of this course, students will be able to: <ol style="list-style-type: none">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.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. 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