MecE 260 – Mechanical Design I – Winter 2012

Syllabus

Instructor: Pierre Mertiny, Ph.D., Dipl.-Ing., P.Eng.
Room: MEC 4-31C, Phone: 492-6982
Open door policy & scheduled group meetings
Email: pmertiny@ualberta.ca (Please start the subject line with MECE360)

Time/location:
Lec MW 8:00 – 8:50, ETLE1-003; Lab, M 14:00 – 16:50, Mec 2-1

Co-requisites:
Civ E 270, Mec E 265. Anyone missing these courses,
ASAP see Glen Thomas < senior.tutor@ualberta.ca >

Web pages:
This website provides the course information, lecture and lab notes, as well as exam marks.
To access the website, go to http://www.ualberta.ca, then in the top right corner click on eClass. Using your user CCID and password, login to eClass. In your Course List, select MEC E 260.

Course content:
(1) Introduction to engineering design
(2) Conceptual design stage
(3) Basic engineering analysis – part I (force analysis)
(4) Technical report writing
(5) Role of ethics and failure
(6) Materials and manufacturing
(7) Design considerations (“design for’s”)
(8) Basic engineering analysis – part II (stresses and strains)

Textbook and References:
Required #1: Lecture notes and handouts will be made available on eClass.

Exams:
- Midterm exam: Wednesday, February 15, 2011, in class (50 min)
- Bell Ringing Exam: Monday, March 26, 2011, in-class (afternoon seminar).
- Final exam: Thursday, April 24, 2011 at 9:00 am
All three exams will be closed-book with faculty approved non-programmable calculators allowed.

Marking scheme:
Midterm exam 10%
Bell Ringing Exam: 10%
Final exam 40%
Project reports 25%
Project test results 5%
Dissection lab 4% (1% for each of 4 labs; 1/4 deduction for malfunctioning device after re-assembly)
Mini-project 6%
WHMIS quiz Successful completion of the WHIMS quiz is required for pick-up of the mini-project kit.

- Information on the grading system: www.uofaweb.ualberta.ca/grades.
- The conversion of marks from assignments and examinations into a final grade based on the four-point system will be performed by using absolute measures in combination with the subjective procedures described in Section 23.4 (4) of the University Calendar.
- If a student misses the midterm exam, for any valid reason, the final course assessment will be based on a 50% final examination.
• Satisfactory performance in the midterm and final exams (combined passing mark) is required for passing the course independently from the project part of the course.

• For group projects, the default is that all group members receive the same mark. However, in extreme cases, individual marks for group work may be adjusted by up to 30% of the course total (up or down) based on a conclusive and consistent review composed of an instructor assessment and a confidential peer evaluation.

• NOTE: Anyone repeating the course should contact Dr. Mertiny ASAP.

University policies:
Policy about course outlines can be found in §23.4(2) of the University Calendar. The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behavior (online at www.ualberta.ca/secretariat/appeals.htm) and avoid any behavior which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.