University of Waterloo

4th Year Students in Mechanical Engineering

Welcome Back!

and

Happy New Year!

Some People in Mechanical Engineering You Should Know

Professor Pearl Sullivan
Department Chair

Professor David Weckman

Associate Chair Undergraduate Studies

(E5-3107, me-ugchair@uwaterloo.ca, ext. 37200)

Welding & Joining Specialization Coordinator

ME 482 Mechanical Engineering Project Coordinator

Lynn Crema, ME Academic Advisor
E5 – 3106, ext. 33625 lcrema@uwaterloo.ca

American Society of Mechanical Engineering Northern Alberta Design Challenge Awards and Dept. of Mechanical & Mechatronics Engineering Design Awards

Spring 2011

1st Prize for $500

Jeremy Rochussen – Redesign of an HEV Starter/Generator Housing for Improved Thermal Management

2nd Prize for $250

David Sommer – Actively Controlled Wind-Tunnel Apparatus to Model the Human Vocal Folds

American Society of Mechanical Engineering Northern Alberta Design Challenge Awards and Dept. of Mechanical & Mechatronics Engineering Design Awards

Fall 2011

1st Prize for $500

Dieter Kusel – Lotus 7 Reverse Gear Integration

2nd Prize for $250

Kiefer Lindsay – Design of a Force Balance for the Adaptive-Wall Wind Tunnel

Communication is Important !

- Please review the Welcome Back Handout and the Information for **Current Students** web page for important deadlines. This is accessible from the Mechanical & Mechatronics Engineering home page at http://www.me.uwaterloo.ca
- Student/Faculty Committee:
- Your class should elect:
  - one Class-Professor
  - 2 Student Class Representatives

    (co-chairs of the Committee)

  Please let Lynn Crema know by Friday January 6th

First Student/Faculty Meeting is Thursday, January 12th at 11:30 am in E5 - 3102

This is Your Last Chance to Satisfy All Mechanical Engineering Curriculum Requirements

Before you graduate at the end of this term, you must have:

- Passed all 30 required core courses
- Passed 5 CSE and 9 TE courses
- Passed PDEng 15, 25, 35, 45, and 55 (See WatPD-Engineering web page for special transition notes)
- Cleared all failed courses (note: special 1A rules)
- Have CR for WHMIS & ELPE
- Have CR for 4 work term reports
- Have CR for 5 of 6 work terms

Mechanical Engineering CSE's (5 Required)

1A	MATH 117 Calculus 1	MATH 115 Algebra and Vector Geom.	PHYS 115 Mechanics	CH E 102 Chemistry for Engineers	ME 100 Commun'n & Profess'ism	
1B	MATH 118 Calculus 2	GEN E 121 Digital Computation	PHYS 125 Physics for Engineers	ME 123 Elec. Eng. for Mech. Eng's.	ME 215 Materials 1	M SCI 261 Managerial & Eng. Econ'ics
2A	ME 201 Advanced Calculus	ME 230 Materials 2	ME 202 Statistics for Engineers	ME 269 Elec'mech Dev Power Proc'ing	ME 219 Deformable Solids 1	CSE #2
2B	ME 203 Ordinary Diff'l Equations	ME 212 Dynamics	ME 220 Deformable Solids 2	ME 262 Microproc's & Digital Logic	ME 250 Thermo-dynamics 1	
3A	ME 303 Advanced Eng. Math	ME 354 Thermo-dynamics 2	ME 351 Fluid Mechanics 1	ME 321 Kinematics and Dynamics	ME 340 Manufacturing Processes	
3B	ME 322 Mechanical Design 1	ME 353 Heat Transfer 1	ME 360 Control Systems	ME 362 Fluid Mechanics 2	ME 380 Mech. Eng. Design Work'p	CSE #3
4A	ME 481 Mech. Eng. Design Projects	Technical Elective 2	Technical Elective 3	Technical Elective 4	CSE #4	
4B	Technical Elective 5	Technical Elective 6	Technical Elective 7	Technical Elective 8	Technical Elective 9	CSE #5

5 CSE's are Required

- At least 1 "List A" course (Impact)
- At least 1 "List B" course (Economics)*
- At least 2 "List C" courses
  (Humanities and Social Sciences)
- One additional CSE (List A, B, C or D)

* MSCI 261 is a "List B" CORE course

Mechanical Engineering TE's (9 Required)

1A	MATH 117 Calculus 1	MATH 115 Algebra and Vector Geom.	PHYS 115 Mechanics	CH E 102 Chemistry for Engineers	ME 100 Commun'n & Profess'ism	
1B	MATH 118 Calculus 2	GEN E 121 Digital Computation	PHYS 125 Physics for Engineers	ME 123 Elec. Eng. for Mech. Eng's.	ME 215 Materials 1	M SCI 261 Managerial & Eng. Econ'ics
2A	ME 201 Advanced Calculus	ME 230 Materials 2	ME 202 Statistics for Engineers	ME 269 Elec'mech Dev Power Proc'ing	ME 219 Deformable Solids 1	CSE #2
2B	ME 203 Ordinary Diff'l Equations	ME 212 Dynamics	ME 220 Deformable Solids 2	ME 262 Microproc's & Digital Logic	ME 250 Thermo-dynamics 1	
3A	ME 303 Advanced Eng. Math	ME 354 Thermo-dynamics 2	ME 351 Fluid Mechanics 1	ME 321 Kinematics and Dynamics	ME 340 Manufacturing Processes	
3B	ME 322 Mechanical Design 1	ME 353 Heat Transfer 1	ME 360 Control Systems	ME 362 Fluid Mechanics 2	ME 380 Mech. Eng. Design Work'p	CSE #3
4A	ME 481 Mech. Eng. Design Projects	Technical Elective 2	Technical Elective 3	Technical Elective 4	CSE #4	
4B	Technical Elective 5	Technical Elective 6	Technical Elective 7	Technical Elective 8	Technical Elective 9	CSE #5

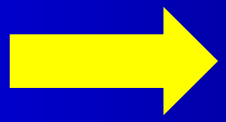
Welding & Joining Specialization Courses

1A	Math 117 Calculus 1	Math 115 Algebra and Vector Geom.	PHYS 115 Mechanics	CH E 102 Chemistry for Engineers	ME 100 Commun'n & Profess'ism	
1B	Math 118 Calculus 2	GEN E 121 Digital Computation	PHYS 125 Physics for Engineers	ME 123 Elec. Eng. for Mech. Eng's.	ME 215 Materials 1	M SCI 261 Managerial & Eng. Econ'ics
2A	ME 201 Advanced Calculus	ME 230 Materials 2	ME 202 Statistics for Engineers	ME 269 Elec'mech Dev Power Proc'ing	ME 219 Deformable Solids 1	CSE #2
2B	ME 203 Ordinary Diff'l Equations	ME 212 Dynamics	ME 220 Deformable Solids 2	ME 262 Microproc's & Digital Logic	ME 250 Thermo-dynamics 1	
3A	ME 303 Advanced Eng. Math	ME 354 Thermo-dynamics 2	ME 351 Fluid Mechanics 1	ME 321 Kinematics & Dynamics	ME 340 Manufacturing Processes	
3B	ME 322 Mechanical Design 1	ME 353 Heat Transfer 1	ME 360 Control Systems	ME 362 Fluid Mechanics 2	ME 380 Mech. Eng. Design Work'p	CSE #3
4A	ME 481 Mech. Eng. Design Projects	ME 435 Industrial Metallurgy	ME 436 Welding Processes	Technical Elective #4	CSE #4	
4B	ME 535 Welding Metallurgy	ME 538 Welding Design, Fab. & QC	ME 526 Fatigue & Fracture	Technical Elective #8 or ME 547	Technical Elective #9	CSE #5

Number of TE's Required

- A total of 9 TE's are required
- A minimum of 7 TE's must be from the Mechanical Engineering course list (METE's)
- Biomechanics and Mechatronics Option students must take at least 6 ME TE's

Be Careful !

- Some courses are not TE's although they may appear to be TEs. For example,
  ME 401, MSCI 441 and GENE 412,
  GENE 452 are CSEs – are **not** TEs
- It is YOUR responsibility to make sure you satisfy all degree requirements; i.e., correct no. of TE's & CSE's, transfer conditions, clearing failed courses by supplemental exams or retaking, etc.
- If you are not sure?  Ask Lynn Crema!

Course Drop/Add Deadlines

- **Add**: Monday, January 16th
- **Drop**: Monday, January 23rd
- **Late Drop**: Jan. 24th to Feb. 28th – WD grade
- **Late Drop with Penalty**: starts March 13th
  - WF (withdraw/fail) grade shows
  - grade of 38% is included in average
- CHECK YOUR COURSE LIST on QUEST!

Safety Lecture

- The Safety Lecture by your Class Professor is Tuesday, January 17th at 11:30 am in your Class/Professor Hour

- **The Safety Lecture is Compulsory**

- You will be required to sign a form acknowledging that you have read the Department of Mechanical Engineering & Mechatronics Engineering Lab. Safety Manual and have attended the Safety lecture.

ME 482 Organizational Meeting

- Organizational meeting is today, after this presentation
- See LEARN for Guidelines, Project List, etc.
- Your Project Registration Form is due in to Lynn Crema by Friday, January 13th
- ME 482 Report is due by Monday, April 2nd
  (Last Day of Lectures)

Final Exams

- First day of exams is Monday, April 9th
- Last day of exams is Saturday, April 21st
- Final Exam Emergency Day is Mon., April 23rd
- Remember, after this is when you can book:
  - plane tickets,
  - holidays,
  - anything else you like !

Some Examinations Regulations

- Examinations, test, or lectures are not permitted between the last day of lectures and the first day of exams.
- Final exams are not allowed during the formal lecture period.
- Major term tests (>25%) normally may not be held in the last five days of lectures.

Final Exam Scheduling Rules

- There will be four (4) – 2.5 hour final examinations/day
- Final Exam Scheduling Rules:
  - No back-to-back exams.
  - No last slot (evening) – first slot (next morning) exams.
  - No more than two (2) exams in one day.

Missed Exams

- Little will be done to accommodate students who miss Midterm or Final Exams without a legitimate reason conveyed **with documentation** to the instructor and to Lynn Crema **prior** to the exam.

- A DNW (Did Not Write) course grade can lead to a RWE (Required to Withdraw from Engineering) decision

Sickness or Unusual Difficulties

If you have a difficulty such as a serious illness, injury or a death in the family:

- make sure you inform the Undergraduate Office (Lynn Crema) immediately
- and be sure to obtain **documentation** right away (i.e., the UW Health Services Verification of Illness Form from a doctor).

Secret Key Codes

MME 4th Year Study Room - E3-3111

(Upstairs, across from the Fluids Lab & Wind Tunnel)

Door Lock Code: (see Lynn Crema)

MME Computer Room - E2-2354

- 8 computers are for use by 4th year students and MEng graduate students

Door Lock Code: (see Lynn Crema)

4th Year Study & Computer Rooms

The MME 4th Year rooms will be shared by all ME & MTE students this term. MEng students will also share the E2-2354 computers.

- Keep the rooms clean & neat
- Keep the back door of E2-2354 closed & locked
- Report any hardware problems with computers in the Nexus login screen or to MME IT in E2-2354

MME 4th Year Study Room Locker Policy:

- All 4th Year lockers will be emptied at the end of each term and contents will be disposed of.

University of Waterloo

Welcome to Your Last Term of Mechanical Engineering !

Questions?