ENGG2160
Mechanics II - Fall 2010

Professor and TA Information

Professor: Dr. Michele Oliver, P.Eng., Office: Room 1335, Thornbrough Building, Phone: (519) 824-4120 (Extension 52117), Fax: (519) 836-0227, E-Mail:moliver@uoguelph.ca

Office Hours: By appointment (if you've got a quick question/concern please feel free to send me an email or talk to me before or after class; if you have question(s)/concern(s) that requires more time, we can set a time to meet that will work for both of our schedules)

Teaching Assistants:

Mr. Matt Brunsting, mbrunsti@uoguelph.ca

Mr. Cameron Farrow, cfarrow@uoguelph.ca

Course and Schedule Information

Course Description: Study of the fundamental principles of the mechanics of deformable materials; stress and strain; Mohr's circle for transformation of stress and strain; deflection under load; design of beams, shafts, columns and pressure vessels; failure theory and design.

Prerequisites: ENGG*1210, ENGG*1500, 0.50 credits in Calculus

Class Time: Mon,Wed, Frid – 11:30-12:20 p.m., Rm. 100, Axelrod Building

Tutorial: Section 1 – Mon 01:30PM - 02:20 p.m., Mack, Room 227
Section 2 – Wed 1:30-2:20 p.m., Rozh, Room 109
Section 3 – Fri 1:30-2:20 p.m., Rozh, Room 108
Section 4 – Tues 3:30-4:20 pm, Rozh, Room 107

Text (Required): R.C. Hibbeler, Mechanics of Materials – Eighth Edition, Prentice Hall, Toronto (available for purchase in the bookstore).

Course Website: D2L Engg 2160.

Learning Objectives

Upon successful completion of this course, students will be able to:

- Understand the stress-strain behavior of engineering materials in service
- Develop adequate procedures for finding the required dimensions of a member of a specified material to carry a given load subject to stated specifications of stress and deflection

Schedule of Topics

1. Stress and Strain – Axial Loading
2. Torsional Loading
3. Flexural Loading
4. Transformation of Stress and Strain
5. Deflection of Beams
6. Columns

Marking

Activity	Percentage of Final Grade
Assignments (approximately 10)	0%
In Tutorial Quizzes (8); top 6 quiz marks count (5% each)	30%
Midterm Exam – Wed. Oct. 27th, 2010 11:30-12:20 p.m. (Room 100, Axelrod Building)	30% or 0% (whichever provides the highest overall course grade)
Final Exam – Wed. Dec. 8th, 2010 7:00 – 9:00 p.m. (Location TBA)	40% or 70% (whichever provides the highest overall course grade)

If a student does not write the midterm exam, the percentage weighting will be shifted to the final exam such that the final exam will be worth 70% of the student's final grade. Students are strongly advised to study for and write the midterm exam because material from the second half of the course builds on first half course material.

Assignments

There will be approximately 10 unmarked assignments, each of which will relate quite closely to the quizzes.

In Tutorial Quizzes

Quizzes need to be written in the student's assigned section in order for the quiz mark to count. Only in extenuating circumstances, when accompanied by appropriate documentation and timely instructor notification, will students be allowed to write a quiz in a section other that the one that they have been assigned to.

Grading Scale (as per the 2005-2006 University of Guelph Undergraduate Calendar)

Letter Grade	Percent Range
A+	90-100%
A	85-89%
A-	80-84%
B+	77-79%
B	73-76%
B-	70-72%
C+	67-69%
C	63-66%
C-	60-62%
D+	57-59%
D	53-56%
D-	50-52%
F	0-49%

Disclaimer

The instructor reserves the right to change any or all of the above in the event of appropriate circumstances, subject to the University of Guelph Academic Regulations.