

SAMPLE COURSE OUTLINE

Course Code, Number, and Title:

APSC 1010: Engineering and Technology in Society

Course Format:

[Course format may vary by instructor. The typical course format would be:]

Lecture 4 h + Seminar 0 h + Lab 0 h

Credits: 3

Transfer credit: For information, visit bctransferguide.ca

Course Description, Prerequisites, Corequisites:

An introductory overview of engineering, with a review of the history of engineering and technology, an introduction to case study and to design principles, and discussion of ethics as it relates to the practice and study of engineering in Canada.

Prerequisites:

Corequisites: APSC 1050.

Priority registration for students admitted to the Diploma in Applied Science for Engineering Program.

Learning Outcomes:

Upon successful completion of this course, students will be able to:

- Identify and approach open-ended complex problems, recognizing the need for appropriate methods of evaluating the solution, and acknowledging uncertainties.
- Assume responsibility for their work while participating equitably as part of a team.
- Deliver well-organized and effective presentations
- Identify sustainability considerations (societal, ecological and economic) in case study and design.
- Examine ethical considerations in engineering practice.
- Report on major historical developments in engineering and applied science.
- Report on major historical engineering projects in terms of societal benefits and detriments.
- Analyze engineering projects in terms of cost, labour and implementation time.

Instructor(s): TBA

Office: TBA Phone: 604 323 XXXX Email: TBA

Office Hours: TBA

Textbook and Course Materials:

[Textbook selection may vary by instructor. An example of texts and course materials for this course might be:]

Optional textbooks:

Jones, J. "The betterment of the Human Condition". Pearson. 2014.

Moaveni, S. "Engineering Fundamentals". Nelson. 2010.

Wright, P. "Introduction to Engineering". Wiley. 2002.

Dunwoody, B. "Fundamental Competencies". Oxford. 2006.

Note: This course may use an electronic (online) instructional resource that is located outside of Canada for mandatory graded class work. You may be required to enter personal information, such as your name and email address, to log in to this resource. This means that your personal information could be stored on servers located outside of Canada and may be accessed by U.S. authorities, subject to federal laws. Where possible, you may log in with an email pseudonym as long as you provide the pseudonym to me so I can identify you when reviewing your class work.

Assessments and Weighting:

Final Exam 20%

Other Assessments %

(An example of other assessments might be:) %

Quizzes/Tests: 20%

Assignments: 25%

Project: 25%

Participation: 10%

Participation format: Attendance, contributing to group discussion and activities ‘

Proportion of individual and group work:

Individual: 70%

Group: 30%

This generic outline is for planning purposes only.

Grading System: Letter grade

Specific grading schemes will be detailed in each course section outline.

Passing grade: D

Topics Covered:

[Topics covered may vary by instructor. An example of topics covered might be:]

- History of engineering technology, from early civilizations, through medieval periods, to modern times.
- Major engineering projects (ex. Panama canal, Apollo mission, etc.)
- Environmental, ethical and economic principles in engineering.
- Engineering catastrophe (ex. Fukushima Daiichi, Deepwater Horizon, etc.)
- The recognized specializations of engineering practice in Canada, with vocational emphasis.
- Introduction to design principles, with research and presentation of an engineering proposal (ex. wheelchair access in classrooms, housing for biochar reactor, etc.)

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

College Policies:

[E1003 - Student Code of Conduct](#)

[F1004 - Code of Academic Conduct](#)

[E2008 - Academic Standing - Academic Probation and Academic Suspension](#)

[E2006 - Appeal of Final Grade](#)

[F1002 - Concerns about Instruction](#)

[E2011 - Withdrawal from Courses](#)

Departmental/Course Policies:

This generic outline is for planning purposes only.