ME 304  
Mechanics of Materials

Instructor: Dr. Alexander Lehman  
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619-375-0040

Lecture: TR 12:30 - 1:45pm, PG-153

Office Hours: MW 3:30-5pm, E-323A, and by appointment.


Prerequisites: ME 200 (Statics).


Course Requirements:  
There are several things that you need to do to successfully complete this course:  
1. Attend class meetings, and participate in discussions and in-class activities.  
2. Complete the homework and other assignments on time.  
3. Prepare for and attend the midterm and final exams.

Grading:  
<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>30%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>35%</td>
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<tr>
<td>Final Exam</td>
<td>35%</td>
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Homework assignments: Homework is will be submitted via blackboard, and must be in by midnight at the end of the date due (generally Mondays). Homework is not considered complete until it is successfully uploaded to blackboard; late homework will not receive full credit. Homework will be graded emphasizing completeness rather than accuracy; incomplete or unacceptably brief solutions will not receive full credit.

Attendance: I do not keep a record of attendance, but being present at class sessions is an expectation for this course. As such, “being absent” is not an acceptable excuse for submitting work late. If you will not be able to turn in an assignment on time, please make arrangements with me ahead of time.
Student Learning Outcomes (SLOs):
This course is designed for students to develop a basic understanding of the mechanics of
1. Stress/Strain
2. Constitutive Relations
3. Axial Loading
5. Torsion
6. Flexure
7. Composite Beams
8. Bending Deformation
9. Thin Walled Pressure Vessels
10. Combined Loadings
11. Stress/Strain Transformation
12. 3-D Elasticity

Contribution to Professional Component: Engineering Topics: 3 credits

Relationship of Course to Program Outcomes:
PO 1: The ability to apply knowledge of mathematics, science, and engineering.

PO 5: The ability to identify, formulate, and solve engineering problems.

PO 12: The ability to apply principles of engineering, basic science, and mathematics (including multivariate calculus and differential equations) to model, analyze, design, and realize physical systems, components or process.

Assignments and Exams

Homework:
<table>
<thead>
<tr>
<th></th>
<th>Due</th>
<th>Problems</th>
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<tbody>
<tr>
<td>1</td>
<td>2/6/17</td>
<td>1.10, 1.15, 1.36, 1.43</td>
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<tr>
<td>2</td>
<td>2/13/17</td>
<td>2.2, 7.3, 7.7</td>
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<tr>
<td>3</td>
<td>2/20/17</td>
<td>7.32, 7.132</td>
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<td>4</td>
<td>2/27/17</td>
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<td>3/6/17</td>
<td>7.98, 7.104, 2.93, 2.95</td>
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<td>6</td>
<td>4/3/17</td>
<td>3.9, 3.37, 3.53</td>
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<td>7</td>
<td>4/10/17</td>
<td>7.85, 7.86, 5.9, 5.22</td>
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<td>4/17/17</td>
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<td>9</td>
<td>4/24/17</td>
<td>6.12, 6.13, 6.18</td>
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<tr>
<td>10</td>
<td>5/3/17</td>
<td>8.32, 8.37, 10.15, 10.27</td>
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All assignments and dates are subject to change.

Exams:
Midterm Exam: March 9th
Final Exam: Thursday, May 11th, 10:30am – 12:30pm