EXPANDED COURSE DESCRIPTION
ENGINEERING
Lassonde School of Engineering
Earth and Space Science and Engineering
LE / ENG 4000 6.0 SECTION A
ENGINEERING PROJECT
FALL 2017 / WINTER 2018

Last Modified Date: 08/23/2017

COURSE CALENDAR DESCRIPTION

The project will include significant elements of design and implementation. The format is intended to resemble engineering projects in practice, including specifications, background research, innovative solutions, analysis, testing and communication. Two terms. Six credits. Prerequisites: 21 3000-level science or engineering credits in the Engineering Program, exclusive of LE/ENG 3000 3.00. Prerequisite or corequisite: LE/ENG 3000 3.00. Prior to Summer 2013: Prerequisites: 21 3000-level science or engineering credits in the Engineering Program, exclusive of SC/ENG 3000 3.00. Prerequisite or corequisite: SC/ENG 3000 3.00. Course credit exclusions: LE/SC/CSE 4080 3.00, LE/SC/CSE 4081 6.00, LE/SC/CSE 4082 6.00, LE/SC/CSE 4084 6.00, LE/SC/CSE 4480 3.00. Prereq not mounted as it can also be taken concurrently.

INSTRUCTOR(S)

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<thead>
<tr>
<th>Name</th>
<th>Section / Format / Term</th>
<th>Contact Email</th>
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<tr>
<td>Smith, James A.</td>
<td>Sec. A / SEMR / Y</td>
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<td>Sadek, Hossam</td>
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<td>Newland, Franz T.</td>
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LIST OF LEARNING OUTCOMES AND EXAMPLES OF COURSE OBJECTIVES

(1) Brief statement of the purpose:

This course:
- Applies engineering knowledge gained over the rest of your studies to a real-world problem or need.
- Gives you an open-ended design project requiring both technical knowledge and engagement with non-engineering communities (users, customers, etc.) interested in the problem or need you are trying to meet.
- Requires application of professional engineering practices, project management and systems engineering practices to complete a complex problem
- Requires teamwork, communication skills and understanding of the role of engineering in meeting societal need to achieve a successful, useful project

(2) Brief list of specific learning outcomes of the course:

1. Effectively design a complex product, service or process using the engineering design cycle
2. Implement engineering solutions that are functional, of high quality meet the design intent.
3. Demonstrate purposeful, methodical and analytical testing and/or evaluation methods
4. Identify any safety risks and apply necessary mitigation measures
5. Communicate and document effectively the engineering designs in a clear and organized matter in various forms including written reports and formal presentation
6. Demonstrate professional skills in all aspects of the course including responsibility, conduct and competence
7. Demonstrate ability to work effectively in a multi-disciplinary team

**GRADED ASSESSMENT**

**EVALUATION**

The final grade for the course will be based on the following items weighted as indicated:

- Requirements review: 5%
- Preliminary design review: 10%
- Critical design review: 20%
- Test readiness review: 10%
- Test review: 20%
- Final project documentation: 20%
- Final project presentation / exhibit: 15%

Note - this evaluation, available at the start of the semester, complies with the Senate Grading Scheme and Feedback Policy, which stipulates that (a) the grading scheme (i.e. kinds and weights of assignments, essays, exams, etc.) be announced, and be available in writing, within the first two weeks of class, and that, (b) under normal circumstances, graded feedback worth at least 15% of the final grade for Fall, Winter or Summer Term, and 30% for ‘full year’ courses offered in the Fall/Winter Term be received by students in all courses prior to the final withdrawal date from a course without receiving a grade (see the policy for exceptions to this aspect of the policy - http://secretariat-policies.info.yorku.ca/policies/grading-scheme-and-feedback-policy/)

**ADDITIONAL INFORMATION**

**COURSE TEXT / READINGS**

- The Engineering Capstone Course: Link: https://www.library.yorku.ca/find/Record/3427894

Additional readings may be assigned or recommended during the course.

**GRADING, ASSIGNMENT SUBMISSION, LATENESS PENALTIES AND MISSED TESTS**

**Grading:** The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Assignments and tests will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 90, B+ = 75 to 79, etc.) (For a full description of York grading system see the York University Undergraduate Calendar - http://calendars.registrar.yorku.ca/2010-2011/academic/index.htm. Final course grades may be adjusted to conform to Program or Faculty grades distribution profiles

Note this course complies with the senate policy stipulating that no examinations or tests collectively worth more than 20% of the final grade in a course will be given during the final 14 calendar days of classes in a term. Assignment Submission: Proper academic performance depends on students doing their work not only
well, but on time. Accordingly, assignments for this course must be received on the due date specified for the assignment.

**Lateness Penalty:** Assignments received later than the due date will deduct 10% from the assignment grade per calendar day late. Exceptions to the lateness penalty for valid reasons such as illness, compassionate grounds, etc., may be entertained by the Course Instructor but will require supporting documentation (acceptable documentation for illness consists of the York Attending Physician’s Statement, available here: http://www.registrar.yorku.ca/pdf/attending-physicians-statement.pdf)

**Missed Tests:** Students with a documented reason for missing a course test, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation (e.g., Attending Physician’s Statement) may request accommodation from the Course Instructor. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

**IMPORTANT COURSE INFORMATION FOR STUDENTS**

All students are expected to familiarize themselves with the following information, available on The Senate Committee on Academic Standards, Curriculum & Pedagogy webpage (see Reports, Initiatives, Documents) - http://secretariat.info.yorku.ca/files/CourseInformationForStudentsAugust2012.pdf

- Senate Policy on Academic Honesty and the Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation

**Additional information**

Academic Accommodation for Students with Disabilities:
Alternate Exam and Test Scheduling: http://www.yorku.ca/altexams/
Important University Sessional Dates (you will find classes and exams start/end dates, reading/co-curricular week, add/drop deadlines, holidays, University closings and more.
http://www.registrar.yorku.ca/enrol/dates/index.htm

Many courses utilize Moodle, York University's course website system. If your course is using Moodle, click here to access it.

**Moodle @ York University**