

May 1, 2011

STUDENT NAME
ADDRESS

Subject: Important Notes and Curriculum Changes in the 2011-2012 Calendar

Dear Student,

Each May, all students enrolled in the **Mechanical Engineering** program are mailed a letter advising them of curriculum changes that have occurred since their entry into the program. This letter, including past ones, can also be viewed at the following website:

<http://www.encs.concordia.ca/current-students/undergraduate-program-requirements/course-sequences/mechanical-engineering/>

This letter is to advise you of any additional changes that will appear in the 2011-2012 Calendar which may affect your selection of courses. It will also be placed at the above mentioned sequence site for your convenience. Should you have any questions regarding this issue, please do not hesitate to contact Student Academic Services at (514) 848-2424, extension 3055.

You can view the program requirements and course descriptions at the following website:
http://registrar.concordia.ca/calendar/pdf/calendar_pdf.html

VERY IMPORTANT: Students must have completed all 200-level courses required from their program before they can register for *any* 400-level course.

Students are required to graduate having met the substantial equivalent of the curriculum in force in the Winter Term prior to degree conferral.

**You must apply for graduation. Graduation Application deadlines:
Spring Convocation January 15th, Fall Convocation July 15th.**

**Additional information can be viewed at the following website:
<http://registrar.concordia.ca/convo/gradapp.html>.**

1. Changes to the Engineering Core

ELEC 275 Principles of Electrical Engineering has been *deleted* from the Mechanical Engineering Program

2. Changes to the Mechanical Engineering Core

a) *MECH 368 Industrial Electronics* has been added to the Mechanical Engineering Core. As a transitional measure Students who have taken *ELEC 275 Principles of Electrical Engineering* prior to May 2011 may use this course as a substitute for *MECH 368*. In addition students who plan to take *MECH 471* MUST take *MECH 368* previously or concurrently, *MECH 368* will then be considered as a technical elective.

b) *MECH 373 Instrumentation and Measurements* has been *taken out* from the Mechanical Engineering core and *moved* to the technical electives in option B and Option C. It has also been renumbered as *MECH 411 Instrumentation and Measurements*. Students who have completed this course prior to May 2011 may use this course to reduce their total number of Technical Electives. This transitional measure may be rescinded after June 2016.

3. Mechanical Engineering Options

The Options in Mechanical Engineering have been restructured. Some new technical electives have been added. As a transitional measure, students who graduate by June 2012 may follow either the old or new option. Students who graduate after November 2012 must follow the new option.

Option A – Aerospace and Propulsion:

- **Option A Core:**
 - MECH 464 Aerodynamics
 - MECH 490A Capstone Mechanical Engineering Design Project

- **Option A Electives:**
 - ENGR 411 Special Technical Report
 - ENGR 417 Standards, Regulations and Certification (new course)
 - ENGR 418 Integration of Avionic Systems (new course)
 - MECH 431 Principles of Aeroleasticity
 - MECH 452 Heat Transfer II
 - MECH 453 Heating, Ventilation and Air Conditioning Systems
 - MECH 460 Finite Element Analysis
 - MECH 461 Gas Dynamics
 - MECH 462 Turbomachinery and Propulsion
 - MECH 465 Gas Turbine Design
 - MECH 480 Flight Control Systems
 - MECH 481 Materials Engineering for Aerospace
 - MECH 482 Avionic Navigation Systems
 - MECH 485 Introduction to Space Systems (new course)
 - MECH 486 Aircraft Stress Analysis (new course)
 - MECH 487 Design of Aircraft Structures (new course)
 - MECH 498 Topics in Mechanical Engineering

Option B – Design and Manufacturing:

- **Option B Core:**
 - MECH 412 Computer-Aided Mechanical Design
 - MECH 490B Capstone Mechanical Engineering Design Project

- **Option B Electives:**
 - ENGR 411 Special Technical Report
 - INDU 372 Quality Control and Reliability
 - INDU 411 Computer Integrated Manufacturing
 - MECH 411 Instrumentation and Measurements (*previously MECH 373*)
 - MECH 414 Computer Numerically Controlled Machining
 - MECH 415 Advanced Programming for Mechanical and Industrial Engineers
 - MECH 421 Mechanical Shaping of Metals and Plastics
 - MECH 422 Mechanical Behaviour of Polymer Composite Materials
 - MECH 423 Casting, Welding, Heat Treating, and Non-Destructive Testing
 - MECH 424 MEMS – Design and Fabrication
 - MECH 425 Manufacturing of Composites
 - MECH 426 Stress and Failure Analysis of Machinery
 - MECH 460 Finite Element Analysis
 - MECH 498 Topics in Mechanical Engineering

Option C – Systems and Mechatronics:

- **Option C Core:**
 - MECH 490C Capstone Mechanical Engineering Design Project

- **Option C Electives:**
 - ENGR 411 Special Technical Report
 - ENGR 472 Robot Manipulators
 - MECH 411 Instrumentation and Measurements (*previously MECH 373*)
 - MECH 415 Advanced Programming for Mechanical and Industrial Engineers
 - MECH 444 Guided Vehicle Systems
 - MECH 447 Fundamentals of Vehicle Systems Design
 - MECH 448 Vehicle Dynamics
 - MECH 454 Vehicular Internal Combustion Engines
 - MECH 463 Fluid Power Control
 - MECH 471 Microcontrollers for Mechatronics
 - MECH 472 Mechatronics and Automation
 - MECH 473 Control System Design
 - MECH 474 Mechatronics
 - MECH 480 Flight Control Systems
 - MECH 482 Avionic Navigation Systems
 - MECH 498 Topics in Mechanical Engineering

Note: MECH 471 will require MECH 368 previously or concurrently as a prerequisite