

COURSE OUTLINE		
TERM: FALL 2022	COURSE NO: APSC 113	
INSTRUCTOR:	COURSE TITLE: Engineering Management for Rapid Prototyping Technology	
OFFICE: LOCAL: E-MAIL:	SECTION NO(S):	CREDITS: 1.0
OFFICE HOURS:		
COURSE WEBSITE:		

Capilano University acknowledges with respect the Lilwat7úl (Lil'wat), x^wməθk^wəy̓əm (Musqueam), shíshálh (Sechelt), Sḵw̓xwú7mesh (Squamish), and Səlílwətaʔ/Selilwitulh (Tsleil-Waututh) people on whose territories our campuses are located.

COURSE FORMAT

One hour of class time for a 15-week semester, which includes two weeks for final exams.

COURSE PREREQUISITES

Pre-calculus 12 or BMTH 054 or MATH 105 or Calculus MPT

CALENDAR DESCRIPTION

In this project management course students will be introduced to Engineering Project management with a focus on original product design utilizing rapid prototyping technology and modern planning tools. Topics such as management of intellectual property, risk, schedules, and program development costs will be discussed. Case studies and sample problems will be used to elucidate these principles and conventions. Students will participate in the discussion and comparison of the strengths and weaknesses of management approaches.

COURSE NOTE

APSC 113 is an approved Science course.

APSC 113 is an approved Quantitative/Analytical course for baccalaureate degrees.

This course is not intended for students in the Engineering programs. Students who receive credit for APSC 130 or APSC 140 cannot receive credit for APSC 113.

REQUIRED TEXTS, RESOURCES, AND TECHNOLOGY

Required Text:

None

Required Technology

To participate in this course, you will need to have access to a device (laptop or computer) and WIFI.

The following educational technology tools will be used in this course: eLearn and Zoom.

COURSE STUDENT LEARNING OUTCOMES

On successful completion of this course, students will be able to do the following:

- Demonstrate an introductory knowledge of project management to support an engineering design challenge.
- Show an understanding on the use of modern management and project planning tools to support engineering design
- Show proficiency in the use of one or more management tools
- Identify key risk factors and mitigation strategies in engineering design projects
- Identify key drivers in engineering design project
- Understand the importance of management of Intellectual Property

COURSE CONTENT

The following topics will be covered in the course, not necessarily in the listed order:

Topics	Hours (approx.)
Introduction to Modern Engineering Management	1.0
Project Management Plan and Key Elements	1.0
New Technology, Tools, and Impact on Project Planning	2.0
Teamwork	1.0
Microsoft Project Scheduling and Work Breakdown Structure	3.0
Cost Control	2.0
Risk management	1.0
Intellectual Property Management	1.0
Stakeholder Management	1.0
Related Management topics	2.0
Total	15.0

LECTURES

The lectures will illustrate and discuss principles of Modern engineering Management to support Design using Rapid Prototyping Technology. Students will research a given engineering design problem, prepare their management solution and carry out analysis to demonstrate the feasibility of their management plan. Students will produce an oral presentations explaining their work.

COMPUTER ACCESS

Drop-in access to the University computers is available during the hours posted outside each lab, subject to computer availability. Please respect the directions of the instructor in the lab if asked to leave the lab due to a class booking.

EVALUATION PROFILE

Final grades for the course will be computed based on the following schedule:

Class Participation	10%
Quizzes	10%
Project Summaries	20%
Final Project Management Presentation	30%
Final Exam	30%
TOTAL	100%

Participation grades are based on the consistency, quality, and frequency of contributions to class discussions and in-class group activities. A detailed rubric will be provided by the instructor.

GRADING PROFILE

Letter grades will be assigned according to the following guidelines:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D = 50-59
A = 85-89	B = 73-76	C = 63-66	F = 0-49
A- = 80-84	B- = 70-72	C- = 60-62	

Students should refer to the University Calendar for the effect of the above grades on grade point average.

LATE ASSIGNMENTS

Late assignments will receive a late penalty of 10% per day.

INCOMPLETE GRADES

Grades of Incomplete "I" are assigned only in exceptional circumstances when a student requests extra time to complete their coursework. Such agreements are made only at the request of the student, who is responsible to determine from the instructor the outstanding requirements of the course.

MISSED EXAMS/QUIZZES/LABS

Normally, a score of zero will be given for a missed exam, test, quiz, lab, etc. In some exceptional situations, the student will be permitted to write a make-up test, defer the lab to a later date or to replace the score by other marks.

The situations in which a score of zero may be avoided are those for which the student meets all of the following conditions:

1. Circumstances are beyond the control of the student which resulted in the exam, test, quiz, lab, etc. to be missed. Such circumstances include serious illness or injury, or death of close family

member. They do not include forgetting about the test, lack of preparation for the test, work-related or social obligations.

2. The student has notified the instructor (or the School of STEM office staff, if the instructor is not available) about the missed exam, test, quiz, lab, etc. Such notification must occur in advance, if possible, or at the latest, on the day of the exam, test, quiz, lab, etc.
3. Proof of the circumstances must be provided. Proof of illness or injury may require a note from a doctor, who may also be consulted.
4. The student has been fully participating in the course up until the circumstances that prevented the writing of the exam, test, quiz, lab, etc. Fully participating means attending almost all classes and turning in almost all assignments in the course.

The options offered to the student who meets the four conditions are decided by the instructor. They will not necessarily meet the convenience of the student.

ATTENDANCE

Attendance at lectures, labs and tutorials is expected. You are responsible for all information given in the lectures, labs and tutorials, including the times of tests and deadlines for assignments.

ENGLISH USAGE

Students are expected to use correct standard English in their written and oral assignments, exams, presentations, and discussions. Failure to do so may result in reduced grades in any part of the Evaluation Profile. Please refer to the guidelines provided in the Capilano Guide to Writing Assignments (available from the University Bookstore).

ONLINE COMMUNICATION

Outside of the classroom, instructors will (if necessary) communicate with students using either their official Capilano University email or eLearn; please check both regularly. Official communication between Capilano University and students is delivered to students' Capilano University email addresses only.

UNIVERSITY OPERATIONAL DETAILS

Tools for Success

Many services are available to support student success for Capilano University students. A central navigation point for all services can be found at: <https://www.capilanou.ca/student-life/>

Capilano University Security: download the [CapU Mobile Safety App](#)

Policy Statement (S2009-06)

Capilano University has policies on Academic Appeals (including appeal of final grade), Student Conduct, Academic Integrity, Academic Probation and other educational issues. These and other policies are available on the University website.

Academic Integrity (S2017-05)

Any instance of academic dishonesty or breach of the standards of academic integrity is serious and students will be held accountable for their actions, whether acting alone or in a group. See policy and procedures S2017-05 Academic Integrity for more information: <https://www.capilanou.ca/about-capu/governance/policies/>

Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances, are prohibited and will be handled in accordance with the Student Academic Integrity Procedures.

Academic dishonesty is any act that breaches one or more of the principles of academic integrity. Acts of academic dishonesty may include but are not limited to the following types:

Cheating: Using or providing unauthorized aids, assistance or materials while preparing or completing assessments, or when completing practical work (in clinical, practicum, or lab settings), including but not limited to the following:

- Copying or attempting to copy the work of another during an assessment;
- Communicating work to another student during an examination;
- Using unauthorized aids, notes, or electronic devices or means during an examination;
- Unauthorized possession of an assessment or answer key; and/or,
- Submitting of a substantially similar assessment by two or more students, except in the case where such submission is specifically authorized by the instructor.

Fraud: Creation or use of falsified documents.

Misuse or misrepresentation of sources: Presenting source material in such a way as to distort its original purpose or implication(s); misattributing words, ideas, etc. to someone other than the original source; misrepresenting or manipulating research findings or data; and/or suppressing aspects of findings or data in order to present conclusions in a light other than the research, taken as a whole, would support.

Plagiarism: Presenting or submitting, as one's own work, the research, words, ideas, artistic imagery, arguments, calculations, illustrations, or diagrams of another person or persons without explicit or accurate citation or credit.

Self-Plagiarism: Submitting one's own work for credit in more than one course without the permission of the instructors, or re-submitting work, in whole or in part, for which credit has already been granted without permission of the instructors.

Prohibited Conduct: The following are examples of other conduct specifically prohibited:

- Taking unauthorized possession of the work of another student (for example, intercepting and removing such work from a photocopier or printer, or collecting the graded work of another student from a stack of papers);

- Falsifying one's own and/or other students' attendance in a course;
- Impersonating or allowing the impersonation of an individual;
- Modifying a graded assessment then submitting it for re-grading; or,
- Assisting or attempting to assist another person to commit any breach of academic integrity.

Sexual Violence and Misconduct

All Members of the University Community have the right to work, teach and study in an environment that is free from all forms of sexual violence and misconduct. Policy B401 defines sexual assault as follows:

Sexual assault is any form of sexual contact that occurs without ongoing and freely given consent, including the threat of sexual contact without consent. Sexual assault can be committed by a stranger, someone known to the survivor or an intimate partner.

Safety and security at the University are a priority and any form of sexual violence and misconduct will not be tolerated or condoned. The University expects all Students and Members of the University Community to abide by all laws and University policies, including B.401 Sexual Violence and Misconduct Policy and B.401.1 Sexual Violence and Misconduct Procedure (found on Policy page <https://www.capilanou.ca/about-capu/governance/policies/>)

Emergencies: Students are expected to familiarise themselves with the emergency policies where appropriate and the emergency procedures posted on the wall of the classroom.