INTRODUCTION TO THE MANAGEMENT, ECONOMICS AND SAFETY AS THEY RELATE TO ENGINEERING PROJECTS, INCLUDING THE FOLLOWING. PROJECT MANAGEMENT: WORK BREAKDOWN STRUCTURES, GANTT CHARTS, LOGIC DIAGRAMS AND CHANGE MANAGEMENT. ENGINEERING ECONOMICS: TIME VALUE OF MONEY, COMPARISON METHODS, RATES OF RETURN. WORKPLACE SAFETY. GROUP DESIGN PROJECTS. PREREQUISITES: LE/ENG 1101 4.00 OR LE/ENG 1000 6.00.

ADDITIONAL INFORMATION

COURSE OBJECTIVES

(1) Brief statement of the purpose:
Once you have completed this course, you should know how to break a project down using a number of standard tools and methods from waterfall-based program management. This includes being aware of the reasons for the project, the key decisionmakers and decisions to be made, the breakdown of project tasks to manageable subsets, understanding of the relationships between the subsets and tools and techniques to manage these.

You should also have an awareness of the limitations of the waterfall approach and the possible benefits of PRINCE2 or Agile project management methodologies, and the key differences between them.

You should have some tools for team formation, management and motivation.

In addition, you should be able to compare project financial options, aware of the concepts of cash flow and of compound interest, and should be able to compare different project bottom line models (financial and other).

You will have had the opportunity to try out the techniques discussed through a group and individual project, reviewing other group projects, and through two written exams.

Finally, you will have completed WHMIS 1 and 2 training.

(2) Brief list of specific learning outcomes of the course:
Define project management, organizational arrangements and roles and responsibilities through the project lifecycle

Explain statement of work (SOW) and project charter, the stages of risk management and its importance, and the progress of project during its lifecycle.

Create a work breakdown structure (WBS), Gantt chart, and project network diagram, recognizing dependencies among tasks, how to identify the critical path and how to use MS Project Software.

Use project management techniques to allocate the project resources and reduce the project duration with consideration of the project constraints.

Apply project management fundamentals via working in groups to develop a prototype for a real engineering project considering all phases of project lifecycle.

Recognize the relationship between time and money (time value of money), the difference between simple and compound interests and calculate them.

Develop a cash flow for each alternative solution of a project, convert one type of cash flow to another type of cash flow using compounding factors.

Compare different investment alternatives based on quantitative methods, and choose the best alternative.

Course Text / Readings

Recommended texts:

A variety of online videos and texts will be provided through the course moodle site. Additional readings may be assigned or recommended during the course.

Evaluation

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

- Design Project Proposal 10%
- Design Proposal Peer review 5%
- Midterm - 15%
- Health & Safety Quiz - no grade assigned (Pass/Fail)
- Design Project Video 15%
- Design Project Report 15%
- Peer review 10%
- Exam 30%

Note – TurnItIn will be available for this course – you will be able to submit your reports to TurnItIn to determine if you have cited material correctly. I will have access to the TurnItIn reports, after marking your work, to check for any plagiarism issues. If you wish to opt out of TurnItIn per York’s “text matching” guidelines, do let me know as soon as possible.

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/)

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 be penalized one grade point per day the assignment is 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.

ACADEMIC INTEGRITY LINKS
- Senate Policy on Academic Honesty - http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
- Academic Integrity - http://lassonde.yorku.ca/academic-integrity

STUDENT LINKS
- Student Rights and Responsibilities - http://oscr.students.uit.yorku.ca/student-conduct
- Religious Observance - https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs
- Counselling and Disability Services - http://cds.info.yorku.ca/
- York University’s Policies on Gender/LGBTQ*/Positive Space - http://rights.info.yorku.ca/lgbtq/

LAND ACKNOWLEDGEMENT
- We acknowledge our presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, the Huron-Wendat, and the Métis. It is now home to many Indigenous Peoples. We acknowledge the current treaty holders, the Mississaugas of the New Credit First Nation. This territory is subject of the Dish With One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.
- The Indigenous Framework for York University: A Guide to Action can be found here: http://indigenous.info.yorku.ca/
- Meaning of a land acknowledgement: http://healthydebate.ca/opinions/indigenous-land-acknowledgements

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