Administrative:  
Dr. Mark Wasikowski (Adjunct Lecturer)  
Mark.Wasikowski@unt.edu;  
Grader: Nima  
Class: MW 4:30 – 6:20 PM DP D215; Office: F115F MW 12:00 – 12:30 and 2:30 – 4:20;  

Course Description:  
Applications of the principles of mechanics and mechanics of materials to machine design. The elements of machines are analyzed in terms of their dynamic behavior. Selection and sizing of machine elements. Students use the finite element technique for the analysis of machines and their counterparts. Students must pass ENGR 2332 (Mechanics of Materials) to enroll in this course.  

Textbook (Required):  
Textbook (Reference):  

Class Format:  
New theory presented during lecture using PowerPoint. PowerPoint is available on BB before lecture. Theory illustrated using by practical solving problem. Read textbook and review lectures ahead of time. Come to class with questions and ready to participate. Attendance taken often. Pop Quizzes and/or attendance quizzes may occur anytime. NO Late homework accepted due to compressed schedule. Students are encouraged to use any 3D modeling software to better present homework. Course material and announcements are posted on Blackboard at www.learn.unt.edu. Any important notices regarding course will be sent by e-mail. Please make sure we have your correct UNT e-mail address and check your e-mail every often. You need a math calculator, basic drafting equipment, and engineering grid paper.  

Course Outcomes:  
Upon successful completion of this course, students will:  
1. State the fundamental principles used in the study of elements for machine design.  
2. Apply principals of mechanics, materials, stress analysis, statics, and dynamics to machine sizing  
3. Define, evaluate, and select appropriate materials for design.  
4. Determine loads applied.  
5. Determine failure and deformation mode of a design.  
6. Apply static failure theories in design analysis.  
7. Apply dynamic failure theories in design analysis.  
8. Select appropriate dimensions and size of machine elements.  

Grade Policy:  
grades based on 2 term exams, comprehensive final, participation. Homework problems often assigned, but not collected. Pop Quizzes anytime. Group collaboration on homework encouraged - small study groups. Make-ups will be given only for University excused absences, given notification beforehand. Re-grade requests accepted only the day handed back. Cell phone / electronics are not allowed during exams - simple math calculators only. NO curve – straight 90/80/70/60 scale. Extra credit may be offered.  

Tentative Schedule:  
Exam 1 20% 2 July Chapters 1 - 7  
Exam 2 20% 16 July Chapters 9 - 15  
Final 25% 8 August Comprehensive  
Participation & Attendance 20% Read lectures / ppt on time and participate in class  
Homework & Pop Quizzes 15%
Tentative Course Outline:

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<th>Week</th>
<th>Topic</th>
<th>Book Chapter Reading</th>
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<td>Part 1 - Fundamentals Review</td>
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<td>1</td>
<td>Introduction, Load, Stress, Strain</td>
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<td>2</td>
<td>Failures - Static, Fatigue and Impact</td>
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<td>Part 2 - Machine Elements</td>
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<td>Columns, Cylinders, and Shafts</td>
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<td>4</td>
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<td>5</td>
<td>Review &amp; Mid Term 1</td>
<td>-</td>
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<td>6</td>
<td>Gears</td>
<td>14, 15</td>
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<td>7</td>
<td>Review &amp; Mid Term 2</td>
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<td>8</td>
<td>Fasteners and Springs</td>
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<td>Brakes, Clutches, Flexible Elements</td>
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<td>10</td>
<td>Materials, Manufacturing, Tribology and Review</td>
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Additional Class Policies:

1. The UNT Catalog procedures on cheating and plagiarism will be vigorously enforced. It is the duty of each student to protect their work so it is not available to others for submission as their efforts. This is especially true of files that are generated on the computer. Students that knowingly allow others to use their work are partners in this unethical behavior. All rules relating to academic dishonesty will be enforced in accordance with University policies.

2. State common law and federal copyright laws protect this course lectures and materials. They have my own original expression and revisions to the textbook author(s) and I record them at the same time that I deliver them in order. Whereas you are authorized to take notes in class, thereby creating a derivative work from my lecture, and/or make a print of my lecture notes/slides. The authorization extends only to making one set of notes for your own personal use and no other use. You are not authorized to record my lectures, to provide your notes to anyone else or to make any commercial use of them without express prior permission from me.

Academic Dishonesty:

According to the UNT Faculty Handbook, “academic dishonesty refers to the use of any unauthorized assistance, the acquisition (without permission) of academic material belonging to a faculty member, dual submission or resubmission of a paper or project without permission of the professor, and knowingly or negligently using paraphrase or direct quotation without full and clear acknowledgement. Misconduct for which students and/or groups are subject to discipline also includes knowingly furnishing false or misleading information to any university official (including faculty).” Academic dishonesty of any kind will not be tolerated in this class. If academic dishonesty is discovered, the student(s) involved will receive an automatic “F” in MEEN 3130. The maximum punitive penalty, permanent expulsion from UNT, will be sought for any student caught acting with academic dishonesty. If you are unsure whether a particular action or behavior constitutes academic dishonesty, ask the instructor for clarification before proceeding.

Disability Accommodation Policy:

All reasonable accommodation will be made to facilitate special needs. However, it is the student's responsibility to make any special needs known to the instructor. It is recommended that students with special needs first meet with the staff of the Office of Disability Accommodation (ODA), Union Suite 322, (940) 565-4323, then meet with the instructor. For more information, see http://www.unt.edu/oda.