SAMPLE COURSE OUTLINE

Creation date: November 30, 2020
Revision date:

Course Code, Number, and Title:

CPSC 1091: Engineering Design and Drafting

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

Lecture 2.0 h + Seminar 0.0 h + Lab. 2.0 h

Credits: 3.0 **Transfer Credit:** For information, visit bctransferguide.ca

Course Description, Prerequisites, Corequisites:

Amongst the many skills required of engineers is the ability to clearly communicate their designs and engineering analyses using both verbal and graphical languages. In this project-based course, students explore the engineering design process and develop their ability to use engineering communication tools. Working in teams, they examine the technical background of a well-defined problem and use engineering drawing and CAD to design potential solutions. Through this process, students experience professional responsibility and develop their writing and presentation skills.

Students will receive credit for only one of CPSC 1090 or 1091.

Prerequisite(s): One of the following: a minimum "B" grade in Precalculus 12 (or equivalent), a minimum "C+" grade in Precalculus 12 (or equivalent) and a minimum "C-" grade in Calculus 12, a minimum "C+" grade in MATH 1170, or a minimum 90 on the Mathematics Diagnostic Test; and a minimum "B" grade in Physics 12, or a minimum "B-" grade in PHYS 1118. Prerequisites are valid for only three years.

Learning Outcomes:

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

- Describe the unique aspects of the engineering profession
- Describe the different engineering disciplines
- Apply engineering decision-making and design processes to well-defined and well-constrained engineering problems
- Apply scientific principles to the understanding and analysis of engineering problems, and to the design of potential solutions
- Describe the use of prototyping in the engineering design process and create a prototype
- Describe the contributions of discovering and innovating essential engineered solutions to the advancement of society

- Participate equitably as a member of a team, demonstrating initiative, professionalism, and effective intra-team communication
- Prepare and deliver effective technical poster presentations, oral presentations, and technical reports
- Draw engineering 2D sketching and Orthographic projections
- Visualize in three dimensions, draw engineering 3D Isometric and perspective sketches
- Prepare electronic drawings using CAD tools
- Apply standards and conventions of engineering drawing
- Apply engineering tools, including hand tools, prototyping tools, and CAD software tools to create, test, and analyze physical embodiments of an engineering design

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:]

For textbook information, visit https://mycampusstore.langara.bc.ca/buy_courselisting.asp?selTerm=3|8

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 35%
Other Assessments 65%
(An example of other assessments might be:)

Project 25%
Midterm Exam 15%
Assignments 10%
Lab Work 10%
Participation 5%

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

Information unavailable, please consult Department for details.

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

- Engineering Profession
- Engineering Design Process
- Engineering Drawing
- Isometric / Orthographic /Sketching
- Computer-Aided Drawing
- Engineering Design Process
- Fundamentals of 3D Modelling
- Engineering Drawings
- Design Project

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:

Information unavailable, please consult Department for details.